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Water Boards

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# State Water Resources Control Board

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*Via Commission Drop Box*

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Sacramento, CA 95814

*CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SAN DIEGO REGION, ORDER NO. R9-2017-0077, SECTIONS A.1, A.3, AND A.5, 17-TC-05, CITY OF SAN JUAN CAPISTRANO AND COUNTY OF SAN DIEGO, CLAIMANTS*: COMMENTS OF STATE WATER RESOURCES CONTROL BOARD AND CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SAN DIEGO REGION ON TEST CLAIM

Dear Ms. Halsey:

The State Water Resources Control Board (State Water Board) and the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) (collectively, Water Boards) jointly submit these Comments in opposition to Test Claim No. 17-TC-05 (Test Claim).[1] This Test Claim was filed with the Commission on State Mandates (Commission) by the County of San Diego (County) and the City of San Juan Capistrano (City) (collectively, Claimants). Claimants seek reimbursement of estimated and other unspecified costs of complying with four requirements set forth in San Diego Water Board Order No. R9-2017-0077, *An Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region to Submit Reports Pertaining to the Control of Trash in Discharges From Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays, and Estuaries in the San Diego Region*, issued on June 2, 2017.[2] For the reasons explained below, the Test Claim must be denied in its entirety.

## I. INTRODUCTION

The federal Clean Water Act[3] regulates water quality standards for the waters of the United States (U.S.) and prohibits the discharge of pollutants from point sources to waters of the U.S. except in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. In California,

[1] The Water Boards previously submitted Administrative Records for the State Water Board's Water Code Section 13383 Orders directing submittal of methods to comply with the statewide Trash Provisions (State Water Board Trash Orders AR), the State Water Board Trash Provisions AR (Trash Provisions AR), and San Diego Water Board Order No. R9-2017-0077 (San Diego Trash Order AR).
[2] The San Diego Trash Order was issued pursuant to authority in Water Code section 13383.
[3] Federal Water Pollution Control Act (FWPCA; 33 U.S.C. § 1251 et seq.) The federal Act is referred to herein by its popular name, the Clean Water Act.

the State Water Board and the nine regional water quality control boards establish water quality control standards and permit point source discharges of pollutants, including discharges of storm water and non-storm water from municipal separate storm sewer systems (MS4s), under the NPDES permitting program. MS4 discharges are among the most significant sources of water pollution in the nation. When storm water or non-storm water flow over urban environs, it collects pollutants—including trash and debris—which then go through the MS4 and discharge to surface waters. When trash reaches surface waters, it has detrimental impacts on aquatic life, wildlife, public health, and recreational use of waters.

Recognizing the pervasive problem of trash across the state, in 2015, the State Water Board adopted an amendment to the Water Quality Control Plan for the Ocean Waters of California to Control Trash and adopted Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (collectively, Trash Provisions[4]). The Trash Provisions apply to all dischargers of trash to surface waters, including those with NPDES permits, non-NPDES waste discharge requirements, and waivers of waste discharge requirements. The Trash Provisions established a water quality objective for trash, a trash discharge prohibition, a framework for implementation based on the type of discharger, and a time schedule for each type of discharger. The implementation provisions established two tracks for Phase I and II MS4 permittees to comply with the trash discharge prohibition: Track 1 required the installation and operation of full capture systems and Track 2 required the installation and operation of controls that achieve full capture system equivalency; industrial dischargers, on the other hand, are required to comply with the outright prohibition, a more stringent requirement. The time schedule in the Trash Provisions required the State Water Board or the appropriate regional water quality control board, depending on the permit, to do one of the following by June 2, 2017: 1) modify or reissue the MS4 permit(s) to add requirements to implement the Trash Provisions, or 2) issue an order pursuant to Water Code section 13267 or 13383 to require MS4 permittees to provide the respective water board with written notice of which implementation track the permittee will comply with the prohibition of discharge, and an implementation plan for Track 2 if the permittee selected that track.

In accordance with the requirements of the Trash Provisions, the State Water Board and the regional water quality control boards issued Water Code section 13383 orders to their respective Phase I and II MS4 permittees, including local, state, and federal entities. At issue in the Test Claim before the Commission is the Water Code Section 13383 Order No. R9-2017-0077, *An Order Directing the Owners and Operators of Phase I Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region to Submit Reports Pertaining to the Control of Trash in Discharges From Phase I MS4s to Ocean Waters, Inland Surface Waters, Enclosed Bays, and Estuaries in the San Diego Region* (San Diego Trash Order or Trash Order), issued on June 2, 2017.

The San Diego Trash Order, like hundreds of similar orders issued to local and non-local agencies by the State Water Board, the Santa Ana Regional Water Quality Control Board (Santa Ana Water Board) and other regional water boards, requires Phase I MS4 permittees within the San Diego Region to take initial steps toward achieving compliance with the narrative water quality objective for trash and the prohibition on the discharge of trash to surface waters established in the State Water Board's Trash Amendments.[5] All 39 Phase I MS4 permittees within the San Diego Region

[4] The Trash Provisions are sometimes also referred to as the "Trash Amendments." Both terms appear interchangeably in documents in the administrative records and attached herein, and the terms refer to the same substance.

[5] The Trash Amendments to the Water Quality Control Plan for Ocean Waters of California and the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California were adopted

are covered under a single MS4 Permit[6] and are named in the San Diego Trash Order. Of these permittees,[7] only Claimants contend that the San Diego Trash Order imposes a state-mandated program on them and that they are entitled to subvention of funds to reimburse them for the activities they undertook to comply with Directives A.1, A.2, A.3 and A.5.[8] in the Order. For the reasons set forth below, Claimants are not entitled to subvention.

The San Diego Trash Order does not impose a program—it does not carry out the governmental service of providing services to the public and does not impose unique requirements on local government to implement state policy. Claimant County of San Diego selected Track 1. Claimant City of San Juan Capistrano selected Track 2. Neither the submission of a letter stating the permittee's selected track to comply with the trash discharge prohibition nor the submission of an implementation plan provided a service to the public.[9] Further, the requirements of the Trash Order are not unique to local government: the requirements to provide written notice of track selection and submit an implementation plan apply generally to other MS4 dischargers, including federal and state entities, as evidenced by the orders issued by the State Water Board. Even if the Trash Order imposed a program, it does not impose a new program or require a higher level of service—Claimants have long been required to submit monitoring and technical reports to the San Diego Water Board pursuant to Water Code section 13383 on various matters, including the controls they have implemented to reduce and/or eliminate the discharge of trash. Finally, assuming the Trash Order imposes a new program or requires a higher level of service, subvention still is not warranted because the Claimants have the authority to levy charges, fees, or assessments to pay for the costs of complying with the Trash Order.

The Trash Order merely requires the Claimants to submit reports to the San Diego Water Board. The Trash Order did not require Claimants to begin implementation of their selected track, to begin coordination with Caltrans, or to undertake other substantive obligations of the Trash Provisions. The substantive implementation of the Trash Provisions will be accomplished through the MS4 permits. The San Diego Water Board, however, has yet to incorporate the Trash Provisions into the Regional MS4 Permit. The San Diego Water Board will add requirements to implement the Trash Provisions, including the implementation of the Claimants' selected tracks, in the next iteration of the Regional MS4 permit. To the extent the Claimants are filing these Test Claims to also seek reimbursement for substantive implementation of the Trash Provisions that will be required in future permit terms, the Test Claim is not ripe. The only question before this Commission is whether the requirements of the Trash Order constitute a state mandate and, if so, whether Claimants are entitled to subvention. In summary, Claimants' Test Claim must be denied in its entirety. The Water Boards' reasoning is set forth below.

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by the State Water Board in April 2015, approved by the Office of Administrative Law in December 2015, and approved by U.S. EPA in January 2016. The development of the Trash Amendments is discussed more fully below. The terms Trash Provisions and Trash Amendments are sometimes used interchangeably in these comments to refer to narrative water quality objective and discharge prohibition established by the State Water Board.

[6] Order No. R9-2013-0001, as amended by Orders No. R9-2015-0001 and R9-2015-0100 is known as the Regional MS4 Permit. (San Diego Trash Order AR, pp. 1458-1855.)

[7] Permittees within the same MS4 permittee are also referred to as copermittees.

[8] Claimant County challenges Directives A.1, *A.2* and A.5; Claimant City challenges Provisions A.1, *A.3* and A.5.

[9] While not included in all Water Code section 13383 orders, the San Diego Trash Order's directive requiring Claimants to submit a description of how they will coordinate with the California Department of Transportation (Department of Transportation) likewise does not provide a public service. We also note that the Trash Provisions also require the Department of Transportation to coordinate with MS4 permittees with overlapping jurisdiction. (State Board Trash Orders AR, p. 1739)

## II. BACKGROUND

The San Diego Trash Order sets forth directives requiring Claimants to take initial steps toward *eventual* implementation of the Trash Amendments' narrative water quality objective and prohibition through the next reissued Regional MS4 Permit. Because the San Diego Trash Order was issued in this context, the Water Boards provide a regulatory overview of water quality standards and NPDES permitting, the Trash Provisions, issuance of Water Code section 13383 orders by the State Water Board and the San Diego Water Board, and the MS4 permits issued by the San Diego Water Board.

### *A. Regulatory Overview of Water Quality Standards and NPDES Permitting Under the Clean Water Act and Porter-Cologne Water Quality Control Act*

The Clean Water Act (33 U.S.C. § 1251 et seq.) regulates water quality standards for the waters of the U.S. and "anticipates a partnership between the States and the Federal Government, animated by a shared objective: 'to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.'"[10] Among other things, the Clean Water Act requires states to establish water quality standards for each waterbody in their jurisdiction.[11] Water quality standards describe the desired condition of a waterbody and the means by which that condition will be protected or achieved. These water quality standards identify designated uses of the waterbody—such as recreation and navigation—and in turn specify water quality criteria and an antidegradation policy to protect those uses.[12] Water quality criteria may be expressed in numeric form (e.g., the maximum pollutant concentration levels permitted in a water body) or in narrative form (e.g., a criterion that describes the desired conditions of a waterbody being "free from" certain negative conditions).[13]

California's Porter-Cologne Water Quality Control Act was enacted in 1969 to promote conservation, to attain the highest water quality reasonable, and to protect the public health, safety, and welfare.[14] The act created the State Water Board and nine regional water boards to implement water law and policy.[15] Each regional water board must adopt water quality control plans, known as "basin plans," for waterbodies in their respective region.[16] Basin plans must designate the beneficial uses for each waterbody, establish water quality objectives that protect and promote those beneficial uses, and set forth a program of implementation for achieving water quality objectives.[17] For waterbodies subject to the Clean Water Act, regional water boards have no discretion to set standards less stringent than those required by federal law.[18] For these waterbodies, the basin plan sets forth the federally required water quality standards; the "beneficial uses" are the equivalent of "designated uses" under the Clean Water Act, and "water quality objectives" are the equivalent of "water quality criteria" under the Clean Water Act. The State Water Board may also adopt and modify water quality control plans (such as the Trash

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[10] *Arkansas v. Oklahoma* (1992) 503 U.S. 91, 101, quoting 33 U.S.C. § 1251(a).
[11] 33 U.S.C. § 1313(a), (c)(1); 40 C.F.R. § 131.2.
[12] 33 U.S.C. § 1313(c)(2)(A); 40 C.F.R. §§ 131.6, 131.10, 131.11, 131.12.
[13] See 40 C.F.R. § 131.11(b).
[14] Wat. Code, § 13000.
[15] *Id.* §§ 13100,13140, 13200, 13201, 13241, 13243.
[16] See *id.*, § 13240.
[17] *Id.*, § 13050, subd. (j).
[18] See *City of Burbank v. State Water Resources Control Board* (2005) 35 Cal.4th 613, citing 33 U.S.C. § 1370.

Provisions) for waters that require water quality standards under the Clean Water Act and such plans supersede standards in basin plans if there is a conflict.[19]

The Clean Water Act also makes it unlawful to discharge pollutants[20] into waters of the U.S. from any point source without first obtaining an NPDES permit.[21] As with the development of water quality standards, the federal government, by and large, relies on states to issue NPDES permits.[22] A permit translates the act's general requirements into specific obligations that allow a discharger to comply with the act.[23] Shortly after Congress added the NPDES program to the Clean Water Act, the California Legislature determined that it was in the interest of the people to have the State issue NPDES permits in lieu of the U.S. EPA "to avoid direct regulation by the federal government of persons already subject to regulation under state law . . . ."[24] The Legislature added chapter 5.5 to the Porter-Cologne Act to achieve that goal and to align California law with federal law.[25] Under chapter 5.5 of the Porter-Cologne Act, the State Water Board and the regional water boards issue waste discharge requirements that serve as NPDES permits.[26] Those requirements "are the equivalent of the NPDES permits required by federal law."[27] Chapter 5.5 also includes Water Code section 13383, which provides the Water Boards with the authority to establish monitoring, inspection, entry, reporting, and recordkeeping requirements for NPDES permittees.[28]

In 1987, Congress amended the Clean Water Act to require NPDES permits for industrial and municipal storm water discharges.[29] The amendments to the Clean Water Act require NPDES permits for a discharge from an MS4 serving a population of 100,000 or more.[30] The Clean Water Act contains three provisions specific to MS4 permits: (1) permits may be issued on a system- or jurisdiction-wide basis; (2) permits must include a requirement to effectively prohibit non-storm water discharges into storm sewers; and (3) permits must require controls to reduce the discharge

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[19] Wat. Code, § 13170.

[20] The U.S. EPA regulations implementing the NPDES program define "pollutant" as "dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials . . . heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water." 40 C.F.R. § 122.2. Trash falls within this definition. See e.g., *Environmental Defense Center v. U.S. EPA* (9th Cir. 2003) 344 F.3d 832, 840–41; *City of Arcadia* (2006) 135 Cal.App.4th 1392, 1403–1407.

[21] 33 U.S.C. §§ 1311, 1342.

[22] See 33 U.S.C. §§ 1251(b), 1342(b).

[23] See 33 U.S.C. § 1342(k).

[24] Wat. Code, § 13370.

[25] *Id.* § 13372.

[26] *Id.* § 13377. The Porter-Cologne Act is more expansive than the federal Clean Water Act. For discharges of waste that are not subject to the federal act (either because the discharges are exempt from the federal act or do not involve the addition of a pollutant from a point source), the Water Boards issue waste discharge requirements outside of chapter 5.5 relying on Water Code section 13263. Among other things, section 13263 requires that waste discharge requirements must implement any relevant water quality control plans. (*Id.*, §§ 13263, subd. (a), 13240–13248.)

[27] *City of Burbank v. State Water Resources Control Board* (2005) 35 Cal.4th 613, 621 *(City of Burbank),* citing Wat. Code, § 13374.

[28] Wat. Code, § 13383, subd. (a). The Water Boards also have broader authority under Water Code section 13267 to require technical and monitoring of any discharger. (See Wat. Code, § 13267, subd. (b)(1).)

[29] 33 U.S.C. § 1342(p).

[30] 33 U.S.C. §1342 (p)(2)(C). U.S. EPA defines MS4s that serve a population between 100,000-249,999 as "medium" MS4s and over 250,000 as "large" MS4s. Medium and large MS4s are known as Phase I MS4s. U.S. EPA issued regulations in 1999 extending permit requirements to "small" MS4s (those serving a population of less than 100,000). These small MS4s are known as Phase II MS4s.

of pollutants to the maximum extent practicable (MEP),[31] including management practices, control techniques, and system, design and engineering methods, and such other provisions as the permitting agency determines appropriate for the control of such pollutants.[32] Controlling MS4 discharges is important because storm water and non-storm water discharges are among the most significant sources of water pollution in the nation.[33] When storm water flows over urban environs, it collects trash and debris, heavy metals, sediments, nutrients (nitrogen and phosphorus), petroleum products, untreated sewage, pesticides, and other toxic pollutants, which are then discharge to creeks, rivers, estuaries, bays and oceans.[34]

### *B. Trash Amendments*

1. Trash is a widespread water quality problem

Trash in the State's surface waters is a pervasive problem and adversely affects numerous beneficial uses, including wildlife habitat, marine habitat, preservation of rare and endangered species, fish migration, navigation, and water contact and non-contact recreation.[35] Trash includes items such as cigarette butts, fast food containers, plastic grocery bags, cans and bottles, used diapers, construction site debris, old tires, and appliances.[36] Aquatic life and wildlife can be harmed by the ingestion of or entanglement with trash, and their habitats can be degraded by trash.[37] Trash can also serve as a transport medium for pollutants and as a hiding place and breeding ground for invasive species.[38] Additionally, trash jeopardizes public health and safety and poses a hindrance to recreational, navigational, and commercial activities.[39] Studies show that trash is predominantly generated on land and frequently ends up in waterbodies and the ocean through storm water discharges after heavy rain events.[40]

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[31] MEP means "to the maximum extent possible, taking into account equitable considerations of synergistic, additive, and competing factors, including but not limited to, gravity of the problem, fiscal feasibility, public health risks, societal concern, and social benefits. (See e.g., San Diego Water Board AR, p. 154, fn. 1.) The MEP approach is an ever-evolving, flexible and advancing concept, which considers technical and economic feasibility. As knowledge and technology regarding controlling storm water runoff continues to evolve, so too must the actions that are taken to comply with the MEP standard. Successive permits issued to MS4 dischargers thus require greater levels of specificity over time in defining what constitutes MEP. This is consistent with Congress's intent that state management programs evolve based on changing conditions from program development and implementation and corresponding improvements in water quality. (E.g., 55 Fed. Reg. 47990, 48052 ["EPA anticipates that storm water management programs will evolve and mature over time."]; 64 Fed. Reg. 68722, 68754 (Dec. 8, 1999) ["EPA envisions application of the MEP standard as an iterative process."]).

[32] 33 U.S.C. § 1342(p)(3)(B).

[33] *Environmental Defense Center, Inc. v. EPA* (9th Cir. 2003) 344 F.3d 832, 840.

[34] *Id.* at pp. 840–841.

[35] Trash Provisions AR, p. 6626; see also *id.* at pp. 5905–5906.

[36] *Id.* at p. 5889.

[37] *Id.* at p. 5888.

[38] *Ibid.*

[39] *Ibid.*

[40] See *id.* at p. 6626.

2. The State Water Board adopted the Trash Amendments to address trash on a statewide basis

To control and reduce the amount of trash entering surface waters across the state, the State Water Board adopted an amendment to the Water Quality Control Plan for the Ocean Waters of California to Control Trash and adopted Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (Trash Provisions) on April 7, 2015.[41] The Office of Administrative Law approved the Trash Provisions on December 2, 2015.[42] Then on January 12, 2016, the U.S. Environmental Protection Agency approved the water quality standards—the narrative water quality objective and the discharge prohibition—in the Trash Provisions, making the standards effective for implementation through NPDES permits.[43] The Trash Provisions apply to the state's ocean waters and all surface waters of the state, except those waters within the jurisdiction of the Los Angeles Regional Water Quality Control Board where trash total maximum daily loads were in effect prior to the effective date of the Trash Provisions.[44]

3. The Trash Amendments include a water quality objective, a discharge prohibition, implementation provisions, and a time schedule

The Trash Provisions provide a consistent, statewide regulatory approach to protect aquatic life and public health beneficial uses from the adverse effects of trash, while focusing limited resources on high trash-generating areas.[45] The Trash Provisions include a narrative water quality objective for trash, a prohibition on the discharge of trash, implementation provisions for permitted storm water and other dischargers, a time schedule for compliance, and monitoring and reporting requirements.[46] The narrative water quality objectives in the Trash Provisions, when read together, provide that trash shall not be present in ocean waters, inland surface waters, enclosed bays, or estuaries, or along shorelines or adjacent areas, in amounts that adversely affect beneficial uses or cause nuisance.[47] The discharge prohibition provides that "the discharge of trash to surface waters of the State and the deposition of trash where it may be discharged into surface waters of the state is prohibited."[48] The water quality objective is implemented through the discharge prohibition and through NPDES storm water discharge permits, waste discharge requirements (WDRs), and waivers of WDRs.[49]

The implementation provisions focus on dischargers under existing storm water permits, specifically Phase I MS4 permits, the NPDES General Permit for Storm Water Discharges from Small MS4s (Phase II MS4 permit),[50] the NPDES Statewide Storm Water Permit WDRs for State of California Department of Transportation,[51] the NPDES General Permit for Storm Water

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[41] See *id.* at pp. 6626–31, 6198–6222.
[42] Office of Administrative Law, letter to State Water Board, Dec. 2, 2015. Also available at https://www.waterboards.ca.gov/water_issues/programs/trash_control/docs/oal_approval_letter.pdf.
[43] U.S. EPA, letter, Jan. 12, 2016. Also available at https://www.waterboards.ca.gov/water_issues/programs/trash_control/docs/usepa_approval.pdf.
[44] Trash Provisions AR, p. 6627.
[45] *Id.* at p. 5910.
[46] *Ibid.*
[47] *Id.* at pp. 6198, 6211.
[48] *Id.* at pp. 6198, 6212.
[49] *Id.* at pp. 6199, 6212.
[50] State Water Board Order 2013-0001-DWQ.
[51] State Water Board Order 2012-0011-DWQ, as amended by Orders 2014-0006-EXEC, 2014-0077-DWQ, 2015-0036-EXEC, and 2017-0026-EXEC.

Discharges Associated with Construction and Land Disturbance Activities[52] (Construction General Permit), and the NPDES General Permit for Storm Water Discharges Associated with Industrial Activities[53] (Industrial General Permit).[54] The requirements for dischargers under these NPDES storm water permits vary—whereas dischargers of storm water associated with industrial activities (including construction activities) are generally required to comply by eliminating trash from all storm water and authorized non-storm-water discharges in accordance with the outright prohibition, MS4 operators are provided with a less stringent compliance path based on the installation, operation, and maintenance of full-capture systems or a combination of controls that achieve full-capture equivalency in significant trash generating areas and/or priority land uses.[55] Specifically, to comply with the trash discharge prohibition, the Phase I and Phase II MS4 permittees with control over priority land uses[56] must select one of two tracks:

> Track 1: Install, operate, and maintain full capture systems for all storm drains that capture runoff from priority land uses in their jurisdictions; or
>
> Track 2: Install, operate, and maintain any combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls within the jurisdiction of the MS4 permittee or within the jurisdiction of the MS4 permittee and contiguous MS4 permittees. The MS4 permittee may determine the locations or land uses within its jurisdiction to implement any combination of controls. The MS4 permittee shall demonstrate that such combination achieves full capture system equivalency. The MS4 permittee may determine which controls to implement to achieve compliance with full capture system equivalency. It is, however, the State Water Board's expectation that the MS4 permittee will elect to install full capture systems where such installation is not cost-prohibitive.[57]

The California Department of Transportation (Department or Department of Transportation) must comply with the discharge prohibition under Track 2: installation, operation, and maintenance of a combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls for all storm drains that capture runoff from significant trash generating areas and/or priority land uses, and demonstration that the chosen combination achieves full capture equivalency.[58] Under the Trash Provisions, the Department is also required to coordinate with MS4 permittees in areas of overlapping jurisdiction.[59]

Although industrial dischargers[60] are required to eliminate all trash from their discharges, if the industrial discharger demonstrates that they cannot comply with the outright prohibition, the permitting water board may require an industrial discharger to implement a compliance method that mirrors Track 1 or Track 2: (1) install, operate, and maintain full capture systems for all storm

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[52] State Water Board Order 2009-0009-DWQ, as amended by Orders 2010-0014-DWQ and 2012-0006-DWQ.
[53] State Water Board Order 2014-0057-DWQ, as amended by Order 2015-0122-DWQ.
[54] Trash Provisions AR, p. 5912.
[55] *Id.* at pp. 5912–5915.
[56] "Priority land uses" are the land uses within a MS4 permittee's jurisdiction that studies have shown generate significant sources of trash. (Trash Provisions AR, p. 6221; see also *id.* at 5913.) Priority land uses include high-density residential, industrial, commercial, mixed urban, and public transportation stations. (*Id.* at p. 6221.)
[57] *Id.* at pp. 6200, 6213, endnotes omitted.
[58] *Ibid.*; see also *id.* at p. 5911, 5915.
[59] State Water Board 13383 Orders AR, p. 1739.
[60] "Industrial dischargers" refers to dischargers covered under the Industrial General Permit and/or the Construction General Permit.

drains that capture runoff from the facility or site regulated by the NPDES permit; or (2) install, operate, and maintain any combination of full capture systems, other treatment controls, and/or institutional controls for the facility or site regulated by the NPDES permit, and demonstrate that the combination of controls achieves full capture system equivalency.[61]

Finally, there is the time schedule for implementation of the trash discharge prohibition. On or before June 2, 2017, the State Water Board and the regional water quality control boards were required to either (1) modify, reissue, or adopt MS4 permits to over which they have permitting authority to implement the Trash Provisions, or (2) issue an order pursuant to Water Code section 13267 or 13383 to MS4 permittees to require the permittee to submit written notice stating whether the permittee would comply with prohibition under Track 1 or Track 2.[62] Specifically, regarding the second option, the Trash Provisions required the State Water Board and regional water quality control boards to—

> Issue an order pursuant to Water Code section 13267 or 13383 requiring the MS4 permittee to submit, within three (3) months from receipt of the order, written notice to the permitting authority stating whether such MS4 permittee will comply with the prohibition of discharge under Chapter III.L.2.a.1 (Track 1) or Chapter III.L.2.a.2 (Track 2). . . . Within eighteen (18) months of the receipt of the Water Code section 13267 or 13383 order, MS4 permittees that have elected to comply with Track 2 shall submit an implementation plan to the permitting authority that describes: (i) the combination of controls selected by the MS4 permittee and the rationale for the selection, (ii) how the combination of controls is designed to achieve full capture system equivalency, and (iii) how full capture system equivalency will be demonstrated.[63]

Under the time schedule, the MS4 permittees are required to achieve full compliance with their chosen track within 10 years of the effective date of the first implementing MS4 NPDES permit, but full compliance may not be later than 15 years after the effective date of the Trash Provisions.[64]

The time schedule also required the State Water Board to issue an order pursuant to Water Code section 13267 or 13383 to require the Department of Transportation to submit an implementation plan that addresses the following: "(i) describes the specific locations of its significant trash generating areas, (ii) the combination of controls selected by the Department and the rationale for the selections, and (iii) how it will demonstrate full capture system equivalency."[65] Like the other MS4 permittees, the Department of Transportation is required to achieve full compliance with its prohibition implementation requirements within 10 years of the effective date of the first implementing permit, but no later than 15 years after the effective date of the Trash Provisions.[66]

The industrial dischargers must comply with the outright prohibition in accordance with the deadlines in the first implementing permits, and any such deadlines may not exceed the five-year term of the first implementing permits.[67]

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[61] Trash Provisions AR, pp. 6201, 6214; see also *id.* at 5911, 5915, 5981.
[62] *Id.* at 6215–6216.
[63] *Id.* at 6215–6216 (endnotes omitted.)
[64] *Id.* at 6203-6204, 6216.
[65] *Id.*,at 6204, 6217, internal endnotes omitted.
[66] *Ibid.*
[67] Trash Provisions AR at pp. 6204, 6217, internal endnotes omitted.

### *C. State Water Board Issued Water Code Section 13383 Orders to Phase II MS4 Permittees and the Department as Required by the Trash Provisions*

Following adoption and approval of the Trash Provisions, the State Water Board took steps to comply with its implementation requirements for permittees enrolled under the Phase II MS4 Permit. Because the State Water Board did not anticipate amending the existing Phase II MS4 Permit within the time frame specified by the Trash Provisions, the State Water Board issued Water Code section 13383 orders on June 1, 2017 to 153 "traditional" Phase II MS4 permittees (i.e., local governmental entities such as cities and counties), as well as 93 "non-traditional" Phase II MS4 permittees.[68] Non-traditional MS4 permittees include state entities such as parks, universities, or prisons and federal entities such as military bases and hospital complexes.

In accordance with the Trash Provisions, the Water Code section 13383 orders issued by the State Water Board required Phase II traditional MS4 permittees to determine and report their selection of either the Track 1 or Track 2 compliance method, to conduct trash assessments if Track 2 was chosen, and to submit an implementation plan.[69] Non-traditional permittees may have land uses and locations that generate substantial amounts of trash, but do not clearly fit under the definition of "priority land use."[70] The Trash Provisions provide the State Water Board with the authority to determine that specific land uses or locations generate substantial amounts of trash and to require the MS4 to comply with trash treatment requirements with respect to such land uses or locations.[71] Through the Water Code section 13383 orders, the State Water Board accordingly required the Phase II MS4 non–traditional permittees to determine and report to the State Water Board the locations and land uses within their jurisdiction that generate substantial amounts of trash, to report their selection of either Track 1 or Track 2 for those land uses, to conduct trash assessments if Track 2 was chosen, and to submit an implementation plan.[72]

The State Water Board also issued a Water Code section 13383 order to the Department of Transportation on June 1, 2017. Consistent with the Trash Provisions, the order required the Department to submit an implementation plan to the State Water Board that includes the following:

> i. Geographic Information System- mapped information identifying specific locations of significant trash generating areas;
> ii. The combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls selected by the Department and the rationale for the selections; and
> iii. The Department's method for demonstrating full capture system equivalency.[73]

### *D. The San Diego Water Board Issued its Trash Order to its Phase I MS4 Permittees to Comply with the Trash Provisions*

Like the State Water Board, the San Diego Water Board and other regional water boards took steps to comply with the implementation requirements of the Trash Provisions. On June 2, 2017, the San Diego Water Board issued a Water Code section 13383 order to the 39 Phase I entities

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[68] See Administrative Record for State Water Board Trash Investigative Orders (State Water Board Trash Orders AR), pp. 1–1735, 1738–1742.
[69] See e.g., *id.* at pp. 397–398.
[70] See *supra* fn. 49.
[71] See Trash Provisions AR, pp. 6201, 6204, 6214, 6217.
[72] See e.g., State Water Board Trash Orders AR, pp. 796–797.
[73] *Id.* at p. 1740.

in its jurisdiction to fulfill its requirements under the Trash Provisions.[74] The first directive required San Diego Region MS4 owners and operators to submit a written notice stating selection of Track 1 or Track 2 to comply with the trash discharge prohibition.[75] If a copermittee selected Track 1, that copermittee was required to submit a jurisdictional map depicting required elements and a time schedule for achieving full compliance with the trash discharge prohibition.[76] If a copermittee selected Track 2, that copermittee was required to submit an implementation plan to the San Diego Water Board not later than December 3, 2018. The Track 2 implementation plan was required to describe: the combination of controls selected and the rationale for the selection; how the combination of controls is designed to achieve full capture system equivalency; how full capture system equivalency will be demonstrated; a description of how the implemented controls will be monitored and assessed in jurisdictional runoff management program or Water Quality Improvement Plan Annual Reports; and any proposals to substitute Priority Land Uses "provided that the total trash generated in other locations or land uses is equivalent to, or greater than, the total trash generated in the Priority Land Use being substituted;" and a time schedule to achieve full compliance with the trash discharge prohibition and interim milestones.[77]

Finally, each copermittee was required to submit, not later than December 3, 2018, a description of how the MS4 permittees intended to coordinate efforts with the Department of Transportation "to install, operate and maintain full capture systems, multi-benefit projects, and other controls in significant trash generating areas and/or priority land uses[.]"[78] These were the only actions required under the San Diego Trash Order. While the San Diego Trash Order did discuss some of the other requirements of the Trash Provisions and potential methods of implementation upon incorporation into the Regional MS4 Permit,[79] the Order did not require the copermittees to take any actions in furtherance of those requirements or otherwise require any ongoing implementation of the Trash Provisions.

### *E. MS4 Permits Issued by the San Diego Water Board*

The San Diego Region includes all of San Diego County and portions of Orange and Riverside Counties. Beginning in 1990, the San Diego Water Board issued MS4 permits for each of these counties and the municipalities within them. The permits were reissued separately for each county and its copermittees. After declaring its intent to develop a region-wide MS4 permit, the fourth and most recent permit reissuance was accomplished in phases. San Diego County copermittees were the first to be covered in 2013. Then, in February and November 2015 the permit was amended to incorporate copermittees in Orange and Riverside Counties, respectively. This "fifth

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[74] San Diego Trash Order AR, pp. 2049-2061.
[75] *Id.*, at p. 2058.
[76] *Ibid.*
[77] *Id.*, at pp. 2058-2059.
[78] *Id.*, at p. 2059. As will be discussed below, the Trash Amendments also require the Department, through modifications to its MS4 permit, to comply with the trash discharge prohibition adopted in the Trash Amendments.
[79] *Id., see, e.g.*, pp. 2054-2056.

term" permit applicable to all 39 MS4 owners and operators[80] within the San Diego Region is commonly referred to as the Regional MS4 Permit.[81]

Prior to the adoption of the Trash Provisions, the San Diego Water Board had already recognized the challenges posed by trash in receiving waters. The Board recognized trash as among the most common pollutants in runoff discharged from MS4s in the San Diego Region[82] and consistently characterized trash as a persistent pollutant "that can enter receiving waters from the MS4, accumulate, and be transported downstream into receiving waters over time." Similarly, the San Diego Water Board recognized that "[t]rash poses a serious threat to the beneficial uses of the receiving waters, including, but not limited to, human health, rare and endangered species, navigation and human recreation."[83] In an effort to address trash, the Water Quality Control Plan for the San Diego Region (Basin Plan) establishes numerous waste discharge prohibitions applicable to trash (as well as other pollutants). For example, the Basin Plan prohibits: "[t]he discharge of pollutants . . .to waters of the United States except as authorized by an NPDES permit . . . ,"[84] and prohibits the discharge of trash by specifying that "[t]he dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the regional board."[85] MS4 permittees, including Claimants, are subject to applicable Basin Plan prohibitions.[86] The Basin Plan also includes a narrative water quality objective providing that "[w]aters shall not contain floating material, including solids, liquids, foams, and scum in concentrations which cause nuisance or adversely affect beneficial uses."[87]

As required by the Clean Water Act, the San Diego Water Board began including in MS4 permits requirements to control the discharge of pollutants, including trash, into waters of the U.S. to the maximum extent practicable and also required permittees to effectively prohibit non-storm water discharges to the MS4. Successive permit iterations largely carried over the effective components of the previous term and built on the prior permit requirements. In addition to trash-specific requirements described below, the San Diego Water Board's MS4 permits have also included monitoring and reporting provisions pursuant to Water Code section 13383. These provisions

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[80] Copermittees, as used herein, refers to a subset of or all 39 entities regulated under the Regional MS4 Permit. Claimants, as used herein, refers only to the County of San Diego and the City of San Juan Capistrano.

[81] Order No. R9-2013-0001, as amended in February and November 2015, NPDES No. CAS0109266, *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region.* See San Diego Trash Order AR, pp. 1458-1855.

[82] See, e.g., Order No. R9-2013-0001, as amended by Order Nos. R9-2015-0001 and R9-2015-0100 (Regional MS4 Permit) (Finding No. 12) (San Diego Trash Order AR, p. 1465); Order No. R9-2010-0016 (Riverside) (Finding No. 3) (San Diego Trash Order AR, p. 1075); Order No. R9-2009-0002 (Orange County) (Finding No. 3) (San Diego Trash Order AR, p. 689); Order No. R9-2007-0001 (San Diego) (Finding No. 2) San Diego Trash Order AR, pp. 443-444); Order No. R9-2004-0001 (Riverside) (Finding No. 5) (San Diego Trash Order AR, p. 371); Order No. R9-2002-0001 (Orange County) (Finding No. 7) (San Diego Trash Order AR, p. 292); Order No. R9-2001-01 (San Diego) (Finding No. 7) (San Diego Trash Order AR, p. 211).

[83] Order No. R9-2010-0016, Finding 8 and Order No. R9-2009-0002, Finding No. 8 (San Diego Trash Order AR, pp. 1077 and 691.)

[84] Basin Plan, Waste Discharge Prohibition (3), p. 4-17.

[85] Basin Plan, Waste Discharge Prohibition (7), p. 4-17.

[86] San Diego Trash Order AR, see, e.g., pp. 217, 519-520, 706, 779-780, 1091, 1162-1163; pp. 1602-1603.

[87] Basin Plan, p. 3-24.

require copermittees, including Claimants, to report results of monitoring and other studies required under Water Code section 13383.

San Diego County

The first MS4 permit for San Diego County copermittees was issued in 1990.[88] The permit was renewed in 2001[89] and again in 2007 (2007 San Diego County Permit).[90] The 2007 San Diego County Permit built on the earlier provisions but added receiving water monitoring and reporting requirements specifically relevant to trash. The monitoring and reporting requirements in the 2007 San Diego County Permit were authorized by Water Code section 13383.[91] The San Diego Water Board explained the need for a monitoring program to address trash as follows:

> A program to monitor trash is needed because trash conditions impacting beneficial uses have frequently been observed within the Copermittees' jurisdictions. For example, the Regional Board directed the Copermittees within the watersheds of Chollas and Paleta Creeks to implement the 'iterative process' to address violations of water quality standards due to trash conditions within the creeks. [Fn. omitted.] The Regional Board also issued a Notice of Violation to the City of Escondido for trash conditions in Escondido Creek. [Fn. omitted.] Moreover, the Copermittees have identified trash as a regional priority. [Fn. omitted][92]

Based upon this rationale, the 2007 San Diego County Permit required copermittees to perform a trash assessment:

> The Copermittees shall collaborate to develop and implement a program to assess the presence of trash (anthropogenic litter) in receiving waters. The program shall collect and evaluate trash data in conjunction with collection and evaluation of analytical data. This monitoring program shall be implemented within each watershed and shall begin no later than the 2007-2008 monitoring year. [93]

In addition, as part of the Jurisdictional Urban Runoff Management Program, permittees were required to report statistics on the presence of trash and/or debris such as the "total distance of curb-miles of improved roads, streets, and highways identified as consistently generating" the highest, moderate and lowest volumes of trash and/or debris.[94] Similarly, permittees were required to report on the "[a]mount of waste from catch basins, inlets, the MS4, and open channels, by category."[95] Similarly, in the urban runoff monitoring program, copermittees were required to monitor and report on a watershed basis for each hydrologic unit on multiple components including to: "Assess the presence of trash in receiving waters and urban runoff at each dry weather field screening or analytical monitoring station. Assessments of trash shall

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[88] San Diego Trash Order AR, pp. 42-84.
[89] *Id.*, pp. 209-289.
[90] *Id.*, pp. 442-682.
[91] *Id.*, p. 556.
[92] *Id.*, p. 670.
[93] *Id.*, pp. 543-546.
[94] *Id.*, p. 509.
[95] *Ibid.*

provide information on the spatial extent and amount of trash present, as well as the nature of the types of trash present."[96]

Separate from monitoring and reporting, San Diego County copermittees were required to begin instituting more robust trash controls. The 2007 San Diego County Permit required copermittees, as part of their Standard Urban Storm Water Mitigation Plan, to institute source control best management practices such as (1) to require developers of Priority Development Projects to "[i]nclude properly designed trash storage areas;"[97] and (2) for existing municipal development, to "implement, or require implementation of, additional controls for special events within their jurisdiction that are expected to generate significant trash and litter."[98] Permittees were also required to implement structural controls to address trash such as (1) to perform regular inspections of "all MS4 facilities that receive or collect high volumes of trash and debris"; (2) to clean in a timely manner "[a]ny catch basin or storm drain inlet that has accumulated trash and debris greater than 33% of design capacity;" and (3) "any MS4 facility that is designed to be self cleaning shall be cleaned of any accumulated trash and debris immediately. Open channels shall be cleaned of observed anthropogenic litter in a timely manner." In addition, copermittees were required to retain records "of the maintenance and cleaning activities including the overall quantity of waste removed."[99] Finally, the 2007 San Diego County Permit also required street sweeping practices to address trash and debris[100] and required permittees to implement a regional residential education program to address residential sources of pollutants including trash.[101]

As explained in the 2007 San Diego County Permit Fact Sheet, many of these source control and reporting provisions pertaining to trash were attributed to the copermittees' identification of trash removal as a priority issue in their long term effectiveness assessment submitted to the San Diego Water Board.[102]

Orange County

The first permit for Orange County Phase I MS4 permittees was issued in 1990[103] The county-specific permit was renewed in 1996,[104] 2002[105] and again in 2009.[106] In the fourth term Orange County MS4 permit (2009 Orange County Permit), copermittees were required to perform and report the results of a "Trash and Litter Impairment Special Study[107] as part of their Water Code section 13383 Monitoring and Reporting Program. The Trash and Litter Impairment Investigation specified that copermittees "must develop and implement a special investigation beginning no later than 2 years following adoption of this Order to assess trash (including litter) as a pollutant within receiving waters on a watershed based scale." For each location identified in the study, trash was required to be monitored during both the wet and dry season and the assessment

[96] *Id.*, pp. 553-554.
[97] *Id.*, p. 461.
[98] *Id.*, p. 474.
[99] *Id.*, pp. 474-475.
[100] *Id.*, p. 475.
[101] *Id.*, p. 491.
[102] *Id.*, p. 631.
[103] *Id.*, pp. 1-41.
[104] *Id.*, pp. 153-181.
[105] *Id.*, pp. 290-369,
[106] *Id.*, pp. 683-1067.
[107] *Id.*, p. 805.

results reported in the Monitoring Annual Report required pursuant to Water Code section 13383.[108]

The 2009 Orange County Permit also required copermittees, as part of their Jurisdictional Regional Monitoring Program, to implement source control best management practices to address trash. For example, permittees were required to implement source control best management practices for land development, including properly designed trash storage areas to reduce storm pollutants of concern in runoff.[109] Like the 2007 San Diego Permit, Orange County's 2009 permit required implementation of best management practices for special events expected to generate significant amounts of trash.[110] Permittees were required to implement a schedule of maintenance activities which at a minimum needed to include "inspection and removal of accumulated waste at least once a year . . .for all MS4 facilities;"[111] Copermittees were required to clean open channels of "observed anthropogenic litter in a timely manner;" and required to maintain records of the "overall quantity of waste removed." [112]

In support of the trash reporting and control requirements in the 2009 Orange County Permit, the San Diego Water Board observed that "[t]he retrofitting of existing MS4 systems, such as catch basins, in targeted high trash areas can result in significant reductions in the amount of trash entering receiving waters from the MS4." The San Diego Water Board also cited a Department of Transportation Study which, in part, "found that of roadway trash, plastics and Styrofoam accounted for 33 percent of trash by weight, and 43 percent by volume. Further, the study found that approximately 80 percent of the litter associated with roadways was floatable, indicating that, without capture, this litter would enter Waters of the State after a storm event, resulting in the impairment of Beneficial Uses."[113]

Riverside County

Like the other counties, the first MS4 permit for Riverside County and its copermittees was issued in 1990.[114] The permit was renewed in 1998 (subsequently modified),[115] 2004[116] and again in 2010.[117] Like the 2007 San Diego County and 2009 Orange County permits, the 2010 Riverside County Permit required permittees to implement source and structural controls to address trash and to report on these efforts. Development projects were required to have properly designed trash storage areas.[118] For municipal facilities, copermittees were expected to designate best management practices for special events expected to generate significant trash and litter.[119] Riverside County copermittees were required to implement regular street sweeping and to inspect and remove accumulated waste, clean open channels of observed litter and maintain records of

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[108] *Id.*, p. 823.
[109] *Id.*, pp. 716, 722.
[110] *Id.*, p. 741.
[111] *Id.*, p. 743.
[112] *Ibid.*
[113] San Diego Trash Order AR, p. 909, citing California Department of Transportation District 7 Litter Management Pilot Study, June 26, 2000.
[114] *Id.*, pp. 85-152.
[115] *Id.*, pp. 182-208.
[116] *Id.*, pp. 370-441.
[117] *Id.*, pp. 1068-1457.
[118] *Id.*, pp. 1101, 1108.
[119] *Id.*, p. 1126.

these activities, including "the overall quantity of waste removed."[120] The 2010 Riverside County Permit copermittees were required to record observations as to the presence of trash at MS4 outfall and receiving waters as part of their Receiving Water Monitoring and Reporting Program.[121]

As part of their monitoring and reporting program[122] issued under the Water Code section 13383, Riverside County copermittees were also required to perform a special study to investigate and assess on trash and litter in receiving waters. Similar to Orange County, Riverside County copermittees were required to assess the presence of trash during wet and dry weather and to report, at a minimum "source identification, an evaluation of BMPs for trash reduction and prevention, and a description of any BMPs implemented in response to study results."[123] As with the 2009 Orange County Permit, the San Diego Water Board also cited the same Department of Transportation Study reporting statistics associated with trash from roadways being transported to waters of the state.[124]

The San Diego Water Board explained the basis for the Riverside County special study requirements, finding:

> The objective of the study is to evaluate the quantity, type, and source(s) of trash and litter in receiving waters (see Finding E.12 and Discussion regarding regional efforts). Although trash can impair beneficial uses, the amount and type of trash discharged into receiving waters from the Copermittee(s) MS4 is unknown. Thus, the Copermittees have largely been unable to assess the effectiveness of their BMPs that target trash as a pollutant. The special study requires the Copermittees to utilize previously developed protocols to determine the source of trash and litter in receiving waters, assess BMP effectiveness, and implement additional BMPs if needed according to the requirements of the Order. Qualitative and quantitative protocols for trash assessment have already been developed for San Diego County and the San Francisco Bay Region. These protocols are required to be used in the development of the special study, are expected to reduce Copermittee costs, and promote regional consistency in trash and litter assessments.[125]

Regional MS4 Permit

The Regional MS4 Permit covers all 39 Phase I MS4 owners/operators within the San Diego Region and carries over requirements to control the discharge of trash, along with other pollutants, from MS4s, to the maximum extent practicable. The Regional MS4 Permit also carries over requirements from prior permits requiring protected trash storage areas and other source control requirements to prevent trash from entering MS4s. For example, Claimants are required to implement "source control BMPs at all development projects where applicable and feasible: . . . [p]rotect trash storage areas from rainfall, run-on, runoff, and wind dispersal[.]"[126] More general provisions in the Regional MS4 Permit also require copermittees to address trash. For example,

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[120] *Id.*, pp. 1127-1128.
[121] *Id.*, p. 1203.
[122] See, *id. e.g.*, p. 1373
[123] *Id.*, p. 1208.
[124] *Id.*, p. 1293, citing California Department of Transportation District 7 Litter Management Pilot Study, June 26, 2000.
[125] *Id.*, p. 1454.
[126] *Id.*, p. 1554.

as part of their Jurisdictional Runoff Management Programs, copermittees are required to "[c]ontrol the discharge of spills, dumping, or disposal of materials other than storm water into its MS4[.]" Provisions like this apply equally to trash and other pollutants. Discharges of trash to Areas of Special Biological Significance are prohibited through the Permit.[127]

In addition, as with the prior county-specific MS4 permits, the Regional MS4 Permit requires copermittees to perform monitoring and to report the results pursuant to Water Code section 13383.[128] As part of these monitoring requirements, the Regional MS4 Permit requires copermittees, including Claimants, to perform assessment of receiving water conditions, including assessment of trash impacts based on available information, and report results to the San Diego Water Board.[129]

## III. OVERVIEW OF MANDATES LAW

California mandates law has its origins in the late 1970s, when Proposition 13 and Proposition 4 added articles XIII A and XIII B to the California Constitution, limiting state and local government's taxing and spending powers.[130] Section 6 of Article XIII B provides that "[w]henever the Legislature or any state agency mandates a new program or higher level of service on any local government, the State shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service."[131]

The purpose of section 6 is to "avoid governmental programs from being forced on localities by the state"[132] and "thereby transferring to those [local] agencies the fiscal responsibility for providing services which the state believe[s] should be extended to the public."[133] Consistent with the intent of section 6, subvention is only appropriate "for the costs involved in carrying out functions peculiar to government, not for expenses incurred by local agencies as an incidental impact of laws that apply generally to all state residents and entities"—laws of general application do not *force* programs on local agencies.[134] The fact that a requirement may single out local governments is not dispositive; where local agencies are required to perform the same functions as non-local agencies and private industry, no subvention is required.[135]

Further, to warrant subvention, the local agency must be required to expend proceeds of its tax revenue and there must be a compulsion to expend revenue.[136] The State is not required to provide a subvention of funds for an executive order if the local agency has the authority to levy service charges, fees, or assessments to pay for the mandated program or higher level of

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[127] *Id.*, p. 1604; Numerous other provisions to control trash apply in Areas of Special Biological Significance, see San Diego Trash Order AR, pp. 1602-1621.
[128] See *id.*, p. 1463 ("CWC section 13383 authorizes the San Diego Water Board to establish monitoring, inspection, entry, reporting and recordkeeping requirements.").
[129] *Id.*, p. 1484.
[130] *Department of Finance v. Commission on State Mandates* (Kern High School District) (2003) 30 Cal.4th 727,735.
[131] Cal. Const., art. XIII B, § 6, subd. (a).
[132] *County of Los Angeles v. Commission on State Mandates* (2003) 110 Cal.App.4th 1176, 1189.
[133] *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56.
[134] *Id.* at 56–57.
[135] *City of Richmond v. Commission on State Mandates* (1998) 64 Cal.App.4th 1190.
[136] *See County of Los Angeles, supra,* 110 Cal.App.4th at 1189.

service.[137] Subvention is only required if the local government is required to expend proceeds of its tax revenue, which is not the case if the costs can be reallocated or paid for with fees.[138]

## IV. ARGUMENT

Claimants are not entitled to the subvention of funds for the costs associated with complying with the San Diego Trash Order. First, the Trash Order did not impose a program under section 6 of article XIII B. Claimants did not provide a governmental service to the public by complying with the Trash Order—neither the submission of a letter stating the Claimant's selected track to comply with the trash discharge prohibition nor the submission of an implementation plan provided a service to the public. Likewise, the submission of a description of plans to coordinate with the Department of Transportation provided no service to the public. Further, the requirements of the San Diego Trash Order are not unique to local government. The requirements to provide written notice of track selection and submit an implementation plan apply generally to other MS4 dischargers, including federal and state entities, as evidenced by the orders issued by the State Water Board. The San Diego Water Board also has the authority to issue Water Code section 13383 orders to all NPDES permittees, not just government entities. Next, even if the Trash Order imposed a program, it did not impose a "new" program or require a higher level of service—the Claimants have long been required to submit monitoring and technical reports to the San Diego Water Board pursuant to Water Code section 13383 on various matters, including on trash control measures, trash studies and other trash-related information. Finally, assuming for argument's sake that the Trash Order imposes a new program or requires a higher level of service, subvention still is not warranted because the Claimants have the authority to levy charges, fees, or assessments to pay for the costs of complying with the Trash Order.

### *A. The Trash Order does not impose a program on Claimants*

In order to obtain reimbursement under mandates law, the Claimants must show as a threshold matter that the San Diego Water Board has imposed a "program" on them and, if so, that it established a "new program" or created a "higher level of service" over the previously required level of service.[139] As used in article XIII B, section 6, "program" means either: (1) "a program which carries out the governmental function of providing services to the public," or (2) "laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state."[140] Claimants have not demonstrated—and cannot demonstrate—that the Trash Order constitutes a "program." As explained below, the San Diego Trash Order does not impose a program under either test.

1. Claimants did not carry out the governmental function of providing services to the public by complying with the Trash Order (i.e., by submitting documents)

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[137] Gov. Code § 17556, subds. (c), (d).
[138] *County of Los Angeles v. Commission on State Mandates* (2003) 110 Cal.App.4th 1176; *Redevelopment Agency v. Commission on State Mandates* (1997) 55 Cal.App.4th 976.
[139] Cal. Const., Art. XIII B, § 6, subd. (a); *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 878; *Lucia Mar Unified School District v. Honig* (1988) 44 Cal.3d 830, 835-836.
[140] Cal. Const., Art. XIIIB, § 6, subd. (a); *San Diego Unified School Dist., supra,* at p. 878; *Lucia Mar Unified School Dist., supra,* at p. 835

Claimants broadly assert that the Trash Order imposes a program under both tests outlined above,[141] yet offer no argument or explanation for how the Trash Order required them to carry out the governmental function of providing services to the public. Because Claimants fail to articulate any reasoning for how this test could be met, the Commission should not consider them to have made such an argument. In the event the Commission attributes such an argument to Claimants, the Water Boards explain that the Trash Order required no such public service.

Like others, the San Diego Trash Order was issued pursuant to Water Code section 13383, which is within chapter 5.5. of the Porter-Cologne Water Quality Control Act pertaining to compliance with the Clean Water Act.[142] Under Water Code section 13383, the Water Boards may impose monitoring, inspection, entry, reporting, and recordkeeping requirements on any NPDES permittee in California, whether public or private.[143] Compliance with requirements imposed under Water Code section 13383 does not provide a service to the public; rather, the purpose of the requirements is for NPDES permittees to provide information to the Water Boards, as the permitting authority, to protect water quality. An NPDES permittee, whether a public or a private entity, that received a Water Code section 13383 order would have the same obligation to submit information (albeit different information) to the Water Boards. Merely providing information to the Water Boards in response to such an order does not carry out the governmental function of providing services to the public.

The Trash Order at issue here required the copermittees to submit a letter to the San Diego Water Board identifying the copermittee's selected method of compliance (Track 1 or Track 2) to implement the Trash Provisions. Those that selected Track 2 were also required to submit an implementation plan describing the combination of controls selected, how the combination of controls is designed to achieve full capture system equivalency and how equivalency will be demonstrated, the methodology for determining trash levels, and a justification that alternative land uses generate trash rates that are equivalent to or greater than the priority land uses. The Trash Order also required Claimants to submit a description of how they would coordinate with the Department of Transportation. By submitting these documents, along with the implementation plan submitted by Claimant City, Claimants fulfilled all that was required of them under the Trash Order. Claimants simply did not carry out the governmental function of providing services to the public by submitting a letter to the San Diego Water Board stating their selected implementation method. Nor, did the City of San Juan Capistrano provide services to the public by submitting an implementation plan. Private dischargers too submit reports to the San Diego Water Board as part of their discharge requirements and do not carry out the governmental function of providing services to the public by doing so.

As represented by Claimants, selecting a track and submitting an implementation plan may have required Claimants to engage consultants and meet internally and with other co-permittees to evaluate the two tracks;[144] however, as with the mere submission of documents, these acts did not carry out the governmental function of providing services to the public either. A private NPDES

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[141] Test Claim, 17-TC-05, Narrative Statement, p. 5-24.

[142] The Water Boards also have broader authority under Water Code section 13267 to require technical and monitoring reports of any discharger. (See Wat. Code, § 13267, subd. (b)(1).)

[142] 33 U.S.C. § 1342(p).

[143] Water Code section 13383 is derived from Clean Water Act section 308(a), which authorizes the permitting authority to require any owner or operator of any point source to submit any information the permitting authority may reasonably require to carry out the NPDES permitting program. (See 33 U.S.C. § 1318(a).)

[144] See Test Claim, 17-TC-05, Narrative Statement, p. 5-23.

discharger having to comply with the Trash Provisions in its NPDES permit may also engage consultants and hold meetings internally or with other permittees to evaluate its compliance approach.

While Claimants do not clearly assert that the Trash Order required any performance of trash collection services or implementation of the water quality objective and prohibition established in the Trash Provisions, the City of San Juan Capistrano provides estimated costs anticipated to be incurred in fiscal years 2019-2020 through 2029-2030 for "developing alternative land uses, conducting annual monitoring and reporting, enhanced catch basin cleaning, equipment, and cleaning costs."[145] Claimants also assert that compliance with the Trash Provisions will cost Phase I permittees statewide between $65.6 million and $174.99 million per year.[146] These estimated costs are for activities outside of the requirements of the San Diego Trash Order and the deadlines it imposes. As indicated above, the Trash Order describes other components of the Trash Provisions and stated that the components would be recommended for inclusion in the next iteration of the MS4 permits. However, as previously noted, the Trash Order did not require the Claimants to implement any substantive trash control requirements of the Trash Provisions—the Trash Order only required Claimants to provide written notification of their selected track, and to submit an implementation plan if the Claimant selected Track 2. The Trash Order did not require Claimants to begin implementing the trash-capture requirements under either of the tracks, and the Claimants' submission of documents did not require the implementation of trash controls. If Claimants began undertaking trash control activities to comply with the Trash Provisions in anticipation of future permit requirements, it was of their own volition and not because it was required by the Trash Order.

Moreover, even if the Trash Order were somehow construed as requiring trash control, it still would not result in the imposition of a program: the trash control efforts that may result from the substantive implementation of the Trash Provisions through either Track 1 or Track 2 does not carry out a governmental function of providing services to the public. The Trash Provisions apply to all dischargers of trash to surface waters, whether public or private. The implementation provisions of the Trash Provisions focus on dischargers under existing storm water permits, including the Industrial General Permit and Construction General Permit that cover primarily private entities. Under the implementation provisions, MS4 permittees are provided with a less stringent implementation path to comply with the trash discharge prohibition; industrial dischargers, on the other hand, are generally required to comply with the outright prohibition when it is implemented in their permits.

Because industrial dischargers are required to comply with the outright prohibition, they did not receive Water Code section 13383 orders requiring them to submit written notification of their selected track or to submit an implementation plan for Track 2. However, like the municipal MS4 operators, industrial dischargers will be required to implement trash control and collection measures at their respective sites and facilities to eliminate trash discharges. In addition, if an industrial discharger can satisfactorily demonstrate its inability to comply with the outright discharge prohibition for trash, the permitting authority may require the discharger to either: 1) install, operate, and maintain full capture systems for all storm drains that captures runoff from the facility or site regulated by the NPDES permit (Track 1); or, 2) install, operate, and maintain any combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls for the facility or site regulated by the NPDES permit such that the combination achieves full capture system equivalency (Track 2). The implementation of the Trash Provisions may result in the collection of trash by both public and private entities; however, any

[145] *Id.*, p. 5-25.
[146] *Id.*, p. 5-26.

trash collected would be due to conditions imposed as part of a permittee's authorization to discharge to surface waters, not the result of the State forcing local governments to carry out the governmental function of providing services to the public.

There is an important distinction between a requirement imposed to regulate conduct engaged in by all entities in the State that has the incidental effect of providing a service to the public and an order that imposes requirements to force a local government to implement a program that the State believes should be provided to the public. If, for example, a state law required all local governments to install trash-capture systems at certain locations as a required public service for residents, that would arguably require local governments to provide a public service and hence qualify as a program under mandates law. But when the State imposes a condition requiring a particular municipality to capture trash in certain high priority locations in connection with the local government's discharge of pollutants, it is not to provide a public service to residents; rather, it is to eliminate trash from storm water discharged by the local government as a permittee in compliance with the trash discharge prohibition that applies to both public and private dischargers.

In *County of Los Angeles v. Department of Industrial Relations* (1989) 214 Cal.App.3d 1538, the Court of Appeal recognized this crucial distinction. There, the Department of Industrial Relations enacted statewide safety regulations that governed all public and private elevators.[147] The county argued that "all passenger elevators in all county buildings are necessary for the performance of peculiarly governmental functions. . . ."[148] Rejecting that argument, the court explained that "the critical question is whether the mandated program carries out the governmental function of providing services to the public, not whether the elevators can be used to obtain these services."[149] In other words, a state law providing that local governments must comply with the same safety rules as everyone else does not constitute a state mandated "program" requiring local government to provide a governmental service.

The same reasoning applies here. The San Diego Water Board does not require Claimants to operate an MS4 or discharge to surface waters. The Board merely implements a body of state and federal law that provides that if a local government chooses to operate an MS4 and discharge to surface water, it must take steps to eliminate the discharge of trash to surface waters, just like other dischargers throughout the State. The Claimants would not be required to comply with the Trash Provisions—and in turn eliminate trash from their discharge—absent their discharge of storm water and non-storm water to surface waters. Because the Trash Provisions require public and private dischargers alike to eliminate trash from their discharge, they do not require Claimants to carry out the governmental function of providing services to the public.[150]

2. The Trash Order does not impose unique requirements on local governments

The Constitution does not require the State to reimburse local governments for compliance with laws or policies of general applicability because they do not "force" programs on localities.[151] The

[147] *County of Los Angeles v. Department of Industrial Relations* (1989) 214 Cal.App.3d 1538, 1540–1541.
[148] *Id.* at pp. 1545–1546, emphasis omitted.
[149] *Id.* at p. 1546, emphasis omitted.
[150] See *County of Los Angeles, supra,* 43 Cal.3d at p. 58 ("Although local agencies must provide benefits to their employees either through insurance or direct payment, they are indistinguishable in this respect from private employers. In no sense can employers, public or private, be considered to be administrators of a program . . . .")
[151] See *id.* at pp. 50–51 ("the drafters and the electorate had in mind subvention for the expense or increased cost of programs administered locally and for expenses occasioned by laws that impose unique requirements on local governments and do not apply generally to all state residents or entities").

fact that a requirement may single out local governments is not dispositive; where local agencies are required to perform the same functions as state entities, federal entities, and private industry, no subvention is required.[152] The requirements of the San Diego Trash Order are not unique to local governments because Water Code section 13383 applies to all NPDES permittees. Additionally, state and federal government entities were subject to the same requirements as the Claimants under orders issued by the State Water Board. And although private industrial dischargers were not subject to similar Water Code section 13383, this fact does not make the requirements of the Trash Orders unique to local government. The Water Boards did not issue such orders because industrial dischargers are held to a more stringent compliance standard under the Trash Provisions that did not require the procedural acts related to the selection of a track.

The San Diego Water Board's Trash Order was issued pursuant to Water Code section 13383 and was intended to implement the initial procedural steps of the Trash Provisions.[153] Thus, the law of general application is Water Code section 13383, which applies generally to public and private dischargers alike. The Water Boards may issue Water Code section 13383 orders to require any NPDES permittee to provide the information pertaining to water quality; the application of Water Code section 13383 is not unique to local government.

Here, the San Diego Water Board issued a Water Code section 13383 order—the Trash Order—to MS4 permittees under its jurisdiction. The Trash Order required the permittees to submit a letter to the San Diego Water Board identifying their selected method of compliance (Track 1 or Track 2). If the permittee chose to follow Track 2, the permittee was also required to submit an implementation plan as previously described. Although the Trash Order issued by the San Diego Water Board was directed only to local governments, the State Water Board issued similar Water Code section 13383 orders to non-traditional Phase II MS4[154] operators, including state and federal entities. Eleven of these non-traditional Phase II MS4 operators are located within the San Diego Region and include federal agencies such as United States Marine Corps (USMC) Recruit Depot, USMC Base Camp Pendleton (MCBCP) and the Veterans Affairs San Diego Healthcare System as well as varied state agencies such as California State University San Marcos (CSUSM) and R.J. Donovan Correctional Facility at Rock Mountain.[155] Like the Claimants, these state and federal entities were required to submit written notification of whether they elected to follow Track 1 or Track 2 and the entities that chose Track 2 were required to submit an implementation plan that included the rationale for how the selected combination of controls will achieve full capture equivalency, the rationale for how the full capture system equivalency will be demonstrated, and the methodology for determining trash levels if the recommended approach was not used.[156]

While not phrased identically, the requirements for the non-traditional Phase II MS4 entities mirror those in the San Diego Trash Order. For example, the San Diego Trash Order required San

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[152] *Ibid.*

[153] See e.g., San Diego Trash Order AR, pp. 2049-2050.

[154] See State Water Board Trash Orders AR, pp. 1080–1742.

[155] See *id.*, pp. 1654-1728.

[156] See e.g., State Water Board Trash Orders AR, pp. 1580–1581. In addition to the requirements that mirrored the San Diego Water Board's orders, the federal and state entities were also required to a submit preliminary jurisdictional map identifying the land uses and locations discharging substantial amounts of trash to the MS4s and the corresponding MS4 network that conveys discharges from the land uses and locations and an updated jurisdictional map identifying all land uses and locations discharging a substantial amount of trash to the MS4 network, the corresponding MS4 network, proposed locations of all certified full capture systems and where any combination of controls would be implemented to achieve full capture system equivalency, and trash levels for land uses and locations that discharged substantial amounts of trash to the MS4 systems. (See e.g., *ibid.*)

Diego copermittees selecting Track 1 to submit a jurisdictional map "identifying Priority Land Uses, the corresponding storm drain network including all storm drain inlets and drainage, proposed full capture system installation locations and associated draining areas."[157] Similarly, the orders issued to MCBCP and CSUSM required these entities to submit a *preliminary* jurisdictional map identifying "i. Land uses and locations discharging substantial amounts of trash to the MS4(s); and ii. The corresponding MS4 network that conveys discharges from the land uses and locations."[158] MCBCP and CSUSM were also required to submit an *updated* jurisdictional map similarly identifying: "i. All land uses and locations discharging substantial amounts of trash to the MS4 network; ii. The corresponding MS4 network; iii. Proposed locations of all certified Full Capture Systems and where any combination of controls will be implemented that will achieve Full Capture Equivalency; iv. Trash levels, using the methodology described in the attached recommended Visual Trash Assessment Approach or other equivalent trash assessment methodology, for all land uses and locations discharging substantial amounts of trash to the MS4 network."[159]

The San Diego Trash Order required copermittees selecting Track 2 to submit an implementation plan that describes the selected combination of controls and associated rationales; specifically, Claimant City must provide the following information:

> a. How the combination of controls is designed to achieve full capture system equivalency;
> b. How full capture system equivalency will be demonstrated;
> c. How the implemented controls identified in the trash implementation plans will be monitored and assessed in jurisdictional runoff management program or Water Quality Improvement Plan Annual Reports;
> d. Proposals by MS4 permittees, if any, to substitute Priority Land Uses described in Finding 9 above with other locations or land uses, provided that the total trash generated in other locations or land uses is equivalent to, or greater than, the total trash generated in the Priority Land Use being substituted; *and*
> e. A time schedule to achieve full compliance with the trash discharge prohibition, including interim milestones (such as average load reductions of ten percent per year or other progress) to full implementation. The proposed final compliance date must not be later than fifteen (15) years from the effective date of the Trash Amendments (i.e., December 2, 2030). [160]

MCBCP and CSUSM were required to include substantively comparable implementation plans consisting of:

> i. The rationale for how the selected combination of controls will achieve Full Capture System Equivalency;
> ii.The rationale for how Full Capture System Equivalency will be demonstrated; and
> iii. If using a methodology other than the attached Visual Trash Assessment Approach to determine (1) land uses and locations that discharge substantial amounts of trash and (2) trash levels, a description of the methodology used and

[157] San Diego Trash Order AR, p. 2058.
[158] State Water Board Trash Orders AR, pp. 1706 and 1692.
[159] *Id.,* at pp. 1707 and 1693.
[160] *Ibid.*

a justification of how the alternative methodology is equivalent to the recommended Visual Trash Assessment Approach.[161]

Unlike other MS4 operators, the California Department of Transportation did not have a choice between Track 1 and Track 2; the Trash Provisions instead required the Department to comply with the trash discharge prohibition under Track 2. As such, the State Water Board's order required the Department to submit an implementation plan identifying specific locations of significant trash generating areas, the selected combination of full capture systems, multi-benefit projects, other treatment controls, and/or institutional controls and the rationale for the selections, and the method that would be used to demonstrate full capture system equivalency.[162] Thus, the requirements of the San Diego Trash Order are not unique to local government because they apply to state and federal entities as well.

The absence of similar orders for private dischargers does not make the requirements of the Trash Orders unique to local government. As noted above, the Water Boards did not issue Water Code section 13383 orders to industrial dischargers that required them to choose between Track 1 and Track 2 to implement the trash discharge prohibition. This is because, unlike MS4 operators that are provided with a more lenient compliance path, industrial dischargers must comply with the outright prohibition by eliminating all trash discharges when the Trash Provisions are implemented in their NPDES permits. If, however, an industrial discharger can demonstrate to the permitting authority its inability to comply with the more stringent outright prohibition, the permitting water board could require the discharger to comply with the trash discharge prohibition using full capture systems (Track 1) or a combination of controls that achieves full capture system equivalency (Track 2). The differences between the compliance requirements for MS4 permittees and private dischargers do not change the fact that all dischargers in the state are required to the comply with the same underlying water quality objective and discharge prohibition for trash in the Trash Provisions.[163] So, consistent with mandates law, the Trash Order cannot be a reimbursable mandate so long as local governments are held to the same or lesser standard than private entities under the Trash Provisions.[164]

In *City of Sacramento*, the Court held that a law extending mandatory unemployment insurance coverage to local governments did not constitute a new program or higher level of service.[165] The Court reasoned that the law "merely makes the local agencies indistinguishable . . . from private employers."[166] It rejected the local government's argument that because the program was new to local governments, it triggered reimbursement under article XIII B, section 6.[167] Accepting that argument, the Court explained, would create an anomalous situation in which the State could be required to pay local governments if it deferred their compliance with the law, but could avoid the

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[161] State Water Board Trash Orders AR, pp. 1707 and 1693.
[162] *Id.* at p. 1740.
[163] Illustrating the general applicability of the Trash Provisions, the Santa Ana Water Board issued a Sector-Specific General NPDES Permit for Storm Water Runoff Associated with Industrial Activities from Scrap Metal Recycling Facilities Within the Santa Ana Region (Scrap Metal General Permit) that includes provisions that implement the Trash Provisions. (Santa Ana Water Board Order R8-2018-0069.) The Scrap Metal General Permit provides that "[t]here shall be no trash, debris, floating materials, foam, plastics, or any other deleterious materials in storm water runoff from the permitted facilities." (*Id.* at p. 14.) The permit also incorporates the trash discharge prohibition from the Trash Provisions and requires permittees to monitor and to report on pollutants (including trash) in their discharge. (*See id.* at pp. 6, 14, 19, 36–37.)
[164] See *City of Richmond, supra,* 64 Cal.App.4th at p. 1197.
[165] *City of Sacramento v. State of California (City of Sacramento)* (1990) 50 Cal.3d 51, 57.
[166] *Id.* at p. 67.
[167] *Id.* at p. 68 (explaining that the law "may have imposed a requirement 'new' to local agencies, but that requirement was not 'unique'").

reimbursement requirements if it imposed the same obligations on the public and private sectors at the same time.[168]

Similarly, in *City of Richmond*, a state law exempted public safety employers from Labor Code provisions governing death benefits payable to a deceased employee's survivors.[169] After the State repealed the exemption, a city sought reimbursement for payment of death benefits.[170] The Court of Appeal recognized that just because a law "affects only local governments does not compel the conclusion that [the law] imposes a unique requirement on local government."[171] The new law made "the workers' compensation death benefit requirements as applicable to local governments as they are to private employers," and therefore did not impose a new program or higher level of service.

Finally, reaching a conclusion different than the Commission,[172] the Los Angeles County Superior Court recently found that the receptacle and inspection requirements in the 2001 Los Angeles County MS4 Permit did not impose a program subject to subvention—the costs incurred by local governments were "an incidental impact of laws [and policies] that apply generally to all state residents and entities" rather than the result of a state mandate shifting the costs of a state-initiated program to the local governments.[173] Relevant here, the court also found the following:

> Moreover, just because the requirements are "unique" to the local governments and cause them to incur costs does not mean the local entities are necessarily entitled to reimbursement form the state. Whereas a private industrial discharger has considerable power to control its operations and employees to prevent contaminated discharges, municipalities cannot prevent contaminated discharges without inducing or policing the public to refrain from harmful conduct. It is therefore inevitable that the Operators' NPDES permit includes measures "unique" to local governments such as the receptacle and inspection requirements at issue here. Indeed, because the anti-pollution laws, the permit, and the policies behind them implement a ban on unlawful discharges that applies to both public and private entities, the state must, as a practical matter, impose "unique" requirements on local governments to ensure that their required compliance is "indistinguishable . . . from private employers.[174]

In light of *City of Sacramento, City of Richmond*, and the recent trial court decision on the 2001 Los Angeles County MS4 Permit, the Commission should find that the Trash Order does not impose unique requirements on local governments. Although MS4 permittees are treated differently from industrial dischargers in that they are provided with a less stringent approach to comply with the trash discharge prohibition, this does not make the Trash Order unique: this "distinction . . . would have an anomalous result. The state could avoid subvention . . . by imposing new obligations on the public and private sectors at the same time. However, if it chose to proceed by stages, extending such obligation first to private entities, and only later to local governments,

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[168] *Id.* at p. 69.
[169] *City of Richmond, supra*, 64 Cal.App.4th at p. 1193.
[170] *Ibid.*
[171] *Id.* at p. 1197.
[172] See *In re Test Claim on: Los Angeles Regional Water Quality Control Board Order No. 01-182, Case Nos. 03-TC-04, 03-TC-19, 03-TC-20, 03-TC-21* (July 31, 2009), p. 49.
[173] *State of California Department of Finance v. Comm'n on State Mandates*, Los Angeles County Superior Court Case No. BS130730, Order Granting Petition for Writ of Mandate (Post-Remand) and Denying Cross-Petitions as Moot, Feb. 9, 2018, p. 14 (citing *County of Los Angeles, supra*, 43 Cal.3d at p. 57).
[174] *Ibid.*

it would have to pay."[175] If updating a law to require local governments to adhere to the same standard as private parties does not create a mandate, as the courts in *City of Sacramento* and *City of Richmond* held, then imposing a lesser standard in lieu of a more stringent standard should not create a mandate. Among other things, it would encourage the state and regional water boards to issue orders imposing the same standards on MS4 operators as on other storm water discharges, potentially at greater cost to local governments.[176]

The Claimants insist that the Trash Orders imposed unique requirements on local governments because the requirements of the Trash Orders did not "extend the requirements to any non-governmental entities."[177] As discussed above, the absence of similar requirements for private entities is due to the fact that private dischargers must comply with the outright prohibition on the discharge of trash, as opposed to complying with the more lenient compliance tracks offered to public MS4 operators. Because private dischargers are not generally afforded the choice of track implementation, they were not required to comply with the procedural requirements associated with track selection that applied to MS4 operators. All dischargers of trash must comply with the Trash Provisions, which the Trash Order partially implements. The fact that MS4 operators must comply with less stringent requirements than those imposed on private dischargers does not make the requirements unique to local government.

As explained above, the Trash Provisions will not only be implemented in Phase I MS4 Permits issued to local governments, but also in the MS4 Permit issued to the California Department of Transportation, the Phase II MS4 Permit issued to both traditional and non-traditional MS4 permittees, the Industrial General Permit and Construction General Permit issued to industrial dischargers, and other NPDES and non-NPDES waste discharge requirements. Neither of the arguments put forth by the Claimants should persuade the Commission: the Trash Order did not impose unique requirements on local governments.

### B. *Even if the Trash Order imposed a program, it would not be a "new" program or require a higher level of service*

Assuming for the sake of argument that the San Diego Trash Order imposed a program, it does not impose a "new" program or require a "higher level of service." To be reimbursable, the program must be "new." "A program is 'new' if the local government had not previously been required to institute it."[178] Alternatively, a law or executive order that requires a higher level of service in an existing program may constitute a reimbursable mandate.[179] The "state must be attempting to divest itself of its responsibility to provide fiscal support for a program, or forcing a new program on a locality for which it is ill equipped to allocate funding."[180]

The Claimants, like their copermittees, have had obligations under the Clean Water Act to reduce the discharge of pollutants, including trash, from the covered MS4s in the Counties of Orange, Riverside, and San Diego to the maximum extent practicable and to report control measures to

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[175] *City of Sacramento, supra,* 50 Cal.3d at 69.
[176] See *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1163 & 1166-1167 (noting state can impose effluent limitations on MS4 permittees); *Building Industry Association of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 886-887 (discussing *Defenders of Wildlife*).
[177] See Test Claim, 17-TC-05, Narrative Statement, p. 5-24.
[178] *County of Los Angeles, supra,* 110 Cal.App.4th at 1189.
[179] *Id.* at pp. 1190–1191.
[180] *Id.* at p. 1194.

the San Diego Water Board since 1990.[181] The San Diego Water Board has consistently recognized trash as a persistent pollutant and trash has been covered under the requirement to control pollutants in storm water and non-storm water discharges.[182] Moreover, as detailed above, Claimants have been and continue to be required to address trash through source control management measures, for example at development sites, and through structural control practices such as conveyance system cleaning. Additionally, under the county-specific and the Regional MS4 Permit, permittees have been subject to, and are currently subject to, monitoring and reporting requirements imposed under Water Code section 13383.

The Trash Order required the Claimants to submit written notice selecting either Track 1 or Track 2 as a method to comply with the trash prohibition. The implementation of the selected track through future MS4 permits will be a continuation of the underlying requirement to reduce and/or eliminate pollutants, including trash, from MS4 discharges, a permit requirement that has been in place since 1990 (or, at the latest, since 2002). Further, the trash discharge prohibition builds on the requirement to eliminate trash from MS4 discharges, and Track 1 and Track 2 are the methods through which the permittees can comply with the trash prohibition.[183] The inclusion of provisions to implement the trash discharge prohibition in subsequent permits will not change the underlying obligation to reduce and/or eliminate the discharge of trash.[184] Thus, the implementation of the selected track is not a new program because the requirements build on the Claimants' long-standing permit requirement to reduce and/or eliminate the discharge of trash from its MS4s. The requirements of the San Diego Trash Order do not impose a new program.

Similarly, the Trash Order does not require a higher level of service. "[T]he subvention requirement for increased or higher level of service is directed to state mandated increases in the services provided by local agencies in existing 'programs.'"[185] A "higher level of service" occurs when the new "requirements were intended to provide an enhanced service to the public."[186] Ever since their first permit, the Claimants have been required to reduce the discharge of pollutants including trash to the maximum extent possible and report the measures they intended to implement to satisfy that requirement. Claimants have been required to implement source control management practices to address trash and also required to incorporate trash assessment studies in their monitoring and reporting requirements. The Trash Order which likewise requires reporting, does not require more of the Claimants than what they have previously been required to do. And, while the Trash Order may result in additional costs for the Claimants, that is not the test for a higher level of service. "If the Legislature had intended to continue to equate 'increased level of service' with 'additional costs,' then the provision would be circular: 'costs mandated by the state' are defined as 'increased costs' due to an increased level of service, which, in turn

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[181] *See* 33 U.S.C. § 1342(p)(3)(B)(iii). San Diego Trash Order AR, pp. 13, 18, 53, 59, 94, 134, 154, 185, 211, 297, 376, 446, 693, 1079, and 1746.

[182] *See e.g.,* Environmental Defense Center v. U.S. EPA (9th Cir. 2003) 344 F.3d 832, 840–41.

[183] *See e.g.,* Trash Provisions AR, p. 6378 ("The Clean Water Act compels the State Water Board to include broad treatment controls in MS4 permits as it determines necessary to reduce the discharge of pollutants. (CWA § 401(p)(3)(B)(iii).) Although federal law does not expressly require the precise trash provisions' treatment controls, upon incorporation into permits, the trash provisions would come within the mandate of Clean Water Act section 401(p)(3)(B)(iii) that permits contain controls to reduce trash to the 'maximum extent practicable' and 'such other provisions as the [State Water Board] determines appropriate.' The requirements contained in the Trash Amendments do not exceed the obligations required under federal law but comports with the federal 'floor.'")

[184] *See* 55 Fed.Reg.47990, 48052 (Nov. 16, 1990) ("The Permits for discharges from municipal separate storm sewer systems will be written to reflect changing conditions that result from program development and implementation and corresponding improvements in water quality.")

[185] See *County of Los Angeles,* supra, 43 Cal.3d at p. 56.

[186] *San Diego Unified, supra,* 33 Cal.4th at p. 878.

would be defined as 'additional costs.'"[187] Costs for purposes of article XIII B, section 6, of the California Constitution do "not equal every increase in a locality's budget resulting from compliance with a new state directive."[188] The State must be avoiding its responsibility to pay for a program or forcing a new program on a local government.[189] The Trash Order does not shift any responsibility from the State on to the Claimants or create a new program—they achieve the same, long-standing requirement to reduce and/or eliminate the discharge of trash to waters of the U.S. and report to the Board on how they intend to meet the requirement. The State has not imposed a new program or required performance of a higher level of service.

### C. *Even if the Trash Order imposed a new program or required a higher level of service, subvention is not warranted because Claimants have the authority to levy charges, fees, or assessments to comply*

Even if the Trash Order imposed a new program or higher level of service, Claimants still would not be entitled to subvention because they have fee authority to cover their costs to comply. "Article XIII B of the Constitution . . . was not intended to reach beyond taxation."[190] Section 6 of that article "requires subvention only when the costs in question can be recovered *solely from tax revenues.*"[191] Where a claimant has "authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increase level of service," no subvention is required.[192] Here, Claimants are not *required* to use taxes to fund compliance with the Trash Order.[193] As noted by the Department of Finance[194] and discussed below, Claimants' authority is undiminished by Propositions 218 or 26. Notably, Proposition 26 specifically excludes assessments and property-related fees imposed in accordance with Proposition 218 from the definition of taxes.[195]

Claimants have the ability to levy charges, fees or assessments on these activities, independent of real property ownership.[196] For example, inspection fees have been held not to be subject to Proposition 218.[197] The California Supreme Court has also validated the adoption of regulatory fees, providing they are not levied for unrelated revenue purposes.[198] It is reasonable to collect fees from developers for the costs associated with implementing certain provisions to control

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[187] *County of Los Angeles v. Commission on State Mandates, supra,* 110 Cal.App.4th at p. 1191.
[188] *Ibid.*
[189] *Id.,* at p. 1194.
[190] *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487.)
[191] *Ibid.,* emphasis in original.
[192] Cal. Gov. Code § 17556 subd. (d).
[193] *Ibid.,* emphasis in original.
[194] See Comments of Department of Finance, in 17-TC-05, January 28, 2019.
[195] Art. XIIIC, § 1, subd. (e)(7).
[196] For a general overview of funding mechanisms that have been employed by municipalities, see Black and Veatch 2005 Stormwater Utility Survey, p. 2 (72% cited stormwater user fees as major [at least 90% of total income] revenue sources and the majority of utilities resported funding was adequate to meet all or most needs).
[197] See, e.g., *Apartment Ass'n of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 842, 844-845 (upholding inspection fees associated with renting property). A fee for residential inspections to ensure compliance with MS4 Permit directives (e.g. compliance with laws related to conducting business) would be similar.
[198] See, *Sinclair Paint Co. v. State Bd. of Equalization* (1997) 15 Cal.4th 866, 876-77. See also *Cal. Farm Bur. Federation v. State Water Resources Control Bd.* (2011) 51 Cal. 4th 421, 437-438; *California Association of Professional Scientists v. Dept. of Fish and Game* (2000) 79 Cal.App.4th 935, 945 (distinguishing regulatory fees from taxes); *Schmeer v. County of Los Angeles* (2013) 213 Cal.App.4th 1319, 1326 (finding plastic bag charge retained by businesses not to be a tax).

trash, particularly where trash from land development has been identified as high trash generating. Asking these entities to bear the costs directly related to their activities "is comparable in character to similar police power measures imposing fees to defray the actual or anticipated adverse effects of various business operations."[199]

Importantly, recent legislation confirms that Claimants have the ability to increase sewer fees or charges without voter approval to cover any increased costs to comply with the challenged provisions. Article XIII D, section 6, subdivision (c) of the California Constitution provides an exception to the voter approval requirements of Proposition 218 for "fees or charges for sewer, water, and refuse collection services." The Legislature has recently enacted two important pieces of legislation confirming that Claimants possess ample fee authority without the need for voter approval. First, through Assembly Bill 2043 (2014), effective January 1, 2015, the Legislature amended the definition of "water" for purposes of Articles XIII C and XIII D to mean "water from any source."[200] In doing so, the Legislature stated that its act "is declaratory of existing law."[201] Second, through Senate Bill 231 (2017), effective January 1, 2018, the Legislature "reaffirm[ed] and reiterate[d]" that the definition of "sewer" for purposes of article XIII D includes:

> systems, all real estate, fixtures, and personal property owned, controlled, operated, or managed in connection with or to facilitate sewage collection, treatment, or disposition for sanitary *or drainage* purposes, including lateral and connecting sewers, interceptors, trunk and outfall lines, sanitary sewage treatment or disposal plants or works, drains, conduits, outlets for *surface or storm waters,* and any and all other works, property, or structures necessary or convenient for the collection or disposal of sewage, industrial waste, *or surface or storm waters.*[202]

These legislative actions confirm that Claimants have authority to raise fees, without voter approval, for costs related to their storm sewer systems. To the extent Claimants rely on *Howard Jarvis Taxpayers Ass'n v. City of Salinas* (2002) 98 Cal.App.4th 1351 as precluding the ability of a municipality to raise fees related to stormwater, that decision is no longer controlling. The Legislature has subsequently clarified the extent of sewers covered by the exception to voter approval requirements contained in Proposition 218.[203] The Legislature thus clarified that Claimants have, and have always had, the ability to raise fees related to storm water. The California Constitution requires the Commission to abide by these later-enacted statutory requirements unless and until a Court of Appeal finds them unconstitutional.[204]

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[199] *Sinclair Paint Co., supra,* 15 Cal.4th at p. 877.
[200] Gov. Code, § 53750, subd. (n), amended by Assembly Bill 2043 (Stats. 2014, ch. 78, § 2).
[201] Stats. 2014, ch. 78, § 1(c).
[202] Gov. Code § 53750, subd. (f), and § 53751, subd. (i), added by Senate Bill 231, Stats. 2017, ch. 536, § 2 (emphasis added). The Legislature noted the numerous authorities predating Proposition 2018 that use this same definition, including: (1) Section 230.5 of the Public Utilities Code, added by Chapter 1109 of the Statutes of 1970; (2) Section 23010.3, added by Chapter 1193 of the Statutes of 1963; (3) The Street Improvement Act of 1913; (4) *L.A. County Flood Control Dist. v. Southern Cal. Edison Co.* (1958) 51 Cal.2d 331 ("no distinction has been made between sanitary sewers and storm drains or sewers"); (5) Many other cases where the term "sewer" has been used interchangeably to both sanitary and storm sewers including, but not limited to, *County of Riverside v. Whitlock* (1972) 22 Cal.App.3d 863, *Ramseier v. Oakley Sanitary Dist.* (1961) 197 Cal.App.2d 722, and *Torson v. Fleming* (1928) 91 Cal.App. 168; and (6) Dictionary definitions of sewer, which courts have found to be an objective source for determining common or ordinary meaning, including Webster's (1976), American Heritage (1969); and Oxford English Dictionary (1971).
[203] Gov. Code, § 53751, subd. (f).
[204] Cal. Const., art. III, § 3.5; *Lockyer v. City and County of San Francisco* (2004) 33 Cal.4th 1055, 1094.

Health and Safety Code section 5471 and Public Resources Code, section 40059, subdivision (a)(1), provide additional authority to charge fees for the costs associated with the contested provisions. Health and Safety Code section 5471, subdivision (a), gives Claimants fee authority for "services and facilities furnished . . . in connection with its water, sanitation, *storm drainage*, or sewerage system."[205] Similarly, Public Resources Code section 40059, subdivision (a)(1), also confers fee authority on counties, cities, districts, or other local governmental agencies for "[a]spects of solid waste handling which are of local concern, including, but not limited to, frequency of collection, means of collection and transportation, level of services, charges and fees, and nature, location, and extent of providing solid waste handling services."[206]

In evaluating the applicability of the "fee exception" in Government Code section 17556, subdivision (d), the question before the Commission is whether Claimants have the authority to impose fees or assessments, not whether the actions to impose a fee or assessment will be successful. Claimants have authority to impose property-related fees or assessments under their police power to pay for the costs of complying with the San Diego Trash Order which Claimants acknowlege is intended to carry out the state's policy of prohibiting trash discharges to surface waters.[207] Permittees' police power is "broad enough to include mandatory remedial measures to mitigate the *past, present or future* adverse impact of the fee payer's operations" in situations, like those present here, where there is a causal connection or nexus between the adverse effects and the fee payer's activities.[208]

Furthermore, the California Watershed improvement Act of 2009 authorizes MS4 permittees statewide to develop and implement voluntary watershed improvement plans.[209] State Water Board Order No. WQ 2015-0175, which upheld, with some modifications, a 2012 Los Angeles Water Board MS4 Permit issued to 85 permittees in the Los Angeles Region, clarifies that "[t]he California Watershed Improvement Act of 2009 grants authority to local government permittees regulated by an MS4 permit to develop and implement watershed improvement plans, but does not limit the authority of a regional water board to impose terms related to watershed management in an MS4 permit. Further, the terms of the WMPs/EWMPs are largely consistent with the watershed improvement plans authorized by the Act, so a permittee can comply with the Los Angeles MS4 Order while also using the authority provided by the California Watershed Improvement Act of 2009 if it so chooses."[210] Similar to the WMPs/EWMPS in the 2012 Los Angeles Permit, Water Quality Improvement Plans in the Regional MS4 Permit are "largely consistent" with the watershed improvement plans authorized by the Act. Therefore, since the Trash Amendments will be implemented through the Regional MS4 Permit, costs to develop and update a Water Quality Improvement Plan are not subject to subvention.

Even if a voter-approval requirement did apply, the requirement does not obviate Claimants' fee authority. Authority means "the right or power[] to levy fees sufficient to cover the cost of the state-mandated program," and is not concerned with a local government's "practical ability" to levy fees. Whether circumstances make it impractical to assess fees is not relevant to the inquiry

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[205] Health & Safety Code, § 5471, subd. (a) (emphasis added).
[206] Pub. Resources Code, § 40059, subd. (a)(1).
[207] Test Claim 17-TC-05, Narrative Statement, p. 5-24.
[208] *Id.*, at p. 877-878. Examples of non-tax fees within the police power of municipalities to impose include: single use carryout bag ordinances charging fee for use of plastic or paper bags; fines for violations of prohibitions on use of foam/polystyrene food containers; hazardous waste disposal fees for businesses; and vehicle registration fees used to fund combined road safety/green infrastructure projects.
[209] Wat. Code, §§ 16100 to 16104.
[210] State Water Board Order WQ 2015-0075, p. 8, footnote 30.

(nor is the contention even factually correct).[211] Second, even if fees were subject to a majority protest vote, under *Paradise Irrigation District v. Commission on State Mandates* (2019) 33 Cal.App.5th 174 (*Paradise Irrigation),* Claimants have the requisite fee authority.

In *Paradise Irrigation*, several local water districts filed a test claim seeking subvention of funds for the cost of water service improvements mandated by the Water Conservation Act of 2009.[212] The local water districts challenged the Commission's test claim denial based on the conclusion that the local water districts had fee authority.[213] They argued that the majority protest provisions that Proposition 218 added to article XIII D eviscerated their authority to levy fees to cover the necessary costs.[214]

The Court of Appeal rejected the local water districts' argument and agreed with the Commission that the local water district had fee authority that precluded state reimbursement, relying on *Connell v. Superior Court* (1997) 59 Cal.App.4th 382, 401 (*Connell).*[215] In *Connell*, a local government sought reimbursement for the cost of complying with a state law increasing the required purity of reclaimed water used in certain types of irrigation.[216] The local government argued that it lacked fee authority because "it would not be economically desirable" to levy the fee.[217] The court rejected that argument, holding that the "sole inquiry is whether the local agency has 'authority' to levy fees sufficient to pay the costs, and it does not matter whether the local agency, for economic reasons, finds it undesirable to exercise that authority."[218] In other words, "where the local agency has the authority, i.e., the right or the power, to levy fees sufficient to cover the costs of the state-mandated program," there is no valid claim to a subvention of state funds.[219] In *Connell,* the court acknowledged the recent adoption of Proposition 218, but did not address the law's effect on local governments' fee authority.[220]

*Paradise Irrigation* "takes up where *Connell* left off, namely with the question of whether the passage of Proposition 218 undermined water and irrigation districts' authority to levy fees[.]"[221] The local water districts argued that article XIII D, section 6's majority protest provisions eviscerated their fee authority.[222] The court disagreed, holding that "the *possibility* of a protest

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[211] *Connell v. Sup. Ct.* (1997) 59 Cal.App.4th 382, 398 [where statute on its face authorized water districts to levy fees sufficient to pay the costs associated with a regulatory change, there was no right to reimbursement]; *Clovis Unified School Dist. v. Chiang* (2010) 188 Cal.App.4th 794, 812 ["to the extent a local agency... 'has the authority' to charge for the mandated program or increased level of service, that charge cannot be recovered as a state mandated cost"].) The nature of the fee at issue is what must be examined. For example, residential inspections fees levied for business (versus property-related) reasons generally have been held not to violate Proposition 218. *Apartment Ass'n. of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 844-45.

[212] *Paradise Irrigation, supra,* 33 Cal.App.5th at p. 181.

[213] *Ibid.*

[214] Proposition 208 amended article XIII D, section 6, by adding a majority protest procedure that local governments must follow to impose or increase fees. (Cal. Const., art. XIII D, § 6, subd. (a).) The agency must provide notice of the proposed fee to property owners who would be charged the fee. (*Id.,* subd. (a)(1).) The agency must also hold a hearing and consider protests against the fee. (*Id.,* subd. (a)(2).) "If written protests against the proposed fee or charge are presented by a majority of owners of the identified parcels, the agency shall not impose the fee or charge." (*Ibid.*)

[215] *Paradise Irrigation, supra,* 33 Cal.App.5th at pp. 180, 182, 187-189, 194-197.

[216] *Connell, supra,* 59 Cal.App.4th at p. 385.

[217] *Id. at p. 399.*

[218] *Id.* at p. 400.

[219] *Id.,* at p. 401.

[220] *Id.* at p. 403.

[221] *Paradise Irrigation, supra,* 33 Cal.App.5th at p. 189.

[222] *Id.,* at p. 194.

under article XIII D, section 6, does not eviscerate the Water and Irrigation Districts' fee authority."[223]

*Paradise Irrigation* considered Proposition 218's majority protest procedures but did not address its voter approval requirements.[224] Because as a result of the 2014 and 2017 amendments, however, the MS4 clearly falls within the exclusion under Cal. Const. art. XIII D, § 6, subd. (c). Therefore, Claimants need not obtain voter approval to charge a fee. The only limitation on Claimant's authority to charge a fee would be the majority protest procedures, and under *Paradise Irrigation,* those procedures do not revoke Claimants' fee authority and preclude reimbursement.

Finally, it is worth noting that Claimants' arguments fundamentally ignore the fact that municipalities can and do impose fees on their residents and businesses to fund aspects of their stormwater programs even before recent legislative enactments. For example, the cities of Culver City, Alameda, Palo Alto, San Clemente, San Jose, and Santa Cruz have all either adopted new fees for implementation of their programs, raised existing stormwater fees, or adopted fee assessments.[225] As recently as November 2018, the County of Los Angeles voters approved establishment of property tax to capture and clean storm water.[226]

As explained above, Claimants have the requisite fee authority to fund the challenged activities. They are unable to demonstrate they are *required* to use tax monies to pay for the costs of implementing the challenged provisions. The Commission therefore must find that the "fee exception" established in Government Code section 17556, subdivision (d) applies to each of the challenged provisions and reject the Test Claim in its entirety.

## V. CONCLUSION

For the foregoing reasons, the Water Boards urge the Commission to reject the Test Claim in its entirety and find there is no reimbursable program requiring subvention.

*I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.*

Catherine George Hagan

Catherine George Hagan, Attorney IV

cc: Service List for 17-TC-05 through Commission Drop Box

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[223] *Id.*, at pp. 194-195; see also *id.*, at p. 192 ["Although this power-sharing arrangement has the potential for conflict, we *must presume that both sides will act reasonably and in good faith, and that the political process will eventually lead to compromises that are mutually acceptable and both financially and legally sound,"* quoting *Bighorn-Desert View Water Agency v. Verjil* (2006) 39 Cal.4th 205, 211.

[224] *Id.* at p. 197 ["In this case, none of the parties argue the costs for upgrading water service that may be required by the Conservation Act are subject to voter approval"].

[225] See documentation of City of Alameda Storm Water Fee Ordinance, City of Palo Alto Storm Drainage Fee Ordinance, and storm water fees authorized in Cities of Culver City, San Clemente, San Jose and Santa Cruz, included as attachments to this response.

[226] See Agrawal, *LA County votes to put new property tax before voters to clean storm water,* L.A. Times, (July 17, 2018).

**ATTACHMENTS TO WATER BOARDS' COMMENTS ON TEST CLAIM 17-TC-05**

[1] This is an unofficial draft that has not been certified by the Clerk to the State Water Resources Control Board. A certified copy is not available at this time.

| | | |
|---|---|---|
| | NPDES Permit for Storm Water Discharges from Small MS4s (Phase II MS4 Permit), State Water Board Order 2013-0001-DWQ (as amended by Orders WQ 2015-0133-EXEC, WQ 2016-0069-EXEC, WQ 2018-0001-EXEC, and WQ 2018-0007-EXEC)[2] | E-783 |
| | NPDES Sector-Specific General Permit for Storm Water Runoff Associated with Industrial Activities from Scrap Metal Recycling Facilities within the Santa Ana Region (Scrap Metal General Permit), Santa Ana Water Board Order R8-2018-0069 | E-1181 |
| *Section F* | *Funding/Fees* | |
| | Black and Veatch, 2005 Stormwater Utility Survey | F-1 |
| | City of San Clemente Urban Runoff Management Fee/Clean Ocean Program FAQs (2013) | F-14 |
| | City of Santa Cruz, Measure E: Clean River, Beaches and Ocean Fund (Fiscal Year 2015 Highlights Presentation) | F-18 |
| | *Palo Alto proceeds with storm water management fee increase*, San Jose Mercury News (Aug. 30, 2016) | F-54 |
| | City of San Jose Storm Sewer Charge (web page listing) | F-56 |
| | City of Alameda Sewer and Storm Water Fees Bulletin | F-57 |
| | Culver City Measure CW, The Clean Water, Clean Beach Parcel Tax | F-59 |
| | *LA County votes to put new property tax before voters to clean storm water*, L.A. Times (July 17, 2018) | F-62 |
| *Section G* | *Agency Approval Letters for Trash Provisions* | |
| | Office of Administrative Law, Notice of Approval of Regulatory Action, Dec. 2, 2015 | G-1 |
| | U.S. EPA Approval Action on State Trash Water Quality Standards, Jan. 12, 2016 | G-2 |
| *Section H* | *Water Quality Control Plan for the San Diego Region (Basin Plan)* | H-1 |

[2] This is an unofficial draft that has not been certified by the Clerk to the State Water Resources Control Board. A certified copy is not available at this time.

# ATTACHMENT A
# FEDERAL STATUTES
# AND
# REGULATIONS

KeyCite Yellow Flag - Negative Treatment
Proposed Legislation

United States Code Annotated Title 33. Navigation and Navigable Waters (Refs & Annos) Chapter 26. Water Pollution Prevention and Control (Refs & Annos) Subchapter I. Research and Related Programs (Refs & Annos)

33 U.S.C.A. § 1251

# § 1251. Congressional declaration of goals and policy

Currentness

**(a) Restoration and maintenance of chemical, physical and biological integrity of Nation's waters; national goals for achievement of objective**

The objective of this chapter is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. In order to achieve this objective it is hereby declared that, consistent with the provisions of this chapter--

**(1)** it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985;

**(2)** it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983;

**(3)** it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited;

**(4)** it is the national policy that Federal financial assistance be provided to construct publicly owned waste treatment works;

**(5)** it is the national policy that areawide waste treatment management planning processes be developed and implemented to assure adequate control of sources of pollutants in each State;

**(6)** it is the national policy that a major research and demonstration effort be made to develop technology necessary to eliminate the discharge of pollutants into the navigable waters, waters of the contiguous zone, and the oceans; and

**(7)** it is the national policy that programs for the control of nonpoint sources of pollution be developed and implemented in an expeditious manner so as to enable the goals of this chapter to be met through the control of both point and nonpoint sources of pollution.

**(b) Congressional recognition, preservation, and protection of primary responsibilities and rights of States**

It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources, and to consult with the Administrator in the exercise of his authority under this chapter. It is the policy of

  

Congress that the States manage the construction grant program under this chapter and implement the permit programs under sections 1342 and 1344 of this title. It is further the policy of the Congress to support and aid research relating to the prevention, reduction, and elimination of pollution and to provide Federal technical services and financial aid to State and interstate agencies and municipalities in connection with the prevention, reduction, and elimination of pollution.

**(c) Congressional policy toward Presidential activities with foreign countries**

It is further the policy of Congress that the President, acting through the Secretary of State and such national and international organizations as he determines appropriate, shall take such action as may be necessary to insure that to the fullest extent possible all foreign countries shall take meaningful action for the prevention, reduction, and elimination of pollution in their waters and in international waters and for the achievement of goals regarding the elimination of discharge of pollutants and the improvement of water quality to at least the same extent as the United States does under its laws.

**(d) Administrator of Environmental Protection Agency to administer chapter**

Except as otherwise expressly provided in this chapter, the Administrator of the Environmental Protection Agency (hereinafter in this chapter called "Administrator") shall administer this chapter.

**(e) Public participation in development, revision, and enforcement of any regulation, etc.**

Public participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any State under this chapter shall be provided for, encouraged, and assisted by the Administrator and the States. The Administrator, in cooperation with the States, shall develop and publish regulations specifying minimum guidelines for public participation in such processes.

**(f) Procedures utilized for implementing chapter**

It is the national policy that to the maximum extent possible the procedures utilized for implementing this chapter shall encourage the drastic minimization of paperwork and interagency decision procedures, and the best use of available manpower and funds, so as to prevent needless duplication and unnecessary delays at all levels of government.

**(g) Authority of States over water**

It is the policy of Congress that the authority of each State to allocate quantities of water within its jurisdiction shall not be superseded, abrogated or otherwise impaired by this chapter. It is the further policy of Congress that nothing in this chapter shall be construed to supersede or abrogate rights to quantities of water which have been established by any State. Federal agencies shall co-operate with State and local agencies to develop comprehensive solutions to prevent, reduce and eliminate pollution in concert with programs for managing water resources.

**CREDIT(S)**

(June 30, 1948, c. 758, Title I, § 101, as added Pub.L. 92-500, § 2, Oct. 18, 1972, 86 Stat. 816; amended Pub.L. 95-217, §§ 5(a), 26(b), Dec. 27, 1977, 91 Stat. 1567, 1575; Pub.L. 100-4, Title III, § 316(b), Feb. 4, 1987, 101 Stat. 60.)

  

## EXECUTIVE ORDERS

### EXECUTIVE ORDER NO. 11548

Ex. Ord. No. 11548, July 20, 1970, 35 F.R. 11677, which related to the delegation of Presidential functions, was superseded by Ex. Ord. No. 11735, Aug. 3, 1973, 38 F.R. 21243, set out as a note under section 1321 of this title.

### EXECUTIVE ORDER NO. 11742

<Oct. 23, 1973, 38 F.R. 29457>

**Delegation of Functions to Secretary of State Respecting Negotiation of International Agreements Relating to Enhancement of Environment**

Under and by virtue of the authority vested in me by section 301 of title 3 of the United States Code and as President of the United States, I hereby authorize and empower the Secretary of State, in coordination with the Council on Environmental Quality, the Environmental Protection Agency, and other appropriate Federal agencies, to perform, without the approval, ratification, or other action of the President, the functions vested in the President by Section 7 of the Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500; 86 Stat. 898) with respect to international agreements relating to the enhancement of the environment.

RICHARD NIXON.

Notes of Decisions (134)

33 U.S.C.A. § 1251, 33 USCA § 1251
Current through P.L. 116-91. Some statute sections may be more current, see credits for details.

KeyCite Yellow Flag - Negative Treatment
Proposed Legislation

United States Code Annotated Title 33. Navigation and Navigable Waters (Refs & Annos) Chapter 26. Water Pollution Prevention and Control (Refs & Annos) Subchapter III. Standards and Enforcement (Refs & Annos)

33 U.S.C.A. § 1311

# § 1311. Effluent limitations

Currentness

**(a) Illegality of pollutant discharges except in compliance with law**

Except as in compliance with this section and sections 1312, 1316, 1317, 1328, 1342, and 1344 of this title, the discharge of any pollutant by any person shall be unlawful.

**(b) Timetable for achievement of objectives**

In order to carry out the objective of this chapter there shall be achieved--

**(1)(A)** not later than July 1, 1977, effluent limitations for point sources, other than publicly owned treatment works, (i) which shall require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 1314(b) of this title, or (ii) in the case of a discharge into a publicly owned treatment works which meets the requirements of subparagraph (B) of this paragraph, which shall require compliance with any applicable pretreatment requirements and any requirements under section 1317 of this title; and

**(B)** for publicly owned treatment works in existence on July 1, 1977, or approved pursuant to section 1283 of this title prior to June 30, 1974 (for which construction must be completed within four years of approval), effluent limitations based upon secondary treatment as defined by the Administrator pursuant to section 1314(d)(1) of this title; or,

**(C)** not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title) or any other Federal law or regulation, or required to implement any applicable water quality standard established pursuant to this chapter.

**(2)(A)** for pollutants identified in subparagraphs (C), (D), and (F) of this paragraph, effluent limitations for categories and classes of point sources, other than publicly owned treatment works, which (i) shall require application of the best available technology economically achievable for such category or class, which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(2) of this title, which such effluent limitations shall require the elimination of discharges of all pollutants if the Administrator finds, on the basis of information available to him (including information developed pursuant to section 1325 of this title), that such elimination is technologically and economically achievable for a category or class of point sources as determined in accordance with regulations issued by the Administrator pursuant to

  

section 1314(b)(2) of this title, or (ii) in the case of the introduction of a pollutant into a publicly owned treatment works which meets the requirements of subparagraph (B) of this paragraph, shall require compliance with any applicable pretreatment requirements and any other requirement under section 1317 of this title;

**(B)** Repealed. Pub.L. 97-117, § 21(b), Dec. 29, 1981, 95 Stat. 1632.

**(C)** with respect to all toxic pollutants referred to in table 1 of Committee Print Numbered 95-30 of the Committee on Public Works and Transportation of the House of Representatives compliance with effluent limitations in accordance with subparagraph (A) of this paragraph as expeditiously as practicable but in no case later than three years after the date such limitations are promulgated under section 1314(b) of this title, and in no case later than March 31, 1989;

**(D)** for all toxic pollutants listed under paragraph (1) of subsection (a) of section 1317 of this title which are not referred to in subparagraph (C) of this paragraph compliance with effluent limitations in accordance with subparagraph (A) of this paragraph as expeditiously as practicable, but in no case later than three years after the date such limitations are promulgated under section 1314(b) of this title, and in no case later than March 31, 1989;

**(E)** as expeditiously as practicable but in no case later than three years after the date such limitations are promulgated under section 1314(b) of this title, and in no case later than March 31, 1989, compliance with effluent limitations for categories and classes of point sources, other than publicly owned treatment works, which in the case of pollutants identified pursuant to section 1314(a)(4) of this title shall require application of the best conventional pollutant control technology as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(4) of this title; and

**(F)** for all pollutants (other than those subject to subparagraphs (C), (D), or (E) of this paragraph) compliance with effluent limitations in accordance with subparagraph (A) of this paragraph as expeditiously as practicable but in no case later than 3 years after the date such limitations are established, and in no case later than March 31, 1989.

**(3)(A)** for effluent limitations under paragraph (1)(A)(i) of this subsection promulgated after January 1, 1982, and requiring a level of control substantially greater or based on fundamentally different control technology than under permits for an industrial category issued before such date, compliance as expeditiously as practicable but in no case later than three years after the date such limitations are promulgated under section 1314(b) of this title, and in no case later than March 31, 1989; and

**(B)** for any effluent limitation in accordance with paragraph (1)(A)(i), (2)(A)(i), or (2)(E) of this subsection established only on the basis of section 1342(a)(1) of this title in a permit issued after February 4, 1987, compliance as expeditiously as practicable but in no case later than three years after the date such limitations are established, and in no case later than March 31, 1989.

**(c) Modification of timetable**

The Administrator may modify the requirements of subsection (b)(2)(A) of this section with respect to any point source for which a permit application is filed after July 1, 1977, upon a showing by the owner or operator of such point source satisfactory to the Administrator that such modified requirements (1) will represent the maximum use of technology within the economic capability of the owner or operator; and (2) will result in reasonable further progress toward the elimination of the discharge of pollutants.

  

**(d) Review and revision of effluent limitations**

Any effluent limitation required by paragraph (2) of subsection (b) of this section shall be reviewed at least every five years and, if appropriate, revised pursuant to the procedure established under such paragraph.

**(e) All point discharge source application of effluent limitations**

Effluent limitations established pursuant to this section or section 1312 of this title shall be applied to all point sources of discharge of pollutants in accordance with the provisions of this chapter.

**(f) Illegality of discharge of radiological, chemical, or biological warfare agents, high-level radioactive waste, or medical waste**

Notwithstanding any other provisions of this chapter it shall be unlawful to discharge any radiological, chemical, or biological warfare agent, any high-level radioactive waste, or any medical waste, into the navigable waters.

**(g) Modifications for certain nonconventional pollutants**

**(1) General authority**

The Administrator, with the concurrence of the State, may modify the requirements of subsection (b)(2)(A) of this section with respect to the discharge from any point source of ammonia, chlorine, color, iron, and total phenols (4AAP) (when determined by the Administrator to be a pollutant covered by subsection (b)(2)(F)) and any other pollutant which the Administrator lists under paragraph (4) of this subsection.

**(2) Requirements for granting modifications**

A modification under this subsection shall be granted only upon a showing by the owner or operator of a point source satisfactory to the Administrator that--

**(A)** such modified requirements will result at a minimum in compliance with the requirements of subsection (b)(1)(A) or (C) of this section, whichever is applicable;

**(B)** such modified requirements will not result in any additional requirements on any other point or nonpoint source; and

**(C)** such modification will not interfere with the attainment or maintenance of that water quality which shall assure protection of public water supplies, and the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities, in and on the water and such modification will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity or teratogenicity), or synergistic propensities.

  

**(3) Limitation on authority to apply for subsection (c) modification**

If an owner or operator of a point source applies for a modification under this subsection with respect to the discharge of any pollutant, such owner or operator shall be eligible to apply for modification under subsection (c) of this section with respect to such pollutant only during the same time period as he is eligible to apply for a modification under this subsection.

**(4) Procedures for listing additional pollutants**

**(A) General authority**

Upon petition of any person, the Administrator may add any pollutant to the list of pollutants for which modification under this section is authorized (except for pollutants identified pursuant to section 1314(a)(4) of this title, toxic pollutants subject to section 1317(a) of this title, and the thermal component of discharges) in accordance with the provisions of this paragraph.

**(B) Requirements for listing**

**(i) Sufficient information**

The person petitioning for listing of an additional pollutant under this subsection shall submit to the Administrator sufficient information to make the determinations required by this subparagraph.

**(ii) Toxic criteria determination**

The Administrator shall determine whether or not the pollutant meets the criteria for listing as a toxic pollutant under section 1317(a) of this title.

**(iii) Listing as toxic pollutant**

If the Administrator determines that the pollutant meets the criteria for listing as a toxic pollutant under section 1317(a) of this title, the Administrator shall list the pollutant as a toxic pollutant under section 1317(a) of this title.

**(iv) Nonconventional criteria determination**

If the Administrator determines that the pollutant does not meet the criteria for listing as a toxic pollutant under such section and determines that adequate test methods and sufficient data are available to make the determinations required by paragraph (2) of this subsection with respect to the pollutant, the Administrator shall add the pollutant to the list of pollutants specified in paragraph (1) of this subsection for which modifications are authorized under this subsection.

**(C) Requirements for filing of petitions**

A petition for listing of a pollutant under this paragraph--

  

**(i)** must be filed not later than 270 days after the date of promulgation of an applicable effluent guideline under section 1314 of this title;

**(ii)** may be filed before promulgation of such guideline; and

**(iii)** may be filed with an application for a modification under paragraph (1) with respect to the discharge of such pollutant.

**(D) Deadline for approval of petition**

A decision to add a pollutant to the list of pollutants for which modifications under this subsection are authorized must be made within 270 days after the date of promulgation of an applicable effluent guideline under section 1314 of this title.

**(E) Burden of proof**

The burden of proof for making the determinations under subparagraph (B) shall be on the petitioner.

**(5) Removal of pollutants**

The Administrator may remove any pollutant from the list of pollutants for which modifications are authorized under this subsection if the Administrator determines that adequate test methods and sufficient data are no longer available for determining whether or not modifications may be granted with respect to such pollutant under paragraph (2) of this subsection.

**(h) Modification of secondary treatment requirements**

The Administrator, with the concurrence of the State, may issue a permit under section 1342 of this title which modifies the requirements of subsection (b)(1)(B) of this section with respect to the discharge of any pollutant from a publicly owned treatment works into marine waters, if the applicant demonstrates to the satisfaction of the Administrator that--

**(1)** there is an applicable water quality standard specific to the pollutant for which the modification is requested, which has been identified under section 1314(a)(6) of this title;

**(2)** the discharge of pollutants in accordance with such modified requirements will not interfere, alone or in combination with pollutants from other sources, with the attainment or maintenance of that water quality which assures protection of public water supplies and the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife, and allows recreational activities, in and on the water;

**(3)** the applicant has established a system for monitoring the impact of such discharge on a representative sample of aquatic biota, to the extent practicable, and the scope of such monitoring is limited to include only those scientific investigations which are necessary to study the effects of the proposed discharge;

  

**(4)** such modified requirements will not result in any additional requirements on any other point or nonpoint source;

**(5)** all applicable pretreatment requirements for sources introducing waste into such treatment works will be enforced;

**(6)** in the case of any treatment works serving a population of 50,000 or more, with respect to any toxic pollutant introduced into such works by an industrial discharger for which pollutant there is no applicable pretreatment requirement in effect, sources introducing waste into such works are in compliance with all applicable pretreatment requirements, the applicant will enforce such requirements, and the applicant has in effect a pretreatment program which, in combination with the treatment of discharges from such works, removes the same amount of such pollutant as would be removed if such works were to apply secondary treatment to discharges and if such works had no pretreatment program with respect to such pollutant;

**(7)** to the extent practicable, the applicant has established a schedule of activities designed to eliminate the entrance of toxic pollutants from nonindustrial sources into such treatment works;

**(8)** there will be no new or substantially increased discharges from the point source of the pollutant to which the modification applies above that volume of discharge specified in the permit;

**(9)** the applicant at the time such modification becomes effective will be discharging effluent which has received at least primary or equivalent treatment and which meets the criteria established under section 1314(a)(1) of this title after initial mixing in the waters surrounding or adjacent to the point at which such effluent is discharged.

For the purposes of this subsection the phrase "the discharge of any pollutant into marine waters" refers to a discharge into deep waters of the territorial sea or the waters of the contiguous zone, or into saline estuarine waters where there is strong tidal movement and other hydrological and geological characteristics which the Administrator determines necessary to allow compliance with paragraph (2) of this subsection, and section 1251(a)(2) of this title. For the purposes of paragraph (9), "primary or equivalent treatment" means treatment by screening, sedimentation, and skimming adequate to remove at least 30 percent of the biological oxygen demanding material and of the suspended solids in the treatment works influent, and disinfection, where appropriate. A municipality which applies secondary treatment shall be eligible to receive a permit pursuant to this subsection which modifies the requirements of subsection (b)(1)(B) of this section with respect to the discharge of any pollutant from any treatment works owned by such municipality into marine waters. No permit issued under this subsection shall authorize the discharge of sewage sludge into marine waters. In order for a permit to be issued under this subsection for the discharge of a pollutant into marine waters, such marine waters must exhibit characteristics assuring that water providing dilution does not contain significant amounts of previously discharged effluent from such treatment works. No permit issued under this subsection shall authorize the discharge of any pollutant into saline estuarine waters which at the time of application do not support a balanced indigenous population of shellfish, fish and wildlife, or allow recreation in and on the waters or which exhibit ambient water quality below applicable water quality standards adopted for the protection of public water supplies, shellfish, fish and wildlife or recreational activities or such other standards necessary to assure support and protection of such uses. The prohibition contained in the preceding sentence shall apply without regard to the presence or absence of a causal relationship between such characteristics and the applicant's current or proposed discharge. Notwithstanding any other provisions of this subsection, no permit may be issued under this subsection for discharge of a pollutant into the New York Bight Apex consisting of the ocean waters of the Atlantic Ocean westward of 73 degrees 30 minutes west longitude and northward of 40 degrees 10 minutes north latitude.

**(i) Municipal time extensions**

  

**(1)** Where construction is required in order for a planned or existing publicly owned treatment works to achieve limitations under subsection (b)(1)(B) or (b)(1)(C) of this section, but (A) construction cannot be completed within the time required in such subsection, or (B) the United States has failed to make financial assistance under this chapter available in time to achieve such limitations by the time specified in such subsection, the owner or operator of such treatment works may request the Administrator (or if appropriate the State) to issue a permit pursuant to section 1342 of this title or to modify a permit issued pursuant to that section to extend such time for compliance. Any such request shall be filed with the Administrator (or if appropriate the State) within 180 days after February 4, 1987. The Administrator (or if appropriate the State) may grant such request and issue or modify such a permit, which shall contain a schedule of compliance for the publicly owned treatment works based on the earliest date by which such financial assistance will be available from the United States and construction can be completed, but in no event later than July 1, 1988, and shall contain such other terms and conditions, including those necessary to carry out subsections (b) through (g) of section 1281 of this title, section 1317 of this title, and such interim effluent limitations applicable to that treatment works as the Administrator determines are necessary to carry out the provisions of this chapter.

**(2)(A)** Where a point source (other than a publicly owned treatment works) will not achieve the requirements of subsections (b)(1)(A) and (b)(1)(C) of this section and--

**(i)** if a permit issued prior to July 1, 1977, to such point source is based upon a discharge into a publicly owned treatment works; or

**(ii)** if such point source (other than a publicly owned treatment works) had before July 1, 1977, a contract (enforceable against such point source) to discharge into a publicly owned treatment works; or

**(iii)** if either an application made before July 1, 1977, for a construction grant under this chapter for a publicly owned treatment works, or engineering or architectural plans or working drawings made before July 1, 1977, for a publicly owned treatment works, show that such point source was to discharge into such publicly owned treatment works,

and such publicly owned treatment works is presently unable to accept such discharge without construction, and in the case of a discharge to an existing publicly owned treatment works, such treatment works has an extension pursuant to paragraph (1) of this subsection, the owner or operator of such point source may request the Administrator (or if appropriate the State) to issue or modify such a permit pursuant to such section 1342 of this title to extend such time for compliance. Any such request shall be filed with the Administrator (or if appropriate the State) within 180 days after December 27, 1977, or the filing of a request by the appropriate publicly owned treatment works under paragraph (1) of this subsection, whichever is later. If the Administrator (or if appropriate the State) finds that the owner or operator of such point source has acted in good faith, he may grant such request and issue or modify such a permit, which shall contain a schedule of compliance for the point source to achieve the requirements of subsections (b)(1)(A) and (C) of this section and shall contain such other terms and conditions, including pretreatment and interim effluent limitations and water conservation requirements applicable to that point source, as the Administrator determines are necessary to carry out the provisions of this chapter.

**(B)** No time modification granted by the Administrator (or if appropriate the State) pursuant to paragraph (2)(A) of this subsection shall extend beyond the earliest date practicable for compliance or beyond the date of any extension granted to the appropriate publicly owned treatment works pursuant to paragraph (1) of this subsection, but in no event shall it extend beyond July 1, 1988; and no such time modification shall be granted unless (i) the publicly owned treatment works will be in operation and available to the point source before July 1, 1988, and will meet the requirements of subsections (b)(1)(B) and (C) of this section after receiving the discharge from that point source; and (ii) the point source and the publicly owned treatment works

  

have entered into an enforceable contract requiring the point source to discharge into the publicly owned treatment works, the owner or operator of such point source to pay the costs required under section 1284 of this title, and the publicly owned treatment works to accept the discharge from the point source; and (iii) the permit for such point source requires that point source to meet all requirements under section 1317(a) and (b) of this title during the period of such time modification.

**(j) Modification procedures**

**(1)** Any application filed under this section for a modification of the provisions of--

**(A)** subsection (b)(1)(B) under subsection (h) of this section shall be filed not later that [1] the 365th day which begins after December 29, 1981, except that a publicly owned treatment works which prior to December 31, 1982, had a contractual arrangement to use a portion of the capacity of an ocean outfall operated by another publicly owned treatment works which has applied for or received modification under subsection (h), may apply for a modification of subsection (h) in its own right not later than 30 days after February 4, 1987, and except as provided in paragraph (5);

**(B)** subsection (b)(2)(A) as it applies to pollutants identified in subsection (b)(2)(F) shall be filed not later than 270 days after the date of promulgation of an applicable effluent guideline under section 1314 of this title or not later than 270 days after December 27, 1977, whichever is later.

**(2)** Subject to paragraph (3) of this section, any application for a modification filed under subsection (g) of this section shall not operate to stay any requirement under this chapter, unless in the judgment of the Administrator such a stay or the modification sought will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity, or teratogenicity), or synergistic propensities, and that there is a substantial likelihood that the applicant will succeed on the merits of such application. In the case of an application filed under subsection (g) of this section, the Administrator may condition any stay granted under this paragraph on requiring the filing of a bond or other appropriate security to assure timely compliance with the requirements from which a modification is sought.

**(3) Compliance requirements under subsection (g)**

**(A) Effect of filing**

An application for a modification under subsection (g) and a petition for listing of a pollutant as a pollutant for which modifications are authorized under such subsection shall not stay the requirement that the person seeking such modification or listing comply with effluent limitations under this chapter for all pollutants not the subject of such application or petition.

**(B) Effect of disapproval**

Disapproval of an application for a modification under subsection (g) shall not stay the requirement that the person seeking such modification comply with all applicable effluent limitations under this chapter.

**(4) Deadline for subsection (g) decision**

  

An application for a modification with respect to a pollutant filed under subsection (g) must be approved or disapproved not later than 365 days after the date of such filing; except that in any case in which a petition for listing such pollutant as a pollutant for which modifications are authorized under such subsection is approved, such application must be approved or disapproved not later than 365 days after the date of approval of such petition.

**(5) Extension of application deadline**

**(A) In general**

In the 180-day period beginning on October 31, 1994, the city of San Diego, California, may apply for a modification pursuant to subsection (h) of the requirements of subsection (b)(1)(B) with respect to biological oxygen demand and total suspended solids in the effluent discharged into marine waters.

**(B) Application**

An application under this paragraph shall include a commitment by the applicant to implement a waste water reclamation program that, at a minimum, will--

**(i)** achieve a system capacity of 45,000,000 gallons of reclaimed waste water per day by January 1, 2010; and

**(ii)** result in a reduction in the quantity of suspended solids discharged by the applicant into the marine environment during the period of the modification.

**(C) Additional conditions**

The Administrator may not grant a modification pursuant to an application submitted under this paragraph unless the Administrator determines that such modification will result in removal of not less than 58 percent of the biological oxygen demand (on an annual average) and not less than 80 percent of total suspended solids (on a monthly average) in the discharge to which the application applies.

**(D) Preliminary decision deadline**

The Administrator shall announce a preliminary decision on an application submitted under this paragraph not later than 1 year after the date the application is submitted.

**(k) Innovative technology**

In the case of any facility subject to a permit under section 1342 of this title which proposes to comply with the requirements of subsection (b)(2)(A) or (b)(2)(E) of this section by replacing existing production capacity with an innovative production process which will result in an effluent reduction significantly greater than that required by the limitation otherwise applicable to such facility and moves toward the national goal of eliminating the discharge of all pollutants, or with the installation of an innovative control technique that has a substantial likelihood for enabling the facility to comply with the applicable effluent

  

limitation by achieving a significantly greater effluent reduction than that required by the applicable effluent limitation and moves toward the national goal of eliminating the discharge of all pollutants, or by achieving the required reduction with an innovative system that has the potential for significantly lower costs than the systems which have been determined by the Administrator to be economically achievable, the Administrator (or the State with an approved program under section 1342 of this title, in consultation with the Administrator) may establish a date for compliance under subsection (b)(2)(A) or (b)(2)(E) of this section no later than two years after the date for compliance with such effluent limitation which would otherwise be applicable under such subsection, if it is also determined that such innovative system has the potential for industrywide application.

**(l) Toxic pollutants**

Other than as provided in subsection (n) of this section, the Administrator may not modify any requirement of this section as it applies to any specific pollutant which is on the toxic pollutant list under section 1317(a)(1) of this title.

**(m) Modification of effluent limitation requirements for point sources**

**(1)** The Administrator, with the concurrence of the State, may issue a permit under section 1342 of this title which modifies the requirements of subsections (b)(1)(A) and (b)(2)(E) of this section, and of section 1343 of this title, with respect to effluent limitations to the extent such limitations relate to biochemical oxygen demand and pH from discharges by an industrial discharger in such State into deep waters of the territorial seas, if the applicant demonstrates and the Administrator finds that--

**(A)** the facility for which modification is sought is covered at the time of the enactment of this subsection by National Pollutant Discharge Elimination System permit number CA0005894 or CA0005282;

**(B)** the energy and environmental costs of meeting such requirements of subsections (b)(1)(A) and (b)(2)(E) and section 1343 of this title exceed by an unreasonable amount the benefits to be obtained, including the objectives of this chapter;

**(C)** the applicant has established a system for monitoring the impact of such discharges on a representative sample of aquatic biota;

**(D)** such modified requirements will not result in any additional requirements on any other point or nonpoint source;

**(E)** there will be no new or substantially increased discharges from the point source of the pollutant to which the modification applies above that volume of discharge specified in the permit;

**(F)** the discharge is into waters where there is strong tidal movement and other hydrological and geological characteristics which are necessary to allow compliance with this subsection and section 1251(a)(2) of this title;

**(G)** the applicant accepts as a condition to the permit a contractural[2] obligation to use funds in the amount required (but not less than $250,000 per year for ten years) for research and development of water pollution control technology, including but not limited to closed cycle technology;

  

**(H)** the facts and circumstances present a unique situation which, if relief is granted, will not establish a precedent or the relaxation of the requirements of this chapter applicable to similarly situated discharges; and

**(I)** no owner or operator of a facility comparable to that of the applicant situated in the United States has demonstrated that it would be put at a competitive disadvantage to the applicant (or the parent company or any subsidiary thereof) as a result of the issuance of a permit under this subsection.

**(2)** The effluent limitations established under a permit issued under paragraph (1) shall be sufficient to implement the applicable State water quality standards, to assure the protection of public water supplies and protection and propagation of a balanced, indigenous population of shellfish, fish, fauna, wildlife, and other aquatic organisms, and to allow recreational activities in and on the water. In setting such limitations, the Administrator shall take into account any seasonal variations and the need for an adequate margin of safety, considering the lack of essential knowledge concerning the relationship between effluent limitations and water quality and the lack of essential knowledge of the effects of discharges on beneficial uses of the receiving waters.

**(3)** A permit under this subsection may be issued for a period not to exceed five years, and such a permit may be renewed for one additional period not to exceed five years upon a demonstration by the applicant and a finding by the Administrator at the time of application for any such renewal that the provisions of this subsection are met.

**(4)** The Administrator may terminate a permit issued under this subsection if the Administrator determines that there has been a decline in ambient water quality of the receiving waters during the period of the permit even if a direct cause and effect relationship cannot be shown: *Provided*, That if the effluent from a source with a permit issued under this subsection is contributing to a decline in ambient water quality of the receiving waters, the Administrator shall terminate such permit.

**(n) Fundamentally different factors**

**(1) General rule**

The Administrator, with the concurrence of the State, may establish an alternative requirement under subsection (b)(2) or section 1317(b) of this title for a facility that modifies the requirements of national effluent limitation guidelines or categorical pretreatment standards that would otherwise be applicable to such facility, if the owner or operator of such facility demonstrates to the satisfaction of the Administrator that--

**(A)** the facility is fundamentally different with respect to the factors (other than cost) specified in section 1314(b) or 1314(g) of this title and considered by the Administrator in establishing such national effluent limitation guidelines or categorical pretreatment standards;

**(B)** the application--

**(i)** is based solely on information and supporting data submitted to the Administrator during the rulemaking for establishment of the applicable national effluent limitation guidelines or categorical pretreatment standard specifically raising the factors that are fundamentally different for such facility; or

  

**(ii)** is based on information and supporting data referred to in clause (i) and information and supporting data the applicant did not have a reasonable opportunity to submit during such rulemaking;

**(C)** the alternative requirement is no less stringent than justified by the fundamental difference; and

**(D)** the alternative requirement will not result in a non-water quality environmental impact which is markedly more adverse than the impact considered by the Administrator in establishing such national effluent limitation guideline or categorical pretreatment standard.

**(2) Time limit for applications**

An application for an alternative requirement which modifies the requirements of an effluent limitation or pretreatment standard under this subsection must be submitted to the Administrator within 180 days after the date on which such limitation or standard is established or revised, as the case may be.

**(3) Time limit for decision**

The Administrator shall approve or deny by final agency action an application submitted under this subsection within 180 days after the date such application is filed with the Administrator.

**(4) Submission of information**

The Administrator may allow an applicant under this subsection to submit information and supporting data until the earlier of the date the application is approved or denied or the last day that the Administrator has to approve or deny such application.

**(5) Treatment of pending applications**

For the purposes of this subsection, an application for an alternative requirement based on fundamentally different factors which is pending on February 4, 1987, shall be treated as having been submitted to the Administrator on the 180th day following February 4, 1987. The applicant may amend the application to take into account the provisions of this subsection.

**(6) Effect of submission of application**

An application for an alternative requirement under this subsection shall not stay the applicant's obligation to comply with the effluent limitation guideline or categorical pretreatment standard which is the subject of the application.

**(7) Effect of denial**

If an application for an alternative requirement which modifies the requirements of an effluent limitation or pretreatment standard under this subsection is denied by the Administrator, the applicant must comply with such limitation or standard as established or revised, as the case may be.

  

**(8) Reports**

By January 1, 1997, and January 1 of every odd-numbered year thereafter, the Administrator shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report on the status of applications for alternative requirements which modify the requirements of effluent limitations under section 1311 or 1314 of this title or any national categorical pretreatment standard under section 1317(b) of this title filed before, on, or after February 4, 1987.

**(o) Application fees**

The Administrator shall prescribe and collect from each applicant fees reflecting the reasonable administrative costs incurred in reviewing and processing applications for modifications submitted to the Administrator pursuant to subsections (c), (g), (i), (k), (m), and (n) of this section, section 1314(d)(4) of this title, and section 1326(a) of this title. All amounts collected by the Administrator under this subsection shall be deposited into a special fund of the Treasury entitled "Water Permits and Related Services" which shall thereafter be available for appropriation to carry out activities of the Environmental Protection Agency for which such fees were collected.

**(p) Modified permit for coal remining operations**

**(1) In general**

Subject to paragraphs (2) through (4) of this subsection, the Administrator, or the State in any case which the State has an approved permit program under section 1342(b) of this title, may issue a permit under section 1342 of this title which modifies the requirements of subsection (b)(2)(A) of this section with respect to the pH level of any pre-existing discharge, and with respect to pre-existing discharges of iron and manganese from the remined area of any coal remining operation or with respect to the pH level or level of iron or manganese in any pre-existing discharge affected by the remining operation. Such modified requirements shall apply the best available technology economically achievable on a case-by-case basis, using best professional judgment, to set specific numerical effluent limitations in each permit.

**(2) Limitations**

The Administrator or the State may only issue a permit pursuant to paragraph (1) if the applicant demonstrates to the satisfaction of the Administrator or the State, as the case may be, that the coal remining operation will result in the potential for improved water quality from the remining operation but in no event shall such a permit allow the pH level of any discharge, and in no event shall such a permit allow the discharges of iron and manganese, to exceed the levels being discharged from the remined area before the coal remining operation begins. No discharge from, or affected by, the remining operation shall exceed State water quality standards established under section 1313 of this title.

**(3) Definitions**

For purposes of this subsection--

**(A) Coal remining operation**

  

The term "coal remining operation" means a coal mining operation which begins after February 4, 1987 at a site on which coal mining was conducted before August 3, 1977.

**(B) Remined area**

The term "remined area" means only that area of any coal remining operation on which coal mining was conducted before August 3, 1977.

**(C) Pre-existing discharge**

The term "pre-existing discharge" means any discharge at the time of permit application under this subsection.

**(4) Applicability of strip mining laws**

Nothing in this subsection shall affect the application of the Surface Mining Control and Reclamation Act of 1977 to any coal remining operation, including the application of such Act to suspended solids.

**CREDIT(S)**

(June 30, 1948, c. 758, Title III, § 301, as added Pub.L. 92-500, § 2, Oct. 18, 1972, 86 Stat. 844; amended Pub.L. 95-217, §§ 42-47, 53(c), Dec. 27, 1977, 91 Stat. 1582-1586, 1590; Pub.L. 97-117, §§ 21, 22(a)-(d), Dec. 29, 1981, 95 Stat. 1631, 1632; Pub.L. 97-440, Jan. 8, 1983, 96 Stat. 2289; Pub.L. 100-4, Title III, §§ 301(a) to (e), 302(a) to (d), 303(a), (b)(1), (c) to (f), 304(a), 305, 306(a), (b), 307, Feb. 4, 1987, 101 Stat. 29-37; Pub.L. 100-688, Title III, § 3202(b), Nov. 18, 1988, 102 Stat. 4154; Pub.L. 103-431, § 2, Oct. 31, 1994, 108 Stat. 4396; Pub.L. 104-66, Title II, § 2021(b), Dec. 21, 1995, 109 Stat. 727.)

Notes of Decisions (357)

Footnotes

1 So in original. Probably should be "than".

2 So in original. Probably should be "contractual".

33 U.S.C.A. § 1311, 33 USCA § 1311

Current through P.L. 116-91. Some statute sections may be more current, see credits for details.

United States Code Annotated Title 33. Navigation and Navigable Waters (Refs & Annos) Chapter 26. Water Pollution Prevention and Control (Refs & Annos) Subchapter III. Standards and Enforcement (Refs & Annos)

33 U.S.C.A. § 1313

# § 1313. Water quality standards and implementation plans

Effective: October 10, 2000
Currentness

**(a) Existing water quality standards**

**(1)** In order to carry out the purpose of this chapter, any water quality standard applicable to interstate waters which was adopted by any State and submitted to, and approved by, or is awaiting approval by, the Administrator pursuant to this Act as in effect immediately prior to October 18, 1972, shall remain in effect unless the Administrator determined that such standard is not consistent with the applicable requirements of this Act as in effect immediately prior to October 18, 1972. If the Administrator makes such a determination he shall, within three months after October 18, 1972, notify the State and specify the changes needed to meet such requirements. If such changes are not adopted by the State within ninety days after the date of such notification, the Administrator shall promulgate such changes in accordance with subsection (b) of this section.

**(2)** Any State which, before October 18, 1972, has adopted, pursuant to its own law, water quality standards applicable to intrastate waters shall submit such standards to the Administrator within thirty days after October 18, 1972. Each such standard shall remain in effect, in the same manner and to the same extent as any other water quality standard established under this chapter unless the Administrator determines that such standard is inconsistent with the applicable requirements of this Act as in effect immediately prior to October 18, 1972. If the Administrator makes such a determination he shall not later than the one hundred and twentieth day after the date of submission of such standards, notify the State and specify the changes needed to meet such requirements. If such changes are not adopted by the State within ninety days after such notification, the Administrator shall promulgate such changes in accordance with subsection (b) of this section.

**(3)(A)** Any State which prior to October 18, 1972, has not adopted pursuant to its own laws water quality standards applicable to intrastate waters shall, not later than one hundred and eighty days after October 18, 1972, adopt and submit such standards to the Administrator.

**(B)** If the Administrator determines that any such standards are consistent with the applicable requirements of this Act as in effect immediately prior to October 18, 1972, he shall approve such standards.

**(C)** If the Administrator determines that any such standards are not consistent with the applicable requirements of this Act as in effect immediately prior to October 18, 1972, he shall, not later than the ninetieth day after the date of submission of such standards, notify the State and specify the changes to meet such requirements. If such changes are not adopted by the State within ninety days after the date of notification, the Administrator shall promulgate such standards pursuant to subsection (b) of this section.

**(b) Proposed regulations**

  

**(1)** The Administrator shall promptly prepare and publish proposed regulations setting forth water quality standards for a State in accordance with the applicable requirements of this Act as in effect immediately prior to October 18, 1972, if--

**(A)** the State fails to submit water quality standards within the times prescribed in subsection (a) of this section.

**(B)** a water quality standard submitted by such State under subsection (a) of this section is determined by the Administrator not to be consistent with the applicable requirements of subsection (a) of this section.

**(2)** The Administrator shall promulgate any water quality standard published in a proposed regulation not later than one hundred and ninety days after the date he publishes any such proposed standard, unless prior to such promulgation, such State has adopted a water quality standard which the Administrator determines to be in accordance with subsection (a) of this section.

**(c) Review; revised standards; publication**

**(1)** The Governor of a State or the State water pollution control agency of such State shall from time to time (but at least once each three year period beginning with October 18, 1972) hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards. Results of such review shall be made available to the Administrator.

**(2)(A)** Whenever the State revises or adopts a new standard, such revised or new standard shall be submitted to the Administrator. Such revised or new water quality standard shall consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses. Such standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this chapter. Such standards shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation.

**(B)** Whenever a State reviews water quality standards pursuant to paragraph (1) of this subsection, or revises or adopts new standards pursuant to this paragraph, such State shall adopt criteria for all toxic pollutants listed pursuant to section 1317(a)(1) of this title for which criteria have been published under section 1314(a) of this title, the discharge or presence of which in the affected waters could reasonably be expected to interfere with those designated uses adopted by the State, as necessary to support such designated uses. Such criteria shall be specific numerical criteria for such toxic pollutants. Where such numerical criteria are not available, whenever a State reviews water quality standards pursuant to paragraph (1), or revises or adopts new standards pursuant to this paragraph, such State shall adopt criteria based on biological monitoring or assessment methods consistent with information published pursuant to section 1314(a)(8) of this title. Nothing in this section shall be construed to limit or delay the use of effluent limitations or other permit conditions based on or involving biological monitoring or assessment methods or previously adopted numerical criteria.

**(3)** If the Administrator, within sixty days after the date of submission of the revised or new standard, determines that such standard meets the requirements of this chapter, such standard shall thereafter be the water quality standard for the applicable waters of that State. If the Administrator determines that any such revised or new standard is not consistent with the applicable requirements of this chapter, he shall not later than the ninetieth day after the date of submission of such standard notify the

  

State and specify the changes to meet such requirements. If such changes are not adopted by the State within ninety days after the date of notification, the Administrator shall promulgate such standard pursuant to paragraph (4) of this subsection.

**(4)** The Administrator shall promptly prepare and publish proposed regulations setting forth a revised or new water quality standard for the navigable waters involved--

**(A)** if a revised or new water quality standard submitted by such State under paragraph (3) of this subsection for such waters is determined by the Administrator not to be consistent with the applicable requirements of this chapter, or

**(B)** in any case where the Administrator determines that a revised or new standard is necessary to meet the requirements of this chapter.

The Administrator shall promulgate any revised or new standard under this paragraph not later than ninety days after he publishes such proposed standards, unless prior to such promulgation, such State has adopted a revised or new water quality standard which the Administrator determines to be in accordance with this chapter.

**(d) Identification of areas with insufficient controls; maximum daily load; certain effluent limitations revision**

**(1)(A)** Each State shall identify those waters within its boundaries for which the effluent limitations required by section 1311(b)(1)(A) and section 1311(b)(1)(B) of this title are not stringent enough to implement any water quality standard applicable to such waters. The State shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters.

**(B)** Each State shall identify those waters or parts thereof within its boundaries for which controls on thermal discharges under section 1311 of this title are not stringent enough to assure protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife.

**(C)** Each State shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, the total maximum daily load, for those pollutants which the Administrator identifies under section 1314(a)(2) of this title as suitable for such calculation. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.

**(D)** Each State shall estimate for the waters identified in paragraph (1)(B) of this subsection the total maximum daily thermal load required to assure protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife. Such estimates shall take into account the normal water temperatures, flow rates, seasonal variations, existing sources of heat input, and the dissipative capacity of the identified waters or parts thereof. Such estimates shall include a calculation of the maximum heat input that can be made into each such part and shall include a margin of safety which takes into account any lack of knowledge concerning the development of thermal water quality criteria for such protection and propagation in the identified waters or parts thereof.

**(2)** Each State shall submit to the Administrator from time to time, with the first such submission not later than one hundred and eighty days after the date of publication of the first identification of pollutants under section 1314(a)(2)(D) of this title,

  

for his approval the waters identified and the loads established under paragraphs (1)(A), (1)(B), (1)(C), and (1)(D) of this subsection. The Administrator shall either approve or disapprove such identification and load not later than thirty days after the date of submission. If the Administrator approves such identification and load, such State shall incorporate them into its current plan under subsection (e) of this section. If the Administrator disapproves such identification and load, he shall not later than thirty days after the date of such disapproval identify such waters in such State and establish such loads for such waters as he determines necessary to implement the water quality standards applicable to such waters and upon such identification and establishment the State shall incorporate them into its current plan under subsection (e) of this section.

**(3)** For the specific purpose of developing information, each State shall identify all waters within its boundaries which it has not identified under paragraph (1)(A) and (1)(B) of this subsection and estimate for such waters the total maximum daily load with seasonal variations and margins of safety, for those pollutants which the Administrator identifies under section 1314(a)(2) of this title as suitable for such calculation and for thermal discharges, at a level that would assure protection and propagation of a balanced indigenous population of fish, shellfish, and wildlife.

**(4) Limitations on revision of certain effluent limitations**

**(A) Standard not attained**

For waters identified under paragraph (1)(A) where the applicable water quality standard has not yet been attained, any effluent limitation based on a total maximum daily load or other waste load allocation established under this section may be revised only if (i) the cumulative effect of all such revised effluent limitations based on such total maximum daily load or waste load allocation will assure the attainment of such water quality standard, or (ii) the designated use which is not being attained is removed in accordance with regulations established under this section.

**(B) Standard attained**

For waters identified under paragraph (1)(A) where the quality of such waters equals or exceeds levels necessary to protect the designated use for such waters or otherwise required by applicable water quality standards, any effluent limitation based on a total maximum daily load or other waste load allocation established under this section, or any water quality standard established under this section, or any other permitting standard may be revised only if such revision is subject to and consistent with the antidegradation policy established under this section.

**(e) Continuing planning process**

**(1)** Each State shall have a continuing planning process approved under paragraph (2) of this subsection which is consistent with this chapter.

**(2)** Each State shall submit not later than 120 days after October 18, 1972, to the Administrator for his approval a proposed continuing planning process which is consistent with this chapter. Not later than thirty days after the date of submission of such a process the Administrator shall either approve or disapprove such process. The Administrator shall from time to time review each State's approved planning process for the purpose of insuring that such planning process is at all times consistent with this chapter. The Administrator shall not approve any State permit program under subchapter IV of this chapter for any State which does not have an approved continuing planning process under this section.

  

**(3)** The Administrator shall approve any continuing planning process submitted to him under this section which will result in plans for all navigable waters within such State, which include, but are not limited to, the following:

**(A)** effluent limitations and schedules of compliance at least as stringent as those required by section 1311(b)(1), section 1311(b)(2), section 1316, and section 1317 of this title, and at least as stringent as any requirements contained in any applicable water quality standard in effect under authority of this section;

**(B)** the incorporation of all elements of any applicable area-wide waste management plans under section 1288 of this title, and applicable basin plans under section 1289 of this title;

**(C)** total maximum daily load for pollutants in accordance with subsection (d) of this section;

**(D)** procedures for revision;

**(E)** adequate authority for intergovernmental cooperation;

**(F)** adequate implementation, including schedules of compliance, for revised or new water quality standards, under subsection (c) of this section;

**(G)** controls over the disposition of all residual waste from any water treatment processing;

**(H)** an inventory and ranking, in order of priority, of needs for construction of waste treatment works required to meet the applicable requirements of sections 1311 and 1312 of this title.

**(f) Earlier compliance**

Nothing in this section shall be construed to affect any effluent limitation, or schedule of compliance required by any State to be implemented prior to the dates set forth in sections 1311(b)(1) and 1311(b)(2) of this title nor to preclude any State from requiring compliance with any effluent limitation or schedule of compliance at dates earlier than such dates.

**(g) Heat standards**

Water quality standards relating to heat shall be consistent with the requirements of section 1326 of this title.

**(h) Thermal water quality standards**

For the purposes of this chapter the term “water quality standards” includes thermal water quality standards.

**(i) Coastal recreation water quality criteria**

  

**(1) Adoption by States**

**(A) Initial criteria and standards**

Not later than 42 months after October 10, 2000, each State having coastal recreation waters shall adopt and submit to the Administrator water quality criteria and standards for the coastal recreation waters of the State for those pathogens and pathogen indicators for which the Administrator has published criteria under section 1314(a) of this title.

**(B) New or revised criteria and standards**

Not later than 36 months after the date of publication by the Administrator of new or revised water quality criteria under section 1314(a)(9) of this title, each State having coastal recreation waters shall adopt and submit to the Administrator new or revised water quality standards for the coastal recreation waters of the State for all pathogens and pathogen indicators to which the new or revised water quality criteria are applicable.

**(2) Failure of States to adopt**

**(A) In general**

If a State fails to adopt water quality criteria and standards in accordance with paragraph (1)(A) that are as protective of human health as the criteria for pathogens and pathogen indicators for coastal recreation waters published by the Administrator, the Administrator shall promptly propose regulations for the State setting forth revised or new water quality standards for pathogens and pathogen indicators described in paragraph (1)(A) for coastal recreation waters of the State.

**(B) Exception**

If the Administrator proposes regulations for a State described in subparagraph (A) under subsection (c)(4)(B), the Administrator shall publish any revised or new standard under this subsection not later than 42 months after October 10, 2000.

**(3) Applicability**

Except as expressly provided by this subsection, the requirements and procedures of subsection (c) apply to this subsection, including the requirement in subsection (c)(2)(A) that the criteria protect public health and welfare.

**CREDIT(S)**

(June 30, 1948, c. 758, Title III, § 303, as added Pub.L. 92-500, § 2, Oct. 18, 1972, 86 Stat. 846; amended Pub.L. 100-4, Title III, § 308(d), Title IV, § 404(b), Feb. 4, 1987, 101 Stat. 39, 68; Pub.L. 106-284, § 2, Oct. 10, 2000, 114 Stat. 870.)

Notes of Decisions (154)

33 U.S.C.A. § 1313, 33 USCA § 1313

  

Current through P.L. 116-91. Some statute sections may be more current, see credits for details.

End of Document

KeyCite Yellow Flag - Negative Treatment
Proposed Legislation

United States Code Annotated Title 33. Navigation and Navigable Waters (Refs & Annos) Chapter 26. Water Pollution Prevention and Control (Refs & Annos) Subchapter III. Standards and Enforcement (Refs & Annos)

33 U.S.C.A. § 1318

# § 1318. Records and reports; inspections

Currentness

**(a) Maintenance; monitoring equipment; entry; access to information**

Whenever required to carry out the objective of this chapter, including but not limited to (1) developing or assisting in the development of any effluent limitation, or other limitation, prohibition, or effluent standard, pretreatment standard, or standard of performance under this chapter; (2) determining whether any person is in violation of any such effluent limitation, or other limitation, prohibition or effluent standard, pretreatment standard, or standard of performance; (3) any requirement established under this section; or (4) carrying out sections 1315, 1321, 1342, 1344 (relating to State permit programs), 1345, and 1364 of this title--

**(A)** the Administrator shall require the owner or operator of any point source to (i) establish and maintain such records, (ii) make such reports, (iii) install, use, and maintain such monitoring equipment or methods (including where appropriate, biological monitoring methods), (iv) sample such effluents (in accordance with such methods, at such locations, at such intervals, and in such manner as the Administrator shall prescribe), and (v) provide such other information as he may reasonably require; and

**(B)** the Administrator or his authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of his credentials--

**(i)** shall have a right of entry to, upon, or through any premises in which an effluent source is located or in which any records required to be maintained under clause (A) of this subsection are located, and

**(ii)** may at reasonable times have access to and copy any records, inspect any monitoring equipment or method required under clause (A), and sample any effluents which the owner or operator of such source is required to sample under such clause.

**(b) Availability to public; trade secrets exception; penalty for disclosure of confidential information**

Any records, reports, or information obtained under this section (1) shall, in the case of effluent data, be related to any applicable effluent limitations, toxic, pretreatment, or new source performance standards, and (2) shall be available to the public, except that upon a showing satisfactory to the Administrator by any person that records, reports, or information, or particular part thereof (other than effluent data), to which the Administrator has access under this section, if made public would divulge methods or processes entitled to protection as trade secrets of such person, the Administrator shall consider such record,

  

report, or information, or particular portion thereof confidential in accordance with the purposes of section 1905 of Title 18. Any authorized representative of the Administrator (including an authorized contractor acting as a representative of the Administrator) who knowingly or willfully publishes, divulges, discloses, or makes known in any manner or to any extent not authorized by law any information which is required to be considered confidential under this subsection shall be fined not more than $1,000 or imprisoned not more than 1 year, or both. Nothing in this subsection shall prohibit the Administrator or an authorized representative of the Administrator (including any authorized contractor acting as a representative of the Administrator) from disclosing records, reports, or information to other officers, employees, or authorized representatives of the United States concerned with carrying out this chapter or when relevant in any proceeding under this chapter.

**(c) Application of State law**

Each State may develop and submit to the Administrator procedures under State law for inspection, monitoring, and entry with respect to point sources located in such State. If the Administrator finds that the procedures and the law of any State relating to inspection, monitoring, and entry are applicable to at least the same extent as those required by this section, such State is authorized to apply and enforce its procedures for inspection, monitoring, and entry with respect to point sources located in such State (except with respect to point sources owned or operated by the United States).

**(d) Access by Congress**

Notwithstanding any limitation contained in this section or any other provision of law, all information reported to or otherwise obtained by the Administrator (or any representative of the Administrator) under this chapter shall be made available, upon written request of any duly authorized committee of Congress, to such committee.

**CREDIT(S)**

(June 30, 1948, c. 758, Title III, § 308, as added Pub.L. 92-500, § 2, Oct. 18, 1972, 86 Stat. 858; amended Pub.L. 95-217, § 67(c)(1), Dec. 27, 1977, 91 Stat. 1606; Pub.L. 100-4, Title III, § 310, Title IV, § 406(d)(1), Feb. 4, 1987, 101 Stat. 41, 73.)

Notes of Decisions (21)

33 U.S.C.A. § 1318, 33 USCA § 1318
Current through P.L. 116-91. Some statute sections may be more current, see credits for details.

KeyCite Yellow Flag - Negative Treatment
Proposed Legislation

United States Code Annotated Title 33. Navigation and Navigable Waters (Refs & Annos) Chapter 26. Water Pollution Prevention and Control (Refs & Annos) Subchapter IV. Permits and Licenses (Refs & Annos)

33 U.S.C.A. § 1342

# § 1342. National pollutant discharge elimination system

Effective: January 14, 2019
Currentness

**(a) Permits for discharge of pollutants**

**(1)** Except as provided in sections 1328 and 1344 of this title, the Administrator may, after opportunity for public hearing issue a permit for the discharge of any pollutant, or combination of pollutants, notwithstanding section 1311(a) of this title, upon condition that such discharge will meet either (A) all applicable requirements under sections 1311, 1312, 1316, 1317, 1318, and 1343 of this title, or (B) prior to the taking of necessary implementing actions relating to all such requirements, such conditions as the Administrator determines are necessary to carry out the provisions of this chapter.

**(2)** The Administrator shall prescribe conditions for such permits to assure compliance with the requirements of paragraph (1) of this subsection, including conditions on data and information collection, reporting, and such other requirements as he deems appropriate.

**(3)** The permit program of the Administrator under paragraph (1) of this subsection, and permits issued thereunder, shall be subject to the same terms, conditions, and requirements as apply to a State permit program and permits issued thereunder under subsection (b) of this section.

**(4)** All permits for discharges into the navigable waters issued pursuant to section 407 of this title shall be deemed to be permits issued under this subchapter, and permits issued under this subchapter shall be deemed to be permits issued under section 407 of this title, and shall continue in force and effect for their term unless revoked, modified, or suspended in accordance with the provisions of this chapter.

**(5)** No permit for a discharge into the navigable waters shall be issued under section 407 of this title after October 18, 1972. Each application for a permit under section 407 of this title, pending on October 18, 1972, shall be deemed to be an application for a permit under this section. The Administrator shall authorize a State, which he determines has the capability of administering a permit program which will carry out the objectives of this chapter to issue permits for discharges into the navigable waters within the jurisdiction of such State. The Administrator may exercise the authority granted him by the preceding sentence only during the period which begins on October 18, 1972, and ends either on the ninetieth day after the date of the first promulgation of guidelines required by section 1314(i)(2) of this title, or the date of approval by the Administrator of a permit program for such State under subsection (b) of this section, whichever date first occurs, and no such authorization to a State shall extend beyond the last day of such period. Each such permit shall be subject to such conditions as the Administrator determines are necessary to carry out the provisions of this chapter. No such permit shall issue if the Administrator objects to such issuance.

  

**(b) State permit programs**

At any time after the promulgation of the guidelines required by subsection (i)(2) of section 1314 of this title, the Governor of each State desiring to administer its own permit program for discharges into navigable waters within its jurisdiction may submit to the Administrator a full and complete description of the program it proposes to establish and administer under State law or under an interstate compact. In addition, such State shall submit a statement from the attorney general (or the attorney for those State water pollution control agencies which have independent legal counsel), or from the chief legal officer in the case of an interstate agency, that the laws of such State, or the interstate compact, as the case may be, provide adequate authority to carry out the described program. The Administrator shall approve each submitted program unless he determines that adequate authority does not exist:

**(1)** To issue permits which--

**(A)** apply, and insure compliance with, any applicable requirements of sections 1311, 1312, 1316, 1317, and 1343 of this title;

**(B)** are for fixed terms not exceeding five years; and

**(C)** can be terminated or modified for cause including, but not limited to, the following:

**(i)** violation of any condition of the permit;

**(ii)** obtaining a permit by misrepresentation, or failure to disclose fully all relevant facts;

**(iii)** change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;

**(D)** control the disposal of pollutants into wells;

**(2)(A)** To issue permits which apply, and insure compliance with, all applicable requirements of section 1318 of this title; or

**(B)** To inspect, monitor, enter, and require reports to at least the same extent as required in section 1318 of this title;

**(3)** To insure that the public, and any other State the waters of which may be affected, receive notice of each application for a permit and to provide an opportunity for public hearing before a ruling on each such application;

**(4)** To insure that the Administrator receives notice of each application (including a copy thereof) for a permit;

  

**(5)** To insure that any State (other than the permitting State), whose waters may be affected by the issuance of a permit may submit written recommendations to the permitting State (and the Administrator) with respect to any permit application and, if any part of such written recommendations are not accepted by the permitting State, that the permitting State will notify such affected State (and the Administrator) in writing of its failure to so accept such recommendations together with its reasons for so doing;

**(6)** To insure that no permit will be issued if, in the judgment of the Secretary of the Army acting through the Chief of Engineers, after consultation with the Secretary of the department in which the Coast Guard is operating, anchorage and navigation of any of the navigable waters would be substantially impaired thereby;

**(7)** To abate violations of the permit or the permit program, including civil and criminal penalties and other ways and means of enforcement;

**(8)** To insure that any permit for a discharge from a publicly owned treatment works includes conditions to require the identification in terms of character and volume of pollutants of any significant source introducing pollutants subject to pretreatment standards under section 1317(b) of this title into such works and a program to assure compliance with such pretreatment standards by each such source, in addition to adequate notice to the permitting agency of (A) new introductions into such works of pollutants from any source which would be a new source as defined in section 1316 of this title if such source were discharging pollutants, (B) new introductions of pollutants into such works from a source which would be subject to section 1311 of this title if it were discharging such pollutants, or (C) a substantial change in volume or character of pollutants being introduced into such works by a source introducing pollutants into such works at the time of issuance of the permit. Such notice shall include information on the quality and quantity of effluent to be introduced into such treatment works and any anticipated impact of such change in the quantity or quality of effluent to be discharged from such publicly owned treatment works; and

**(9)** To insure that any industrial user of any publicly owned treatment works will comply with sections 1284(b), 1317, and 1318 of this title.

**(c) Suspension of Federal program upon submission of State program; withdrawal of approval of State program; return of State program to Administrator**

**(1)** Not later than ninety days after the date on which a State has submitted a program (or revision thereof) pursuant to subsection (b) of this section, the Administrator shall suspend the issuance of permits under subsection (a) of this section as to those discharges subject to such program unless he determines that the State permit program does not meet the requirements of subsection (b) of this section or does not conform to the guidelines issued under section 1314(i)(2) of this title. If the Administrator so determines, he shall notify the State of any revisions or modifications necessary to conform to such requirements or guidelines.

**(2)** Any State permit program under this section shall at all times be in accordance with this section and guidelines promulgated pursuant to section 1314(i)(2) of this title.

**(3)** Whenever the Administrator determines after public hearing that a State is not administering a program approved under this section in accordance with requirements of this section, he shall so notify the State and, if appropriate corrective action is not taken within a reasonable time, not to exceed ninety days, the Administrator shall withdraw approval of such program. The

  

Administrator shall not withdraw approval of any such program unless he shall first have notified the State, and made public, in writing, the reasons for such withdrawal.

**(4) Limitations on partial permit program returns and withdrawals**

A State may return to the Administrator administration, and the Administrator may withdraw under paragraph (3) of this subsection approval, of--

**(A)** a State partial permit program approved under subsection (n)(3) only if the entire permit program being administered by the State department or agency at the time is returned or withdrawn; and

**(B)** a State partial permit program approved under subsection (n)(4) only if an entire phased component of the permit program being administered by the State at the time is returned or withdrawn.

**(d) Notification of Administrator**

**(1)** Each State shall transmit to the Administrator a copy of each permit application received by such State and provide notice to the Administrator of every action related to the consideration of such permit application, including each permit proposed to be issued by such State.

**(2)** No permit shall issue (A) if the Administrator within ninety days of the date of his notification under subsection (b)(5) of this section objects in writing to the issuance of such permit, or (B) if the Administrator within ninety days of the date of transmittal of the proposed permit by the State objects in writing to the issuance of such permit as being outside the guidelines and requirements of this chapter. Whenever the Administrator objects to the issuance of a permit under this paragraph such written objection shall contain a statement of the reasons for such objection and the effluent limitations and conditions which such permit would include if it were issued by the Administrator.

**(3)** The Administrator may, as to any permit application, waive paragraph (2) of this subsection.

**(4)** In any case where, after December 27, 1977, the Administrator, pursuant to paragraph (2) of this subsection, objects to the issuance of a permit, on request of the State, a public hearing shall be held by the Administrator on such objection. If the State does not resubmit such permit revised to meet such objection within 30 days after completion of the hearing, or, if no hearing is requested within 90 days after the date of such objection, the Administrator may issue the permit pursuant to subsection (a) of this section for such source in accordance with the guidelines and requirements of this chapter.

**(e) Waiver of notification requirement**

In accordance with guidelines promulgated pursuant to subsection (i)(2) of section 1314 of this title, the Administrator is authorized to waive the requirements of subsection (d) of this section at the time he approves a program pursuant to subsection (b) of this section for any category (including any class, type, or size within such category) of point sources within the State submitting such program.

  

**(f) Point source categories**

The Administrator shall promulgate regulations establishing categories of point sources which he determines shall not be subject to the requirements of subsection (d) of this section in any State with a program approved pursuant to subsection (b) of this section. The Administrator may distinguish among classes, types, and sizes within any category of point sources.

**(g) Other regulations for safe transportation, handling, carriage, storage, and stowage of pollutants**

Any permit issued under this section for the discharge of pollutants into the navigable waters from a vessel or other floating craft shall be subject to any applicable regulations promulgated by the Secretary of the department in which the Coast Guard is operating, establishing specifications for safe transportation, handling, carriage, storage, and stowage of pollutants.

**(h) Violation of permit conditions; restriction or prohibition upon introduction of pollutant by source not previously utilizing treatment works**

In the event any condition of a permit for discharges from a treatment works (as defined in section 1292 of this title) which is publicly owned is violated, a State with a program approved under subsection (b) of this section or the Administrator, where no State program is approved or where the Administrator determines pursuant to section 1319(a) of this title that a State with an approved program has not commenced appropriate enforcement action with respect to such permit, may proceed in a court of competent jurisdiction to restrict or prohibit the introduction of any pollutant into such treatment works by a source not utilizing such treatment works prior to the finding that such condition was violated.

**(i) Federal enforcement not limited**

Nothing in this section shall be construed to limit the authority of the Administrator to take action pursuant to section 1319 of this title.

**(j) Public information**

A copy of each permit application and each permit issued under this section shall be available to the public. Such permit application or permit, or portion thereof, shall further be available on request for the purpose of reproduction.

**(k) Compliance with permits**

Compliance with a permit issued pursuant to this section shall be deemed compliance, for purposes of sections 1319 and 1365 of this title, with sections 1311, 1312, 1316, 1317, and 1343 of this title, except any standard imposed under section 1317 of this title for a toxic pollutant injurious to human health. Until December 31, 1974, in any case where a permit for discharge has been applied for pursuant to this section, but final administrative disposition of such application has not been made, such discharge shall not be a violation of (1) section 1311, 1316, or 1342 of this title, or (2) section 407 of this title, unless the Administrator or other plaintiff proves that final administrative disposition of such application has not been made because of the failure of the applicant to furnish information reasonably required or requested in order to process the application. For the 180-day period beginning on October 18, 1972, in the case of any point source discharging any pollutant or combination of pollutants immediately prior to such date which source is not subject to section 407 of this title, the discharge by such source shall not be a violation of this chapter if such a source applies for a permit for discharge pursuant to this section within such 180-day period.

  

**(l) Limitation on permit requirement**

**(1) Agricultural return flows**

The Administrator shall not require a permit under this section for discharges composed entirely of return flows from irrigated agriculture, nor shall the Administrator directly or indirectly, require any State to require such a permit.

**(2) Stormwater runoff from oil, gas, and mining operations**

The Administrator shall not require a permit under this section, nor shall the Administrator directly or indirectly require any State to require a permit, for discharges of stormwater runoff from mining operations or oil and gas exploration, production, processing, or treatment operations or transmission facilities, composed entirely of flows which are from conveyances or systems of conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying precipitation runoff and which are not contaminated by contact with, or do not come into contact with, any overburden, raw material, intermediate products, finished product, byproduct, or waste products located on the site of such operations.

**(3) Silvicultural activities**

**(A) NPDES permit requirements for silvicultural activities**

The Administrator shall not require a permit under this section nor directly or indirectly require any State to require a permit under this section for a discharge from runoff resulting from the conduct of the following silviculture activities conducted in accordance with standard industry practice: nursery operations, site preparation, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, or road construction and maintenance.

**(B) Other requirements**

Nothing in this paragraph exempts a discharge from silvicultural activity from any permitting requirement under section 1344 of this title, existing permitting requirements under section 1342 of this title, or from any other federal law.

**(C)** The authorization provided in Section [1] 1365(a) of this title does not apply to any non-permitting program established under 1342(p)(6) [2] of this title for the silviculture activities listed in 1342(l)(3)(A) [2] of this title, or to any other limitations that might be deemed to apply to the silviculture activities listed in 1342(l)(3)(A) [2] of this title.

**(m) Additional pretreatment of conventional pollutants not required**

To the extent a treatment works (as defined in section 1292 of this title) which is publicly owned is not meeting the requirements of a permit issued under this section for such treatment works as a result of inadequate design or operation of such treatment works, the Administrator, in issuing a permit under this section, shall not require pretreatment by a person introducing conventional pollutants identified pursuant to section 1314(a)(4) of this title into such treatment works other than pretreatment required to assure compliance with pretreatment standards under subsection (b)(8) of this section and section 1317(b)(1) of this title. Nothing in this subsection shall affect the Administrator's authority under sections 1317 and 1319 of this title, affect

  

State and local authority under sections 1317(b)(4) and 1370 of this title, relieve such treatment works of its obligations to meet requirements established under this chapter, or otherwise preclude such works from pursuing whatever feasible options are available to meet its responsibility to comply with its permit under this section.

**(n) Partial permit program**

**(1) State submission**

The Governor of a State may submit under subsection (b) of this section a permit program for a portion of the discharges into the navigable waters in such State.

**(2) Minimum coverage**

A partial permit program under this subsection shall cover, at a minimum, administration of a major category of the discharges into the navigable waters of the State or a major component of the permit program required by subsection (b).

**(3) Approval of major category partial permit programs**

The Administrator may approve a partial permit program covering administration of a major category of discharges under this subsection if--

**(A)** such program represents a complete permit program and covers all of the discharges under the jurisdiction of a department or agency of the State; and

**(B)** the Administrator determines that the partial program represents a significant and identifiable part of the State program required by subsection (b).

**(4) Approval of major component partial permit programs**

The Administrator may approve under this subsection a partial and phased permit program covering administration of a major component (including discharge categories) of a State permit program required by subsection (b) if--

**(A)** the Administrator determines that the partial program represents a significant and identifiable part of the State program required by subsection (b); and

**(B)** the State submits, and the Administrator approves, a plan for the State to assume administration by phases of the remainder of the State program required by subsection (b) by a specified date not more than 5 years after submission of the partial program under this subsection and agrees to make all reasonable efforts to assume such administration by such date.

**(o) Anti-backsliding**

  

**(1) General prohibition**

In the case of effluent limitations established on the basis of subsection (a)(1)(B) of this section, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 1314(b) of this title subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit. In the case of effluent limitations established on the basis of section 1311(b)(1)(C) or section 1313(d) or (e) of this title, a permit may not be renewed, reissued, or modified to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit except in compliance with section 1313(d)(4) of this title.

**(2) Exceptions**

A permit with respect to which paragraph (1) applies may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant if--

**(A)** material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation;

**(B)(i)** information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance; or

**(ii)** the Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under subsection (a)(1)(B);

**(C)** a less stringent effluent limitation is necessary because of events over which the permittee has no control and for which there is no reasonably available remedy;

**(D)** the permittee has received a permit modification under section 1311(c), 1311(g), 1311(h), 1311(i), 1311(k), 1311(n), or 1326(a) of this title; or

**(E)** the permittee has installed the treatment facilities required to meet the effluent limitations in the previous permit and has properly operated and maintained the facilities but has nevertheless been unable to achieve the previous effluent limitations, in which case the limitations in the reviewed, reissued, or modified permit may reflect the level of pollutant control actually achieved (but shall not be less stringent than required by effluent guidelines in effect at the time of permit renewal, reissuance, or modification).

Subparagraph (B) shall not apply to any revised waste load allocations or any alternative grounds for translating water quality standards into effluent limitations, except where the cumulative effect of such revised allocations results in a decrease in the amount of pollutants discharged into the concerned waters, and such revised allocations are not the result of a discharger eliminating or substantially reducing its discharge of pollutants due to complying with the requirements of this chapter or for reasons otherwise unrelated to water quality.

  

**(3) Limitations**

In no event may a permit with respect to which paragraph (1) applies be renewed, reissued, or modified to contain an effluent limitation which is less stringent than required by effluent guidelines in effect at the time the permit is renewed, reissued, or modified. In no event may such a permit to discharge into waters be renewed, reissued, or modified to contain a less stringent effluent limitation if the implementation of such limitation would result in a violation of a water quality standard under section 1313 of this title applicable to such waters.

**(p) Municipal and industrial stormwater discharges**

**(1) General rule**

Prior to October 1, 1994, the Administrator or the State (in the case of a permit program approved under this section) shall not require a permit under this section for discharges composed entirely of stormwater.

**(2) Exceptions**

Paragraph (1) shall not apply with respect to the following stormwater discharges:

**(A)** A discharge with respect to which a permit has been issued under this section before February 4, 1987.

**(B)** A discharge associated with industrial activity.

**(C)** A discharge from a municipal separate storm sewer system serving a population of 250,000 or more.

**(D)** A discharge from a municipal separate storm sewer system serving a population of 100,000 or more but less than 250,000.

**(E)** A discharge for which the Administrator or the State, as the case may be, determines that the stormwater discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

**(3) Permit requirements**

**(A) Industrial discharges**

Permits for discharges associated with industrial activity shall meet all applicable provisions of this section and section 1311 of this title.

**(B) Municipal discharge**

  

Permits for discharges from municipal storm sewers--

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

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

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

**(4) Permit application requirements**

**(A) Industrial and large municipal discharges**

Not later than 2 years after February 4, 1987, the Administrator shall establish regulations setting forth the permit application requirements for stormwater discharges described in paragraphs (2)(B) and (2)(C). Applications for permits for such discharges shall be filed no later than 3 years after February 4, 1987. Not later than 4 years after February 4, 1987, the Administrator or the State, as the case may be, shall issue or deny each such permit. Any such permit shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the date of issuance of such permit.

**(B) Other municipal discharges**

Not later than 4 years after February 4, 1987, the Administrator shall establish regulations setting forth the permit application requirements for stormwater discharges described in paragraph (2)(D). Applications for permits for such discharges shall be filed no later than 5 years after February 4, 1987. Not later than 6 years after February 4, 1987, the Administrator or the State, as the case may be, shall issue or deny each such permit. Any such permit shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the date of issuance of such permit.

**(5) Studies**

The Administrator, in consultation with the States, shall conduct a study for the purposes of--

**(A)** identifying those stormwater discharges or classes of stormwater discharges for which permits are not required pursuant to paragraphs (1) and (2) of this subsection;

**(B)** determining, to the maximum extent practicable, the nature and extent of pollutants in such discharges; and

**(C)** establishing procedures and methods to control stormwater discharges to the extent necessary to mitigate impacts on water quality.

  

Not later than October 1, 1988, the Administrator shall submit to Congress a report on the results of the study described in subparagraphs (A) and (B). Not later than October 1, 1989, the Administrator shall submit to Congress a report on the results of the study described in subparagraph (C).

**(6) Regulations**

Not later than October 1, 1993, the Administrator, in consultation with State and local officials, shall issue regulations (based on the results of the studies conducted under paragraph (5)) which designate stormwater discharges, other than those discharges described in paragraph (2), to be regulated to protect water quality and shall establish a comprehensive program to regulate such designated sources. The program shall, at a minimum, (A) establish priorities, (B) establish requirements for State stormwater management programs, and (C) establish expeditious deadlines. The program may include performance standards, guidelines, guidance, and management practices and treatment requirements, as appropriate.

**(q) Combined sewer overflows**

**(1) Requirement for permits, orders, and decrees**

Each permit, order, or decree issued pursuant to this chapter after December 21, 2000, for a discharge from a municipal combined storm and sanitary sewer shall conform to the Combined Sewer Overflow Control Policy signed by the Administrator on April 11, 1994 (in this subsection referred to as the "CSO control policy").

**(2) Water quality and designated use review guidance**

Not later than July 31, 2001, and after providing notice and opportunity for public comment, the Administrator shall issue guidance to facilitate the conduct of water quality and designated use reviews for municipal combined sewer overflow receiving waters.

**(3) Report**

Not later than September 1, 2001, the Administrator shall transmit to Congress a report on the progress made by the Environmental Protection Agency, States, and municipalities in implementing and enforcing the CSO control policy.

**(r) Discharges incidental to the normal operation of recreational vessels**

No permit shall be required under this chapter by the Administrator (or a State, in the case of a permit program approved under subsection (b)) for the discharge of any graywater, bilge water, cooling water, weather deck runoff, oil water separator effluent, or effluent from properly functioning marine engines, or any other discharge that is incidental to the normal operation of a vessel, if the discharge is from a recreational vessel.

**(s) Integrated plans**

**(1) Definition of integrated plan**

  

In this subsection, the term "integrated plan" means a plan developed in accordance with the Integrated Municipal Stormwater and Wastewater Planning Approach Framework, issued by the Environmental Protection Agency and dated June 5, 2012.

**(2) In general**

The Administrator (or a State, in the case of a permit program approved by the Administrator) shall inform municipalities of the opportunity to develop an integrated plan that may be incorporated into a permit under this section.

**(3) Scope**

**(A) Scope of permit incorporating integrated plan**

A permit issued under this section that incorporates an integrated plan may integrate all requirements under this chapter addressed in the integrated plan, including requirements relating to--

**(i)** a combined sewer overflow;

**(ii)** a capacity, management, operation, and maintenance program for sanitary sewer collection systems;

**(iii)** a municipal stormwater discharge;

**(iv)** a municipal wastewater discharge; and

**(v)** a water quality-based effluent limitation to implement an applicable wasteload allocation in a total maximum daily load.

**(B) Inclusions in integrated plan**

An integrated plan incorporated into a permit issued under this section may include the implementation of--

**(i)** projects, including innovative projects, to reclaim, recycle, or reuse water; and

**(ii)** green infrastructure.

**(4) Compliance schedules**

**(A) In general**

  

A permit issued under this section that incorporates an integrated plan may include a schedule of compliance, under which actions taken to meet any applicable water quality-based effluent limitation may be implemented over more than 1 permit term if the schedule of compliance--

**(i)** is authorized by State water quality standards; and

**(ii)** meets the requirements of section 122.47 of title 40, Code of Federal Regulations (as in effect on January 14, 2019).

**(B) Time for compliance**

For purposes of subparagraph (A)(ii), the requirement of section 122.47 of title 40, Code of Federal Regulations, for compliance by an applicable statutory deadline under this chapter does not prohibit implementation of an applicable water quality-based effluent limitation over more than 1 permit term.

**(C) Review**

A schedule of compliance incorporated into a permit issued under this section may be reviewed at the time the permit is renewed to determine whether the schedule should be modified.

**(5) Existing authorities retained**

**(A) Applicable standards**

Nothing in this subsection modifies any obligation to comply with applicable technology and water quality-based effluent limitations under this chapter.

**(B) Flexibility**

Nothing in this subsection reduces or eliminates any flexibility available under this chapter, including the authority of a State to revise a water quality standard after a use attainability analysis under section 131.10(g) of title 40, Code of Federal Regulations (or a successor regulation), subject to the approval of the Administrator under section 1313(c) of this title.

**(6) Clarification of State authority**

**(A) In general**

Nothing in section 1311(b)(1)(C) of this title precludes a State from authorizing in the water quality standards of the State the issuance of a schedule of compliance to meet water quality-based effluent limitations in permits that incorporate provisions of an integrated plan.

**(B) Transition rule**

  

In any case in which a discharge is subject to a judicial order or consent decree, as of January 14, 2019, resolving an enforcement action under this chapter, any schedule of compliance issued pursuant to an authorization in a State water quality standard may not revise a schedule of compliance in that order or decree to be less stringent, unless the order or decree is modified by agreement of the parties and the court.

**CREDIT(S)**

(June 30, 1948, c. 758, Title IV, § 402, as added Pub.L. 92-500, § 2, Oct. 18, 1972, 86 Stat. 880; amended Pub.L. 95-217, §§ 33(c), 50, 54(c)(1), 65, 66, Dec. 27, 1977, 91 Stat. 1577, 1588, 1591, 1599, 1600; Pub.L. 100-4, Title IV, §§ 401 to 404(a), (c), formerly (d), 405, Feb. 4, 1987, 101 Stat. 65 to 67, 69; Pub.L. 102-580, Title III, § 364, Oct. 31, 1992, 106 Stat. 4862; Pub.L. 104-66, Title II, § 2021(e)(2), Dec. 21, 1995, 109 Stat. 727; Pub.L. 106-554, § 1(a)(4) [Div. B, Title I, § 112(a)], Dec. 21, 2000, 114 Stat. 2763, 2763A-224; Pub.L. 110-288, § 2, July 29, 2008, 122 Stat. 2650; Pub.L. 113-79, Title XII, § 12313, Feb. 7, 2014, 128 Stat. 992; Pub.L. 115-436, § 3(a), Jan. 14, 2019, 132 Stat. 5558.)

Notes of Decisions (265)

Footnotes

1 So in original. Probably should not be capitalized.

2 So in original. Probably should be preceded by “section”.

33 U.S.C.A. § 1342, 33 USCA § 1342

Current through P.L. 116-91. Some statute sections may be more current, see credits for details.

**End of Document**

Code of Federal Regulations Title 40. Protection of Environment Chapter I. Environmental Protection Agency (Refs & Annos) Subchapter D. Water Programs Part 122. EPA Administered Permit Programs: The National Pollutant Discharge Elimination System (Refs & Annos) Subpart A. Definitions and General Program Requirements

40 C.F.R. § 122.2

# § 122.2 Definitions.

Effective: December 23, 2019
Currentness

The following definitions apply to parts 122, 123, and 124. Terms not defined in this section have the meaning given by CWA. When a defined term appears in a definition, the defined term is sometimes placed in quotation marks as an aid to readers.

Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

Animal feeding operation is defined at § 122.23.

Applicable standards and limitations means all State, interstate, and federal standards and limitations to which a "discharge," a "sewage sludge use or disposal practice," or a related activity is subject under the CWA, including "effluent limitations," water quality standards, standards of performance, toxic effluent standards or prohibitions, "best management practices," pretreatment standards, and "standards for sewage sludge use or disposal" under sections 301, 302, 303, 304, 306, 307, 308, 403 and 405 of CWA.

Application means the EPA standard national forms for applying for a permit, including any additions, revisions or modifications to the forms; or forms approved by EPA for use in "approved States," including any approved modifications or revisions.

Approved program or approved State means a State or interstate program which has been approved or authorized by EPA under part 123.

Aquaculture project is defined at § 122.25.

Average monthly discharge limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

Average weekly discharge limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

Best management practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment

requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

BMPs means "best management practices."

Bypass is defined at § 122.41(m).

Class I sludge management facility means any POTW identified under 40 CFR 403.8(a) as being required to have an approved pretreatment program (including such POTWs located in a State that has elected to assume local program responsibilities pursuant to 40 CFR 403.10(e)) and any other treatment works treating domestic sewage classified as a Class I sludge management facility by the Regional Administrator, or, in the case of approved State programs, the Regional Administrator in conjunction with the State Director, because of the potential for its sludge use or disposal practices to adversely affect public health and the environment.

Combined sewer overflow (CSO) means a discharge from a combined sewer system (CSS) at a point prior to the Publicly Owned Treatment Works (POTW) Treatment Plant (defined at § 403.3(r) of this chapter).

Combined sewer system (CSS) means a wastewater collection system owned by a State or municipality (as defined by section 502(4) of the CWA) which conveys sanitary wastewaters (domestic, commercial and industrial wastewaters) and storm water through a single-pipe system to a Publicly Owned Treatment Works (POTW) Treatment Plant (as defined at § 403.3(r) of this chapter).

Concentrated animal feeding operation is defined at § 122.23.

Concentrated aquatic animal feeding operation is defined at § 122.24.

Contiguous zone means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone.

Continuous discharge means a "discharge" which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub.L. 92–500, as amended by Pub.L. 95–217, Pub.L. 95–576, Pub.L. 96–483 and Pub.L. 97–117, 33 U.S.C. 1251 et seq.

CWA and regulations means the Clean Water Act (CWA) and applicable regulations promulgated thereunder. In the case of an approved State program, it includes State program requirements.

Daily discharge means the "discharge of a pollutant" measured during a calendar day or any 24–hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Direct discharge means the "discharge of a pollutant."

Director means the Regional Administrator or the State Director, as the context requires, or an authorized representative. When there is no "approved State program," and there is an EPA administered program, "Director" means the Regional Administrator. When there is an approved State program, "Director" normally means the State Director. In some circumstances, however, EPA

  

retains the authority to take certain actions even when there is an approved State program. (For example, when EPA has issued an NPDES permit prior to the approval of a State program, EPA may retain jurisdiction over that permit after program approval, see § 123.1.) In such cases, the term "Director" means the Regional Administrator and not the State Director.

Discharge when used without qualification means the "discharge of a pollutant."

Discharge of a pollutant means:

(a) Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or

(b) Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channelled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger."

Discharge Monitoring Report ("DMR") means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by "approved States" as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

DMR means "Discharge Monitoring Report."

Draft permit means a document prepared under § 124.6 indicating the Director's tentative decision to issue or deny, modify, revoke and reissue, terminate, or reissue a "permit." A notice of intent to terminate a permit, and a notice of intent to deny a permit, as discussed in § 124.5, are types of "draft permits." A denial of a request for modification, revocation and reissuance, or termination, as discussed in § 124.5, is not a "draft permit." A "proposed permit" is not a "draft permit."

Effluent limitation means any restriction imposed by the Director on quantities, discharge rates, and concentrations of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean.

Effluent limitations guidelines means a regulation published by the Administrator under section 304(b) of CWA to adopt or revise "effluent limitations."

Environmental Protection Agency ("EPA") means the United States Environmental Protection Agency.

EPA means the United States "Environmental Protection Agency."

Facility or activity means any NPDES "point source" or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program.

Federal Indian reservation means all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation.

General permit means an NPDES "permit" issued under § 122.28 authorizing a category of discharges under the CWA within a geographical area.

  

Great Lakes Basin means the waters defined as “Great Lakes” and “Great Lakes System” as those terms are defined in § 132.2 of this chapter.

Hazardous substance means any substance designated under 40 CFR part 116 pursuant to section 311 of CWA.

Indian country means:

(1) All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation;

(2) All dependent Indian communities with the borders of the United States whether within the originally or subsequently acquired territory thereof, and whether within or without the limits of a state; and

(3) All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.

Indian Tribe means any Indian Tribe, band, group, or community recognized by the Secretary of the Interior and exercising governmental authority over a Federal Indian reservation.

Indirect discharger means a nondomestic discharger introducing “pollutants” to a “publicly owned treatment works.”

Individual control strategy is defined at 40 CFR 123.46(c).

Interstate agency means an agency of two or more States established by or under an agreement or compact approved by the Congress, or any other agency of two or more States having substantial powers or duties pertaining to the control of pollution as determined and approved by the Administrator under the CWA and regulations.

Major facility means any NPDES “facility or activity” classified as such by the Regional Administrator, or, in the case of “approved State programs,” the Regional Administrator in conjunction with the State Director.

Maximum daily discharge limitation means the highest allowable “daily discharge.”

Municipal separate storm sewer system is defined at § 122.26 (b)(4) and (b)(7).

Municipality means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of CWA.

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of CWA. The term includes an “approved program.”

New discharger means any building, structure, facility, or installation:

(a) From which there is or may be a “discharge of pollutants;”

(b) That did not commence the “discharge of pollutants” at a particular “site” prior to August 13, 1979;

  

(c) Which is not a "new source;" and

(d) Which has never received a finally effective NPDES permit for discharges at that "site."

This definition includes an "indirect discharger" which commences discharging into "waters of the United States" after August 13, 1979. It also includes any existing mobile point source (other than an offshore or coastal oil and gas exploratory drilling rig or a coastal oil and gas developmental drilling rig) such as a seafood processing rig, seafood processing vessel, or aggregate plant, that begins discharging at a "site" for which it does not have a permit; and any offshore or coastal mobile oil and gas exploratory drilling rig or coastal mobile oil and gas developmental drilling rig that commences the discharge of pollutants after August 13, 1979, at a "site" under EPA's permitting jurisdiction for which it is not covered by an individual or general permit and which is located in an area determined by the Regional Administrator in the issuance of a final permit to be an area or biological concern. In determining whether an area is an area of biological concern, the Regional Administrator shall consider the factors specified in 40 CFR 125.122(a)(1) through (10).

An offshore or coastal mobile exploratory drilling rig or coastal mobile developmental drilling rig will be considered a "new discharger" only for the duration of its discharge in an area of biological concern.

New source means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced:

(a) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or

(b) After proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal.

NPDES means "National Pollutant Discharge Elimination System."

Owner or operator means the owner or operator of any "facility or activity" subject to regulation under the NPDES program.

Permit means an authorization, license, or equivalent control document issued by EPA or an "approved State" to implement the requirements of this part and parts 123 and 124. "Permit" includes an NPDES "general permit" (§ 122.28). Permit does not include any permit which has not yet been the subject of final agency action, such as a "draft permit" or a "proposed permit."

Person means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

Pesticide discharges to waters of the United States from pesticide application means the discharges that result from the application of biological pesticides, and the application of chemical pesticides that leave a residue, from point sources to waters of the United States. In the context of this definition of pesticide discharges to waters of the United States from pesticide application, this does not include agricultural storm water discharges and return flows from irrigated agriculture, which are excluded by law (33 U.S.C. 1342(l); 33 U.S.C. 1362(14)).

Pesticide residue for the purpose of determining whether an NPDES permit is needed for discharges to waters of the United States from pesticide application, means that portion of a pesticide application that is discharged from a point source to waters of the United States and no longer provides pesticidal benefits. It also includes any degradates of the pesticide.

Point source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection

  

system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff. (See § 122.3).

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean:

(a) Sewage from vessels; or

(b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

NOTE: Radioactive materials covered by the Atomic Energy Act are those encompassed in its definition of source, byproduct, or special nuclear materials. Examples of materials not covered include radium and accelerator-produced isotopes. See Train v. Colorado Public Interest Research Group, Inc., 426 U.S. 1 (1976).

POTW is defined at § 403.3 of this chapter.

Primary industry category means any industry category listed in the NRDC settlement agreement (Natural Resources Defense Council et al. v. Train, 8 E.R.C. 2120 (D.D.C. 1976), modified 12 E.R.C. 1833 (D.D.C. 1979)); also listed in appendix A of part 122.

Privately owned treatment works means any device or system which is (a) used to treat wastes from any facility whose operator is not the operator of the treatment works and (b) not a "POTW."

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Proposed permit means a State NPDES "permit" prepared after the close of the public comment period (and, when applicable, any public hearing and administrative appeals) which is sent to EPA for review before final issuance by the State. A "proposed permit" is not a "draft permit."

Publicly owned treatment works is defined at 40 CFR 403.3.

Recommencing discharger means a source which recommences discharge after terminating operations.

Regional Administrator means the Regional Administrator of the appropriate Regional Office of the Environmental Protection Agency or the authorized representative of the Regional Administrator.

Schedule of compliance means a schedule of remedial measures included in a "permit", including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the CWA and regulations.

Secondary industry category means any industry category which is not a "primary industry category."

Secretary means the Secretary of the Army, acting through the Chief of Engineers.

  

Septage means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained.

Sewage from vessels means human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes that are discharged from vessels and regulated under section 312 of CWA, except that with respect to commercial vessels on the Great Lakes this term includes graywater. For the purposes of this definition, "graywater" means galley, bath, and shower water.

Sewage Sludge means any solid, semi-solid, or liquid residue removed during the treatment of municipal waste water or domestic sewage. Sewage sludge includes, but is not limited to, solids removed during primary, secondary, or advanced waste water treatment, scum, septage, portable toilet pumpings, type III marine sanitation device pumpings (33 CFR part 159), and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during the incineration of sewage sludge.

Sewage sludge use or disposal practice means the collection, storage, treatment, transportation, processing, monitoring, use, or disposal of sewage sludge.

Silvicultural point source is defined at § 122.27.

Site means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity.

Sludge-only facility means any "treatment works treating domestic sewage" whose methods of sewage sludge use or disposal are subject to regulations promulgated pursuant to section 405(d) of the CWA and is required to obtain a permit under § 122.1(b)(2).

Standards for sewage sludge use or disposal means the regulations promulgated pursuant to section 405(d) of the CWA which govern minimum requirements for sludge quality, management practices, and monitoring and reporting applicable to sewage sludge or the use or disposal of sewage sludge by any person.

State means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Commonwealth of the Northern Mariana Islands, the Trust Territory of the Pacific Islands, or an Indian Tribe as defined in these regulations which meets the requirements of § 123.31 of this chapter.

State Director means the chief administrative officer of any State or interstate agency operating an "approved program," or the delegated representative of the State Director. If responsibility is divided among two or more State or interstate agencies, "State Director" means the chief administrative officer of the State or interstate agency authorized to perform the particular procedure or function to which reference is made.

State/EPA Agreement means an agreement between the Regional Administrator and the State which coordinates EPA and State activities, responsibilities and programs including those under the CWA programs.

Storm water is defined at § 122.26(b)(13).

Storm water discharge associated with industrial activity is defined at § 122.26(b)(14).

Total dissolved solids means the total dissolved (filterable) solids as determined by use of the method specified in 40 CFR part 136.

  

Toxic pollutant means any pollutant listed as toxic under section 307(a)(1) or, in the case of "sludge use or disposal practices," any pollutant identified in regulations implementing section 405(d) of the CWA.

Treatment works treating domestic sewage means a POTW or any other sewage sludge or waste water treatment devices or systems, regardless of ownership (including federal facilities), used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices. For purposes of this definition, "domestic sewage" includes waste and waste water from humans or household operations that are discharged to or otherwise enter a treatment works. In States where there is no approved State sludge management program under section 405(f) of the CWA, the Regional Administrator may designate any person subject to the standards for sewage sludge use and disposal in 40 CFR part 503 as a "treatment works treating domestic sewage," where he or she finds that there is a potential for adverse effects on public health and the environment from poor sludge quality or poor sludge handling, use or disposal practices, or where he or she finds that such designation is necessary to ensure that such person is in compliance with 40 CFR part 503.

TWTDS means "treatment works treating domestic sewage."

Upset is defined at § 122.41(n).

Variance means any mechanism or provision under section 301 or 316 of CWA or under 40 CFR part 125, or in the applicable "effluent limitations guidelines" which allows modification to or waiver of the generally applicable effluent limitation requirements or time deadlines of CWA. This includes provisions which allow the establishment of alternative limitations based on fundamentally different factors or on sections 301(c), 301(g), 301(h), 301(i), or 316(a) of CWA.

  

Waters of the United States or waters of the U.S. means:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(b) All interstate waters, including interstate "wetlands;"

(c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

(1) Which are or could be used by interstate or foreign travelers for recreational or other purposes;

(2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(3) Which are used or could be used for industrial purposes by industries in interstate commerce;

(d) All impoundments of waters otherwise defined as waters of the United States under this definition;

(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;

  

(f) The territorial sea; and

(g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. [See Note 1 of this section.] Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

Wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole effluent toxicity means the aggregate toxic effect of an effluent measured directly by a toxicity test.

**Editorial Note:** The sentence beginning with the "This exclusion applies . . ." appearing in § 122.2 within the definition of "Waters of the United States" was stayed indefinitely by the Environmental Protection Agency at 45 FR 48620, July 21, 1980 and continued at 48 FR 14153, April 1, 1983; 80 FR 37114, June 29, 2015; and 84 FR 56669 October 22, 2019.

Note: Section 2(a) of Exec. Order No. 13778 provides: "The Administrator of the Environmental Protection Agency (Administrator) and the Assistant Secretary of the Army for Civil Works (Assistant Secretary) shall review the final rule entitled "Clean Water Rule: Definition of 'Waters of the United States,' " 80 Fed. Reg. 37054 (June 29, 2015), for consistency with the policy set forth in section 1 of this order and publish for notice and comment a proposed rule rescinding or revising the rule, as appropriate and consistent with law."

(Authority: Clean Water Act (33 U.S.C. 1251 et seq.), Safe Drinking Water Act (42 U.S.C. 300f et seq.), Clean Air Act (42 U.S.C. 7401 et seq.), Resource Conservation and Recovery Act (42 U.S.C. 6901 et seq.))

**Credits**

[48 FR 39619, Sept. 1, 1983; 50 FR 6940, 6941, Feb. 19, 1985; 54 FR 254, Jan. 4, 1989; 54 FR 18781, May 2, 1989; 54 FR 23895, June 2, 1989; 58 FR 45037, Aug. 25, 1993; 58 FR 67980, Dec. 22, 1993; 64 FR 42462, Aug. 4, 1999; 64 FR 43426, Aug. 10, 1999; 65 FR 30905, May 15, 2000; 80 FR 37114, June 29, 2015; 83 FR 730, Jan. 8, 2018; 83 FR 5208, Feb. 6, 2018; 84 FR 3336, Feb. 12, 2019; 84 FR 56669, Oct. 22, 2019]

AUTHORITY: The Clean Water Act, 33 U.S.C. 1251 et seq.

Notes of Decisions (98)

Current through January 16, 2020; 85 FR 2864.

**End of Document**

Code of Federal Regulations Title 40. Protection of Environment Chapter I. Environmental Protection Agency (Refs & Annos) Subchapter D. Water Programs Part 131. Water Quality Standards (Refs & Annos) Subpart A. General Provisions

40 C.F.R. § 131.2

§ 131.2 Purpose.

Effective: October 20, 2015
Currentness

A water quality standard defines the water quality goals of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria that protect the designated uses. States adopt water quality standards to protect public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act (the Act). "Serve the purposes of the Act" (as defined in sections 101(a)(2) and 303(c) of the Act) means that water quality standards should, wherever attainable, provide water quality for the protection and propagation of fish, shellfish and wildlife and for recreation in and on the water and take into consideration their use and value of public water supplies, propagation of fish, shellfish, and wildlife, recreation in and on the water, and agricultural, industrial, and other purposes including navigation.

Such standards serve the dual purposes of establishing the water quality goals for a specific water body and serve as the regulatory basis for the establishment of water-quality-based treatment controls and strategies beyond the technology-based levels of treatment required by sections 301(b) and 306 of the Act.

**Credits**
[80 FR 51046, Aug. 21, 2015]

AUTHORITY: 33 U.S.C. 1251 et seq.

Notes of Decisions (7)

Current through January 16, 2020; 85 FR 2864.

**End of Document**

Code of Federal Regulations Title 40. Protection of Environment Chapter I. Environmental Protection Agency (Refs & Annos) Subchapter D. Water Programs Part 131. Water Quality Standards (Refs & Annos) Subpart A. General Provisions

40 C.F.R. § 131.6

# § 131.6 Minimum requirements for water quality standards submission.

Currentness

The following elements must be included in each State's water quality standards submitted to EPA for review:

(a) Use designations consistent with the provisions of sections 101(a)(2) and 303(c)(2) of the Act.

(b) Methods used and analyses conducted to support water quality standards revisions.

(c) Water quality criteria sufficient to protect the designated uses.

(d) An antidegradation policy consistent with § 131.12.

(e) Certification by the State Attorney General or other appropriate legal authority within the State that the water quality standards were duly adopted pursuant to State law.

(f) General information which will aid the Agency in determining the adequacy of the scientific basis of the standards which do not include the uses specified in section 101(a)(2) of the Act as well as information on general policies applicable to State standards which may affect their application and implementation.

AUTHORITY: 33 U.S.C. 1251 et seq.

Notes of Decisions (48)

Current through January 16, 2020; 85 FR 2864.

End of Document

Code of Federal Regulations Title 40. Protection of Environment Chapter I. Environmental Protection Agency (Refs & Annos) Subchapter D. Water Programs Part 131. Water Quality Standards (Refs & Annos) Subpart B. Establishment of Water Quality Standards

40 C.F.R. § 131.10

§ 131.10 Designation of uses.

Effective: October 20, 2015
Currentness

(a) Each State must specify appropriate water uses to be achieved and protected. The classification of the waters of the State must take into consideration the use and value of water for public water supplies, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation. If adopting new or revised designated uses other than the uses specified in section 101(a)(2) of the Act, or removing designated uses, States must submit documentation justifying how their consideration of the use and value of water for those uses listed in this paragraph appropriately supports the State's action. A use attainability analysis may be used to satisfy this requirement. In no case shall a State adopt waste transport or waste assimilation as a designated use for any waters of the United States.

(b) In designating uses of a water body and the appropriate criteria for those uses, the State shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters.

(c) States may adopt sub-categories of a use and set the appropriate criteria to reflect varying needs of such sub-categories of uses, for instance, to differentiate between cold water and warm water fisheries.

(d) At a minimum, uses are deemed attainable if they can be achieved by the imposition of effluent limits required under sections 301(b) and 306 of the Act and cost-effective and reasonable best management practices for nonpoint source control.

(e) [Reserved by 80 FR 51047]

(f) States may adopt seasonal uses as an alternative to reclassifying a water body or segment thereof to uses requiring less stringent water quality criteria. If seasonal uses are adopted, water quality criteria should be adjusted to reflect the seasonal uses, however, such criteria shall not preclude the attainment and maintenance of a more protective use in another season.

(g) States may designate a use, or remove a use that is not an existing use, if the State conducts a use attainability analysis as specified in paragraph (j) of this section that demonstrates attaining the use is not feasible because of one of the six factors in this paragraph. If a State adopts a new or revised water quality standard based on a required use attainability analysis, the State shall also adopt the highest attainable use, as defined in § 131.3(m).

  

(1) Naturally occurring pollutant concentrations prevent the attainment of the use; or

(2) Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or

(3) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or

(4) Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or

(5) Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or

(6) Controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact.

(h) States may not remove designated uses if:

(1) They are existing uses, as defined in § 131.3, unless a use requiring more stringent criteria is added; or

(2) Such uses will be attained by implementing effluent limits required under sections 301(b) and 306 of the Act and by implementing cost-effective and reasonable best management practices for nonpoint source control.

(i) Where existing water quality standards specify designated uses less than those which are presently being attained, the State shall revise its standards to reflect the uses actually being attained.

(j) A State must conduct a use attainability analysis as described in § 131.3(g), and paragraph (g) of this section, whenever:

(1) The State designates for the first time, or has previously designated for a water body, uses that do not include the uses specified in section 101(a)(2) of the Act; or

  

(2) The State wishes to remove a designated use that is specified in section 101(a)(2) of the Act, to remove a sub-category of such a use, or to designate a sub-category of such a use that requires criteria less stringent than previously applicable.

(k) A State is not required to conduct a use attainability analysis whenever:

(1) The State designates for the first time, or has previously designated for a water body, uses that include the uses specified in section 101(a)(2) of the Act; or

(2) The State designates a sub-category of a use specified in section 101(a)(2) of the Act that requires criteria at least as stringent as previously applicable; or

(3) The State wishes to remove or revise a designated use that is a non–101(a)(2) use. In this instance, as required by paragraph (a) of this section, the State must submit documentation justifying how its consideration of the use and value of water for those uses listed in paragraph (a) appropriately supports the State's action, which may be satisfied through a use attainability analysis.

**Credits**
[80 FR 51047, Aug. 21, 2015]

AUTHORITY: 33 U.S.C. 1251 et seq.

Notes of Decisions (41)

Current through January 16, 2020; 85 FR 2864.

**End of Document**

Code of Federal Regulations Title 40. Protection of Environment Chapter I. Environmental Protection Agency (Refs & Annos) Subchapter D. Water Programs Part 131. Water Quality Standards (Refs & Annos) Subpart B. Establishment of Water Quality Standards

40 C.F.R. § 131.11

§ 131.11 Criteria.

Effective: October 20, 2015
Currentness

(a) Inclusion of pollutants:

(1) States must adopt those water quality criteria that protect the designated use. Such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use. For waters with multiple use designations, the criteria shall support the most sensitive use.

(2) Toxic pollutants. States must review water quality data and information on discharges to identify specific water bodies where toxic pollutants may be adversely affecting water quality or the attainment of the designated water use or where the levels of toxic pollutants are at a level to warrant concern and must adopt criteria for such toxic pollutants applicable to the water body sufficient to protect the designated use. Where a State adopts narrative criteria for toxic pollutants to protect designated uses, the State must provide information identifying the method by which the State intends to regulate point source discharges of toxic pollutants on water quality limited segments based on such narrative criteria. Such information may be included as part of the standards or may be included in documents generated by the State in response to the Water Quality Planning and Management Regulations (40 CFR part 130).

(b) Form of criteria: In establishing criteria, States should:

(1) Establish numerical values based on:

(i) 304(a) Guidance; or

(ii) 304(a) Guidance modified to reflect site-specific conditions; or

(iii) Other scientifically defensible methods;

  

(2) Establish narrative criteria or criteria based upon biomonitoring methods where numerical criteria cannot be established or to supplement numerical criteria.

**Credits**

[80 FR 51047, Aug. 21, 2015]

AUTHORITY: 33 U.S.C. 1251 et seq.

Notes of Decisions (51)

Current through January 16, 2020; 85 FR 2864.

**End of Document**

Code of Federal Regulations Title 40. Protection of Environment Chapter I. Environmental Protection Agency (Refs & Annos) Subchapter D. Water Programs Part 131. Water Quality Standards (Refs & Annos) Subpart B. Establishment of Water Quality Standards

40 C.F.R. § 131.12

# § 131.12 Antidegradation policy and implementation methods.

Effective: October 20, 2015
Currentness

(a) The State shall develop and adopt a statewide antidegradation policy. The antidegradation policy shall, at a minimum, be consistent with the following:

(1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

(2) Where the quality of the waters exceeds levels necessary to support the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

(i) The State may identify waters for the protections described in paragraph (a)(2) of this section on a parameter-by-parameter basis or on a water body-by-water body basis. Where the State identifies waters for antidegradation protection on a water body-by-water body basis, the State shall provide an opportunity for public involvement in any decisions about whether the protections described in paragraph (a)(2) of this section will be afforded to a water body, and the factors considered when making those decisions. Further, the State shall not exclude a water body from the protections described in paragraph (a)(2) of this section solely because water quality does not exceed levels necessary to support all of the uses specified in section 101(a)(2) of the Act.

(ii) Before allowing any lowering of high water quality, pursuant to paragraph (a)(2) of this section, the State shall find, after an analysis of alternatives, that such a lowering is necessary to accommodate important economic or social development in the area in which the waters are located. The analysis of alternatives shall evaluate a range of practicable alternatives that would prevent or lessen the degradation associated with the proposed activity. When the analysis of alternatives identifies one or more practicable alternatives, the State shall only find that a lowering is necessary if one such alternative is selected for implementation.

(3) Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

  

(4) In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with section 316 of the Act.

(b) The State shall develop methods for implementing the antidegradation policy that are, at a minimum, consistent with the State's policy and with paragraph (a) of this section. The State shall provide an opportunity for public involvement during the development and any subsequent revisions of the implementation methods, and shall make the methods available to the public.

**Credits**
[80 FR 51048, Aug. 21, 2015]

AUTHORITY: 33 U.S.C. 1251 et seq.

Notes of Decisions (82)

Current through January 16, 2020; 85 FR 2864.

**End of Document**

55 FR 47990-01, 1990 WL 348331(F.R.)

RULES and REGULATIONS

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 122, 123, and 124

[FRL-3834-7]

RIN 2040-AA79

# National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges

Friday, November 16, 1990

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Today's final rule begins to implement section 402(p) of the Clean Water Act (CWA) (added by section 405 of the Water Quality Act of 1987 (WQA)), which requires the Environmental Protection Agency (EPA) to establish regulations setting forth National Pollutant Discharge Elimination System (NPDES) permit application requirements for: storm water discharges associated with industrial activity; discharges from a municipal separate storm sewer system serving a population of 250,000 or more; and discharges from municipal separate storm sewer systems serving a population of 100,000 or more, but less than 250,000.

Today's rule also clarifies the requirements of section 401 of the WQA, which amended CWA section 402(1)(2) to provide that NPDES permits shall not be required for discharges of storm water runoff from mining operations or oil and gas exploration, production, processing, or treatment operations or transmission facilities, composed entirely of flows which are from conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying precipitation runoff and which are not contaminated by contact with, or do not come into contact with, any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site of such operations. This rule sets forth NPDES permit application requirements addressing storm water discharges associated with industrial activity and storm water discharges from large and medium municipal separate storm sewer systems.

DATES: This final rule becomes effective December 17, 1990. In accordance with 40 CFR 23.2, this rule shall be considered final for purposes of judicial review on November 30, 1990, at 1 p.m. eastern daylight time. The public record is located at EPA Headquarters, EPA Public Information Reference Unit, room 2402, 401 M Street SW., Washington DC 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: For further information on the rule contact: Thomas J. Seaton, Kevin Weiss, or Michael Mitchell Office of Water Enforcement and Permits (EN-336), United States Environmental Protection Agency, 401 M Street SW., Washington, DC 20460, (202) 475-9518.

SUPPLEMENTARY INFORMATION:



  

  

7. Permit Applicability and Applications for Oil, Gas and Mining Operations

a. Gas and Oil Operations

b. Use of Reportable Quantities to Determine if a Storm Water Discharge from an Oil or Gas Operation is Contaminated

c. Mining Operations

8. Application Requirements for Construction Activities

a. Permit application requirements

b. Administrative burdens

G. Municipal Separate Storm Sewer Systems

1. Municipal Separate Storm Sewers

2. Effective Prohibition on Non-Storm Water Discharges

3. Site-Specific Storm Water Quality Management Programs for Municipal Systems

4. Large and Medium Municipal Storm Sewer Systems

a. Overview of proposed options and comments

b. Definition of large and medium municipal separate storm sewer system

c. Response to comments

H. Permit Application Requirements for Large and Medium Municipal Systems

1. Implementing the Permit Program

2. Structure of Permit Application

a. Part 1 Application

b. Part 2 Application

3. Major Outfalls

4. Field Screening Program

5. Source Identification

6. Characterization of Discharges

a. Screening Analysis for Illicit Discharges

b. Representative Data

c. Loading and Concentration Estimates

7. Storm Water Quality Management Plans

  

SUPPLEMENTARY INFORMATION:

**I. Background and Water Quality Concerns**

The 1972 amendments to the Federal Water Pollution Control Act (referred to as the Clean Water Act or CWA), prohibit the discharge of any pollutant to navigable waters from a point source unless the discharge is authorized by an NPDES permit. Efforts to improve water quality under the NPDES program traditionally and primarily focused on reducing pollutants in discharges of industrial process wastewater and municipal sewage. This program emphasis developed for a number of reasons. At the onset of the program in 1972, many sources of industrial process wastewater and municipal sewage were not adequately controlled and represented pressing environmental problems. In addition, sewage outfalls and industrial process discharges were easily identified as responsible for poor, often drastically degraded, water quality conditions. However, as pollution control measures were initially ***47991** developed for these discharges, it became evident that more diffuse sources (occurring over a wide area) of water pollution, such as agricultural and urban runoff were also major causes of water quality problems. Some diffuse sources of water pollution, such as agricultural storm water discharges and irrigation return flows, are statutorily exempted from the NPDES program.

Since enactment of the 1972 amendments to the CWA, considering the rise of economic activity and population, significant progress in controlling water pollution has been made, particularly with regard to industrial process wastewater and municipal sewage. Expenditures by EPA, the States, and local governments to construct and upgrade sewage treatment facilities have substantially increased the population served by higher levels of treatment. Backlogs of expired permits for industrial process wastewater discharges have been reduced. Continued improvements are expected for these discharges as the NPDES program continues to place increasing emphasis on water quality-based pollution controls, especially for toxic pollutants.

Although assessments of water quality are difficult to perform and verify, several national assessments of water quality are available. For the purpose of these assessments, urban runoff was considered to be a diffuse source or nonpoint source pollution. From a legal standpoint, however, most urban runoff is discharged through conveyances such as separate storm sewers or other conveyances which are point sources under the CWA. These discharges are subject to the NPDES program. The “National Water Quality Inventory, 1988 Report to Congress” provides a general assessment of water quality based on biennial reports submitted by the States under section 305(b) of the CWA. In preparing the section 305(b) Reports, the States were asked to indicate the fraction of the States' waters that were assessed, as well as the fraction of the States' waters that were fully supporting, partly supporting, or not supporting designated uses. The Report indicates that of the rivers, lakes, and estuaries that were assessed by States (approximately one-fifth of stream miles, one-third of lake acres and one-half of estuarine waters), roughly 70% to 75% are supporting the uses for which they are designated. For waters with use impairments, States were asked to determine impacts

  

due to diffuse sources (agricultural and urban runoff and other sources), municipal sewage, industrial process wastewaters, combined sewer overflows, and natural and other sources, then combine impacts to arrive at estimates of the relative percentage of State waters affected by each source. In this manner, the relative importance of the various sources of pollution that are causing use impairments was assessed and weighted national averages were calculated. Based on 37 States that provided information on sources of pollution, industrial process wastewaters were cited as the cause of nonsupport for 7.5% of rivers and streams, 10% of lakes, and 6% of estuaries. Municipal sewage was the cause of nonsupport for 13% of rivers and streams, 5% lakes, 48% estuaries, 41% of the Great Lake shoreline, and 11% of coastal waters. The Assessment concluded that pollution from diffuse sources, such as runoff from agricultural, urban areas, construction sites, land disposal and resource extraction, is cited by the States as the leading cause of water quality impairment. These sources appear to be increasingly important contributors of use impairment as discharges of industrial process wastewaters and municipal sewage plants come under increased control and as intensified data collection efforts provide additional information. Some examples of diffuse sources cited as causing use impairment are: for rivers and streams, 9% from separate storm sewers, 6% from construction and 13% from resource extraction; for lakes, 28% from separate storm sewers and 26% from land disposal; for the Great Lakes shoreline, 10% from separate storm sewers, 34% from resource extraction, and 82% from land disposal; for estuaries, 28% from separate storm sewers and 27% from land disposal; and for coastal areas, 20% from separate storm sewers and 29% from land disposal.

The States conducted a more comprehensive study of diffuse pollution sources under the sponsorship of the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) and EPA. The study resulted in the report “America's Clean Water—The States' Nonpoint Source Assessment, 1985” which indicated that 38 States reported urban runoff as a major cause of beneficial use impairment. In addition, 2*1* States reported construction site runoff as a major cause of use impairment.

To provide a better understanding of the nature of urban runoff from commercial and residential areas, from 1978 through 1983, EPA provided funding and guidance to the Nationwide Urban Runoff Program (NURP). The NURP included 28 projects across the Nation, conducted separately at the local level but centrally reviewed, coordinated, and guided.

One focus of the NURP was to characterize the water quality of discharges from separate storm sewers which drain residential, commercial, and light industrial (industrial parks) sites. The majority of samples collected in the study were analyzed for eight conventional pollutants and three metals. Data collected under the NURP indicated that on an annual loading basis, suspended solids in discharges from separate storm sewers draining runoff from residential, commercial and light industrial areas are around an order of magnitude greater than solids in discharges from municipal secondary sewage treatment plants. In addition, the study indicated that annual loadings of chemical oxygen demand (COD) are comparable in magnitude to effluent from secondary sewage treatment plants. When analyzing annual loadings associated with urban runoff, it is important to recognize that discharges of urban runoff are highly intermittent, and that the short-term loadings associated with individual events will be high and may have shockloading effects on receiving water, such as low dissolved oxygen levels. NURP data also showed that fecal coliform counts in urban runoff are typically in the tens to hundreds of thousands per 100 ml of runoff during warm weather conditions, although the study suggested that fecal coliform may not be the most appropriate indicator organism for identifying potential health risks in storm water runoff. Although NURP did not evaluate oil and grease, other studies have demonstrated that urban runoff is an extremely important source of oil pollution to receiving waters, with hydrocarbon levels in urban runoff typically being reported at a range of 2 to 15 mg/l. These hydrocarbons tend to accumulate in bottom sediments where they may persist for long periods of time and exert adverse impacts on benthic organisms.

A portion of the NURP study involved monitoring 120 priority pollutants in storm water discharges from lands used for residential, commercial and light industrial activities. Seventy-seven priority pollutants were detected in samples of storm water discharges from residential, commercial and light industrial lands taken during the NURP study, including 14 inorganic and 63 organic pollutants. Table A-1 shows the priority pollutants which were detected in at least ten percent of the discharge samples which were sampled for priority pollutants.

**Table A-1.— Priority Pollutants Detected in at Least 10% of NURP Samples**

  

**[In percent]**

| | **Frequency of detection** |
|---|---|
| Metals and inorganics: | |
| Antimony | 13 |
| Arsenic | 52 |
| Beryllium | 12 |
| Cadmium | 48 |
| Chromium | 58 |
| Copper | 91 |
| Cyanides | 23 |
| Lead | 94 |
| Nickel | 43 |
| Selenium | 11 |
| Zinc | 94 |
| Pesticides: | |
| Alpha-hexachlorocyclohexane | 20 |
| Alpha-endosulfan | 19 |
| Chlordane | 17 |
| Lindane | 15 |
| Halogenated aliphatics: | |
| Methane, dichloro- | 11 |
| Phenols and cresols: | |
| Phenol | 14 |
| Phenol, pentachloro- | 19 |
| Phenol, 4-nitro | 10 |
| Phthalate esters: | |
| Phthalate, bis(2-ethylhexyl) | 22 |
| Polycyclic aromatic hydrocarbons: | |
| Chrysene | 10 |

  

| | |
|---|---|
| Fluoranthene | 16 |
| Phenanthrene | 12 |
| Pyrene | 15 |

***47992** The NURP data also showed a significant number of these samples exceeded various EPA freshwater water quality criteria.

The NURP study provides insight on what can be considered background levels of pollutants for urban runoff, as the study focused primarily on monitoring runoff from residential, commercial and light industrial areas. However, NURP concluded that the quality of urban runoff can be adversely impacted by several sources of pollutants that were not directly evaluated in the study and are generally not reflected in the NURP data, including illicit connections, construction site runoff, industrial site runoff and illegal dumping.

Other studies have shown that many storm sewers contain illicit discharges of non-storm water and that large amounts of wastes, particularly used oils, are improperly disposed in storm sewers. Removal of these discharges present opportunities for dramatic improvements in the quality of storm water discharges. Storm water discharges from industrial facilities may contain toxics and conventional pollutants when material management practices allow exposure to storm water, in addition to wastes from illicit connections and improperly disposed wastes.

In some municipalities, illicit connections of sanitary, commercial and industrial discharges to storm sewer systems have had a significant impact on the water quality of receiving waters. Although the NURP study did not emphasize the identification of illicit connections to storm sewers (other than to assure that monitoring sites used in the study were free from sanitary sewage contamination), the study concluded that illicit connections can result in high bacterial counts and dangers to public health. The study also noted that removing such discharges presented opportunities for dramatic improvements in the quality of urban storm water discharges.

Studies have shown that illicit connections to storm sewers can create severe, wide-spread contamination problems. For example, the Huron River Pollution Abatement Program inspected 660 businesses, homes and other buildings located in Washtenaw County, Michigan and identified 14% of the buildings as having improper storm drain connections. Illicit discharges were detected at a higher rate of 60% for automobile related businesses, including service stations, automobile dealerships, car washes, body shops and light industrial facilities. While some of the problems discovered in this study were the result of improper plumbing or illegal connections, a majority were approved connections at the time they were built.

Intensive construction activities may result in severe localized impacts on water quality because of high unit loads of pollutants, primarily sediments. Construction sites can also generate other pollutants such as phosphorus and nitrogen from fertilizer, pesticides, petroleum products, construction chemicals and solid wastes. These materials can be toxic to aquatic organisms and degrade water for drinking and water-contact recreation. Sediment loadings rates from construction sites are typically 10 to 20 times that of agricultural lands, with runoff rates as high as 100 times that of agricultural lands, and typically 1,000 to 2,000 times that of forest lands. Even a small amount of construction may have a significant negative impact on water quality in localized areas. Over a short period of time, construction sites can contribute more sediment to streams than was previously deposited over several decades.

**II. Water Quality Act of 1987**

The WQA contains three provisions which specifically address storm water discharges. The central WQA provision governing storm water discharges is section 405, which adds section 402(p) to the CWA. Section 402(p)(1) provides that EPA or NPDES States cannot require a permit for certain storm water discharges until October 1, 1992, except: for storm water discharges listed

  

under section 402(p)(2). Section 402(p)(2) lists five types of storm water discharges which are required to obtain a permit prior to October 1, 1992:

(A) A discharge with respect to which a permit has been issued prior to February 4, 1987;

(B) A discharge associated with industrial activity;

(C) A discharge from a municipal separate storm sewer system serving a population of 250,000 or more;

(D) A discharge from a municipal separate storm sewer system serving a population of 100,000 or more, but less than 250,000; or

(E) A discharge for which the Administrator or the State, as the case may be, determines that the storm water discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to the waters of the United States.

Section 402(p)(4)(A) requires EPA to promulgate final regulations governing storm water permit application requirements for storm water discharges associated with industrial activity and discharges from large municipal separate storm sewer systems (systems serving a population of 250,000 or more), "no later than two years" after the date of enactment (i.e., no later than February 4, 1989). Section 402(p)(4)(B) also requires EPA to promulgate final regulations governing storm water permit application requirements for discharges from medium municipal separate storm sewer systems (systems serving a population of 100,000 or more but less than 250,000) "no later than four years" after enactment (i.e., no later than February 4, 1991).

In addition, section 402(p)(4) provides that permit applications for storm water discharges associated with industrial activity and discharges from large municipal separate storm sewer systems "shall be filed no later than three years" after the date of enactment of the WQA (i.e., no later than February 4, 1990). Permit applications for discharges from medium municipal systems must be filed "no later than five years" after enactment (i.e., no later than February 4, 1992).

The WQA clarified and amended the requirements for permits for storm water discharges in the new CWA section 402(p)(3). The Act clarified that permits for discharges associated with industrial activity must meet all of the applicable provisions of section 402 and section 301 ***47993** including technology and water quality based standards. However, the new Act makes significant changes to the permit standards for discharges from municipal storm sewers. Section 402(p)(3)(B) provides that permits for such discharges:

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

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

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

These changes are discussed in more detail later in today's rule.

The EPA, in consultation with the States, is required to conduct two studies on storm water discharges that are in the class of discharges for which EPA and NPDES States cannot require permits prior to October 1, 1992. The first study will identify those storm water discharges or classes of storm water discharges for which permits are not required prior to October 1, 1992, and determine, to the maximum extent practicable, the nature and extent of pollutants in such discharges. The second study is for the purpose of establishing procedures and methods to control storm water discharges to the extent necessary to mitigate impacts on water quality. Based on the two studies the EPA, in consultation with State and local officials, is required to issue regulations no later than October 1, 1992, which designate additional storm water discharges to be regulated to protect water

  

quality and establish a comprehensive program to regulate such designated sources. This program must, at a minimum, (A) Establish priorities, (B) establish requirements for State storm water management programs, and (C) establish expeditious deadlines. The program may include performance standards, guidelines, guidance, and management practices and treatment requirements, as appropriate.

Section 401 of the WQA amends section 402(1)(2) of the CWA to provide that the EPA shall not require a permit for discharges of storm water runoff from mining operations or oil and gas exploration, production, processing, or treatment operations or transmission facilities if the storm water discharge is not contaminated by contact with, or does not come into contact with, any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site of such operations.

Section 503 of the WQA amends section 502(14) of the CWA to exclude agricultural storm water discharges from the definition of point source.

**III. Remand of 1984 Regulations**

On December 4, 1987, the United States Court of Appeals for the District of Columbia Circuit vacated 40 CFR 122.26, (as promulgated on September 26, 1984, 49 FR 37998, September 26, 1984), and remanded the regulations to EPA for further rulemaking (NRDC v. EPA, No. 80-1607). EPA had requested the remand because of significant changes made by the storm water provisions of the WQA. The effect of the decision was to invalidate the storm water discharge regulations then found at § 122.26.

Storm water discharges which had been issued an NPDES permit prior to February 4, 1987, were not affected by the Court remand or the February 12, 1988, rule implementing the court order (53 FR 4157). (See section 402(p)(2)(A) of the CWA.) Similarly, the remand did not affect the authority of EPA or an NPDES State to require a permit for any storm water discharge (except an agricultural storm water discharge) designated under section 402(p)(2)(E) of the CWA. The notice of the remand clarified that such designated discharges meet the regulatory definition of point source found at 40 CFR 122.2 and that EPA or an NPDES State can rely on the statutory authority and require the filing of an application (Form 1 and Form 2C) for an NPDES permit with respect to such discharges on a case-by-case basis.

**IV. Codification Rule and Case-by-Case Designations**

***Codification Rule***

On January 4, 1989, (54 FR 255), EPA published a final rule which codified numerous provisions of the WQA into EPA regulations. The codification rule included several provisions dealing with storm water discharges. The codification rule promulgated the language found at section 402(p) (1) and (2) of the amended Clean Water Act at 40 CFR 122.26(a)(1). In addition, the codification rule promulgated the language of Section 503 of the WQA which exempted agricultural storm water discharges from the definition of point source at 40 CFR 122.2, and section 401 of the WQA addressing uncontaminated storm water discharges from mining or oil and gas operations at 40 CFR 122.26(a)(2).

EPA also codified the statutory authority of section 402(p)(2)(E) of the CWA for the Administrator or the State Director, as the case may be, to designate storm water discharges for a permit on a case-by-case basis at 40 CFR 122.26(a)(1)(v).

***Case by Case Designations***

Section 402(p)(2)(E) of the CWA authorizes case-by-case designations of storm water discharges for immediate permitting if the Administrator or the State Director determines that the storm water discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

  

In determining that a storm water discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States for the purpose of a designation under section 402(p)(2)(E), the legislative history for the provision provides that "EPA or the State should use any available water quality or sampling data to determine whether the latter two criteria (contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States) are met, and should require additional sampling as necessary to determine whether or not these criteria are met." Conference Report, Cong. Rec. S16443 (daily ed. October 16, 1986). In accordance with this legislative history, today's rule promulgates permit application requirements for certain storm water discharges, including discharges designated on a case-by-case basis. EPA will consider a number of factors when determining whether a storm water discharge is a significant contributor of pollution to the waters of the United States. These factors include: the location of the discharge with respect to waters of the United States; the size of the discharge; the quantity and nature of the pollutants reaching waters of the United States; and any other relevant factors. Today's rule incorporates these factors at 40 CFR 122.26(a)(1)(v).

Under today's rule, case-by-case designations are made under regulatory procedures found at 40 CFR 124.52. The procedures at 40 CFR 124.52 require that whenever the Director decides that an individual permit is required, the Director shall notify the discharger in writing that the discharge requires a permit and the reasons for the decision. In addition, an application form is sent with the notice. Section 124.52 provides a 60 day period from the date of notice for submitting a permit application. Although this 60 day period may be appropriate for many designated storm water discharges, site specific factors may dictate that the Director provide ***47994** additional time for submitting a permit application. For example, due to the complexities associated with designation of a municipal separate storm sewer system for a system- or jurisdiction-wide permit, the Director may provide the applicant with additional time to submit relevant information or may require that information be submitted in several phases.

**V. Consent Decree of October 20, 1989**

On April 20, 1989, EPA was served notice of intent to sue by Kathy Williams et al, because of the Agency's failure to promulgate final storm regulations on February 4, 1989, pursuant to Section 402(p)(4) of the CWA. A suit was filed by the same party on July 20, 1989, alleging the same cause of action, to wit: the Agency's failure to promulgate regulations under section 402(p)(4) of the CWA. On October 20, 1989, EPA entered into a consent decree with Kathy Williams et al, wherein the Federal District Court, District of Oregon, Southern Division, decreed that the Agency promulgate final regulations for storm water discharges identified in sections 402(p)(2) (B) and (C) of the CWA no later than July 20, 1990. Kathy Williams et al., v. William K. Reilly, Administrator, et al., No. 89-6265-E (D-Ore.) In July 1990, the consent degree was amended to provide for a promulgation date of October 31. Today's rule is promulgated in compliance with the terms of the consent decree as amended.

**VI. Today's Final Rule and Response to Comments**

***A. Overview***

Section 405 of the WQA alters the regulatory approach to control pollutants in storm water discharges by adopting a phased and tiered approach. The new provision phases in permit application requirements, permit issuance deadlines and compliance with permit conditions for different categories of storm water discharges. The approach is tiered in that storm water discharges associated with industrial activity must comply with sections 301 and 402 of the CWA (requiring control of the discharge of pollutants that utilize the Best Available Technology (BAT) and the Best Conventional Pollutant Control Technology (BCT) and where necessary, water quality-based controls), but permits for discharges from municipal separate storm sewer systems must require controls to reduce the discharge of pollutants to the maximum extent practicable, and where necessary water quality-based controls, and must include a requirement to effectively prohibit non-storm water discharges into the storm sewers. Furthermore, EPA in consultation with State and local officials must develop a comprehensive program to designate and regulate other storm water discharges to protect water quality.

This final regulation establishes requirements for the storm water permit application process. It also sets forth the required components of municipal storm water quality management plans, as well as a preliminary permitting strategy for industrial activities. In implementing these regulations, EPA and the States will strive to achieve environmental results in a cost effective

manner by placing high priority on pollution prevention activities, and by targeting activities based on reducing risk from particularly harmful pollutants and/or from discharges to high value waters. EPA and the States will also work with applicants to avoid cross media transfers of storm water contaminants, especially through injection to shallow wells in the Class V Underground Injection Control Program.

In addition, EPA recognizes that problems associated with storm water, combined sewer overflows (CSOs) and infiltration and inflow (I&I) are all inter-related even though they are treated somewhat differently under the law. EPA believes that it is important to begin linking these programs and activities and, because of the potential cost to local governments, to investigate the use of innovative, non-traditional approaches to reducing or preventing contamination of storm water.

The application process for developing municipal storm water management plans provides an ideal opportunity between steps 1 and 2 for considering the full range of nontraditional, preventive approaches, including municipalities, public awareness/education programs, use of vegetation and/or land conservancy practices, alternative paving materials, creative ways to eliminate I&I and illegal hook-ups, and potentials for water reuse. EPA has already announced its plans to present an award for the best creative, cost effective approaches to storm water and CSOs beginning in 1991.

This rulemaking establishes permit application requirements for classes of storm water discharges that were specifically identified in section 402(p)(2). These priority storm water discharges include storm water discharges associated with industrial activity and discharges from a municipal separate storm sewer serving a population of 100,000 or more.

This rulemaking was developed after careful consideration of 450 sets of comments, comprising over 3200 pages, that were received from a variety of industries, trade associations, municipalities, State and Federal Agencies, environmental groups, and private citizens. These comments were received during a 90-day comment period which extended from December 7, 1988, to March 7, 1989. EPA received several requests for an extension of the comment period from 30-days up to 90-days. Many arguments were advanced for an extension including: the extent and complexity of the proposal, the existence of other concurrent EPA proposals, and the need for technical evaluations of the proposal. EPA considered these comments as they were received, but declined to extend the comment period beyond 90 days. The standard comment period on proposals normally range from 30 to 60 days. In light of the statutory deadline of February 4, 1989, additional time for the comment period beyond what was already a substantially lengthened comment period would have been inappropriate. The number and extent of the comments received on this proposal indicated that interested parties had substantially adequate time to review and comment on the regulation. Furthermore, the public was invited to attend six public meetings in Washington DC, Chicago, Dallas, Oakland, Jacksonville, and Boston to present questions and comments. EPA is convinced that substantial and adequate public participation was sought and received by the Agency.

Numerous commenters have also requested that the rule be reproposed due to the extent of the proposal and the number of options and issues upon which the Agency requested comments. EPA has decided against a reproposal. The December 7, 1988, notice of proposed rulemaking was extremely detailed and thoroughly identified major issues in such a manner as to allow the public clear opportunities to comment. The comments that were received were extensive, and many provided valuable information and ideas that have been incorporated into the regulation. Accordingly, the Agency is confident it has produced a workable and rational approach to the initial regulation of storm water discharges and a regulation that reflects the experience and knowledge of the public as provided in the comments, and which was developed in accordance with the ***47995** procedural requirements of the Administrative Procedures Act (APA). EPA believes that while the number of issues raised by the proposal was extensive, the number of detailed comments indicates that the public was able to understand the issues in order to comment adequately. Thus, a reproposal is unnecessary.

***B. Definition of Storm Water***

The December 7, 1988, notice requested comment on defining storm water as storm water runoff, surface runoff, street wash waters related to street cleaning or maintenance, infiltration (other than infiltration contaminated by seepage from sanitary sewers or by other discharges) and drainage related to storm events or snow melt. This definition is consistent with the regulatory

  

definition of "storm sewer" at 40 CFR 35.2005(b)(47) which is used in the context of grants for construction of treatment works. This definition aids in distinguishing separate storm water sewers from sanitary sewers, combined sewers, process discharge outfalls and non-storm water, non-process discharge outfalls.

The definition of "storm water" has an important bearing on the NPDES permitting scheme under the CWA. The following discusses the interrelationship of NPDES permitting requirements for storm water discharges addressed by this rule and NPDES permitting requirements for other non-storm water discharges which may be discharged via the storm sewer as a storm water discharge. Today's rule addresses permit application requirements for storm water discharges associated with industrial activity and for discharges from municipal separate storm sewer systems serving a population of 100,000 or more. Storm water discharges associated with industrial activity are to be covered by permits which contain technology-based controls based on BAT/BCT considerations or water quality-based controls, if necessary. A permit for storm water discharges from an industrial facility may also cover other non-storm water discharges from the facility. Today's rule establishes individual (Form 1 and Form 2F) and group application requirements for storm water discharges associated with industrial activity. In addition, EPA or authorized NPDES States with authorized general permit programs may issue general permits which establish alternative application or notification requirements for storm water discharges covered by the general permit(s). Where a storm water discharge associated with industrial activity is mixed with a non-storm water discharge, both discharges must be covered by an NPDES permit (this can be in the same permit or with multiple permits). Permit application requirements for these "combination" discharges are discussed later in today's notice.

Today's rule also addresses permit application requirements for discharges from municipal separate storm sewer systems serving a population of 100,000 or more. Under today's rule, appropriate municipal owners or operators of these systems must obtain NPDES permits for discharges from these systems. These permits are to establish controls to the maximum extent practicable (MEP), effectively prohibit non-storm water discharges to the municipal separate storm sewer system and, where necessary, contain applicable water quality-based controls. Where non-storm water discharges or storm water discharges associated with industrial activity discharge through a municipal separate storm sewer system (including systems serving a population of 100,000 or more as well as other systems), which ultimately discharges to a waters of the United States, such discharges through a municipal storm sewer need to be covered by an NPDES permit that is independent of the permit issued for discharges from the municipal separate storm sewer system. Today's rule defines the term "illicit discharge" to describe any discharge through a municipal separate storm sewer that is not composed entirely of storm water and that is not covered by an NPDES permit. Such illicit discharges are not authorized under the CWA. Section 402(p)(3)(B) of the CWA requires that permits for discharges from municipal separate storm sewers require the municipality to "effectively prohibit" non-storm water discharges from the municipal separate storm sewer. As discussed in more detail below, today's rule begins to implement the "effective prohibition" by requiring municipal operators of municipal separate storm sewer systems serving a population of 100,000 or more to submit a description of a program to detect and control certain non-storm water discharges to their municipal system. Ultimately, such non-storm water discharges through a municipal separate storm sewer must either be removed from the system or become subject to an NPDES permit (other than the permit for the discharge from the municipal separate storm sewer). For reasons discussed in more detail below, in general, municipalities will not be held responsible for prohibiting some specific components of discharges or flows listed below through their municipal separate storm sewer system, even though such components may be considered non-storm water discharges, unless such discharges are specifically identified on a case-by-case basis as needing to be addressed. However, operators of such non-storm water discharges need to obtain NPDES permits for these discharges under the present framework of the CWA (rather than the municipal operator of the municipal separate storm sewer system). (Note that section 516 of the Water Quality Act of 1987 requires EPA to conduct a study of de minimis discharges of pollutants to waters of the United States and to determine the most effective and appropriate methods of regulating any such discharges.)

EPA received numerous comments on the proposed regulatory definition of storm water, many of which proposed exclusions or additions to the definition. Several commenters suggested that the definition should include or not include detention and retention reservoir releases, water line flushing, fire hydrant flushing, runoff from fire fighting, swimming pool drainage and discharge, landscape irrigation, diverted stream flows, uncontaminated pumped ground water, rising ground waters, discharges from potable water sources, uncontaminated waters from cooling towers, foundation drains, non-contact cooling water (such as

  

HVAC or heating, ventilation and air conditioning condensation water that POTWs require to be discharged to separate storm sewers rather than sanitary sewers), irrigation water, springs, roof drains, water from crawl space pumps, footing drains, lawn watering, individual car washing, flows from riparian habitats and wetlands. Most of these comments were made with regard to the concern that these were commonly occurring discharges which did not pose significant environmental problems. It was also noted that, unless these flows are classified as storm water, permits would be required for these discharges.

In response to the comments which requested EPA to define the term "storm water" broadly to include a number of classes of discharges which are not in any way related to precipitation events, EPA believes that this rulemaking is not an appropriate forum for addressing the appropriate regulation under the NPDES program of such non-storm water discharges, even though some classes of non-storm water discharges may typically contain only minimal amounts of pollutants. Congress did not intend that the term storm water be used to describe any discharge that has a de minimis amount of pollutants, nor did it intend for section 402(p) to be used to ***47996** provide a moratorium from permitting other non-storm water discharges. Consequently, the final definition of storm water has not been expanded from what was proposed. However, as discussed in more detail later in today's notice, municipal operators of municipal separate storm sewer systems will generally not be held responsible for "effectively prohibiting" limited classes of these discharges through their municipal separate storm sewer systems.

The proposed rule included infiltration in the definition of storm water. In this context one commenter suggested that the term infiltration be defined. Infiltration is defined at 40 CFR 35.2005(b)(20) as water other than wastewater that enters a sewer system (including sewer service connections and foundation drains) from the ground through such means as defective pipes, pipe joints, connections or manholes. Infiltration does not include, and is distinguished from, inflow. Another commenter urged that ground water infiltration not be classified as storm water because the chemical characteristics and contaminants of ground water will differ from surface storm water because of a longer contact period with materials in the soil and because ground water quality will not reflect current practices at the site. In today's rule, the definition of storm water excludes infiltration since pollutants in these flows will depend on a large number of factors, including interactions with soil and past land use practices at a given site. Further infiltration flows can be contaminated by sources that are not related to precipitation events, such as seepage from sanitary sewers. Accordingly the final regulatory language does not include infiltration in the definition of storm water. Such flows may be subject to appropriate permit conditions in industrial permits. As discussed in more detail below, municipal management programs must address infiltration where identified as a source of pollutants to waters of the United States.

One commenter questioned the status of discharges from detention and retention basins used to collect storm water. This regulation covers discharges of storm water associated with industrial activity and discharges from municipal separate storm sewer systems serving a population of 100,000 or more into waters of the United States. Therefore, discharges from basins that are part of a conveyance system for a storm water discharge associated with industrial activity or part of a municipal separate storm sewer system serving a population of 100,000 or more are covered by this regulation. Flows which are channeled into basins and which do not discharge into waters of the United States are not addressed by today's rule.

Several commenters requested that the term illicit connection be replaced with a term that does not connote illegal discharges or activity, because many discharges of non-storm water to municipal separate storm sewer systems occurred prior to the establishment of the NPDES program and in accordance with local or State requirements at the time of the connection. EPA disagrees that there should be a change in this terminology. The fact that these connections were at one time legal does not confer such status now. The CWA prohibits the point source discharge of non-storm water not subject to an NPDES permit through municipal separate storm sewers to waters of the United States. Thus, classifying such discharges as illicit properly identifies such discharges as being illegal.

A commenter wanted clarification of the terms "other discharges" and "drainage" that are used in the definition of "storm water." As noted above, today's rule clarifies that infiltration is not considered storm water. Thus the portion of the definition of storm water that refers to "other discharges" has also been removed. However, the term drainage has been retained. "Drainage" does not take on any meaning other than the flow of runoff into a conveyance, as the word is commonly understood.

  

One commenter stated that irrigation flows combined with storm water discharges should be excluded from consideration in the storm water program. The Agency would note that irrigation return flows are excluded from regulation under the NPDES program. Section 402(l)(1) states that the Administrator or the State shall not require permits for discharges composed entirely of return flows from irrigated agriculture. The legislative history of the 1977 Clean Water Act, which enacted this language, states that the word "entirely" was intended to limit the exception to only those flows which do not contain additional discharges from activities unrelated to crop production. Congressional Record Vol. 123 (1977), pg. 4360, Senate Report No. 95-370. Accordingly, a storm water discharge component, from an industrial facility for example, included in such "joint" discharges may be regulated pursuant to an NPDES permit either at the point at which the storm water flow enters or joins the irrigation flow, or where the combined flow enters waters of the United States or a municipal separate storm sewer.

Some commenters expressed concern about including street wash waters as storm water. One commenter argued including street wash waters in the definition of storm water should not be construed to eliminate the need for management practices relating to construction activities where sediment may simply wash into storm drains. EPA agrees with these points and the concerns that storm sewers may receive material that pose environmental problems if street wash waters are included in the definition. Accordingly, such discharges are no longer in the definition as proposed, and must be addressed by municipal management programs as part of the prohibition on non-storm water discharges through municipal separate storm sewer systems.

Several commenters requested that the terms discharge and point source, in the context of permits for storm water discharge, be clarified. Several commenters stated that the EPA should clarify that storm water discharge does not include "sheet flow" off of an industrial facility. EPA interprets this as request for clarification on the status of the terms "point source" and "discharge" under these regulations. In response, this rulemaking only covers storm water discharges from point sources. A point source is defined at 40 CFR 122.2 as "any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff." EPA agrees with one commenter that this definition is adequate for defining what discharges of storm water are covered by this rulemaking. EPA notes that this definition would encompass municipal separate storm sewers. In view of this comprehensive definition of point source, EPA need clarify in this rulemaking only that a storm water discharge subject to NPDES regulation does not include storm water that enters the waters of the United States via means other than a "point source." As further discussed below, storm water from an industrial facility which enters and is subsequently discharged through a municipal separate storm sewer is a "discharge associated with industrial ***47997** activity" which must be covered by an individual or general permit pursuant to today's rule.

EPA would also note that individual facilities have the burden of determining whether a permit application should be submitted to address a point source discharge. Those unsure of the classification of storm water flow from a facility, should file permit applications addressing the flow, or prior to submitting the application consult permitting authorities for clarification.

One commenter stated that "point source" for this rulemaking should be defined, for the purposes of achieving better water quality, as those areas where "discharges leave the municipal [separate storm sewer] system." EPA notes in response that "point source" as currently defined will address such discharges, while keeping the definition of discharge and point source within the framework of the NPDES program, and without adding potentially confusing and ambiguous additional definitions to the regulation. If this comment is asserting that the term point source should not include discharges from sources through the municipal system, EPA disagrees. As discussed in detail below, discharges through municipal separate storm sewer systems which are not connected to an operable treatment works are discharges subject to NPDES permit requirements at (40 CFR 122.3(c)), and may properly be deemed point sources.

One industry argued that the definition of "point source" should be modified for storm water discharges so as to exclude discharges from land that is not artificially graded and which has a propensity to form channels where precipitation runs off. EPA intends to embrace the broadest possible definition of point source consistent with the legislative intent of the CWA and court interpretations to include any identifiable conveyance from which pollutants might enter the waters of the United States. In most

court cases interpreting the term "point source", the term has been interpreted broadly. For example, the holding in Sierra Club v. Abston Construction Co., Inc., 620 F.2d 41 (5th Cir. 1980) indicates that changing the surface of land or establishing grading patterns on land will result in a point source where the runoff from the site is ultimately discharged to waters of the United States:

Simple erosion over the material surface, resulting in the discharge of water and other materials into navigable waters, does not constitute a point source discharge, absent some effort to change the surface, to direct the water flow or otherwise impede its progress * * * Gravity flow, resulting in a discharge into a navigable body of water, may be part of a point source discharge if the (discharger) at least initially collected or channeled the water and other materials. A point source of pollution may also be present where (dischargers) design spoil piles from discarded overburden such that, during periods of precipitation, erosion of spoil pile walls results in discharges into a navigable body of water by means of ditches, gullies and similar conveyances, even if the (dischargers) have done nothing beyond the mere collection of rock and other materials * * * Nothing in the Act relieves (dischargers) from liability simply because the operators did not actually construct those conveyances, so long as they are reasonably likely to be the means by which pollutants are ultimately deposited into a navigable body of water. Conveyances of pollution formed either as a result of natural erosion or by material means, and which constitute a component of a * * * drainage system, may fit the statutory definition and thereby subject the operators to liability under the Act." 620 F.2d at 45 (emphasis added).

Under this approach, point source discharges of storm water result from structures which increase the imperviousness of the ground which acts to collect runoff, with runoff being conveyed along the resulting drainage or grading patterns.

The entire thrust of today's regulation is to control pollutants that enter receiving water from storm water conveyances. It is these conveyances that will carry the largest volume of water and higher levels of pollutants. The storm water permit application process and permit conditions will address circumstances and discharges peculiar to individual facilities.

One industry commented that the definition of waters of the State under some State NPDES programs included municipal storm sewer systems. The commenter was concerned that certain industrial facilities discharging through municipal storm sewers in these states would be required to obtain an NPDES permit, despite EPA's proposal not to require permits from such facilities generally. In response, EPA notes that section 510 of the CWA, approved States are able to have stricter requirements in their NPDES program. In approved NPDES States, the definition of waters of the State controls with regard to what constitutes a discharge to a water body. However, EPA believes that this will have little impact, since, as discussed below, all industrial dischargers, including those discharging through municipal separate storm sewer systems, will be subject to general or individual NPDES permits, regardless of any additional State requirements.

One municipality commented that neither the term "point source" nor "discharge" should be used in conjunction with industrial releases into urban storm water systems because that gives the impression that such systems are navigable waters. EPA disagrees that any confusion should result from the use of these terms in this context. In this rulemaking, EPA always addresses such discharges as "discharges through municipal separate storm sewer systems" as opposed to "discharges to waters of the United States." Nonetheless, such industrial discharges through municipal storm sewer systems are subject to the requirements of today's rule, as discussed elsewhere.

One commenter desired clarification with regard to what constituted an outfall, and if an outfall could be a pipe that connected two storm water conveyances. This rulemaking defines outfall as a point of discharge into the waters of the United States, and not a conveyance which connects to Sections of municipal separate storm sewer. In response to another comment, this rulemaking only addresses discharges to waters of United States, consequently discharges to ground waters are not covered by this rulemaking (unless there is a hydrological connection between the ground water and a nearby surface water body. See, e.q., Exxon Coro. v. Train, 554 F.2d 1310, 1312 n.1 (5th Cir. 1977); McClellan Ecological Seepage Situation v. Weinberger, 707 F.Supp. 1182, 1195-96 (E.D. Cal. 1988)).

  

In the WQA and other places, the term "storm water" is presented as a single word. Numerous comments were received by EPA as to the appropriate spelling. Many of these comments recommended that two words for storm water is appropriate. EPA has decided to use an approach consistent with the Government Printing Office's approved form where storm water appears as two words.

***C. Responsibility for Storm Water Discharges Associated With Industrial Activity Through Municipal Separate Storm Sewers***

The December 7, 1988, notice of proposed rulemaking requested comments on the appropriate permitting scheme for storm water discharges associated with industrial activity through municipal separate storm sewers. EPA proposed a permitting scheme that would define the requirement to obtain coverage under an NPDES permit for a storm water discharge associated with industrial activity through a municipal separate storm sewer in terms of the classification of the municipal separate storm sewer. EPA proposed holding municipal operators of large or medium ***47998** municipal separate storm sewer systems primarily responsible for applying for and obtaining an NPDES permit covering system discharges as well as storm water discharges (including storm water discharges associated with industrial activity) through the system. Under the proposed approach, operators of storm water discharges associated with industrial activity which discharge through a large or medium municipal separate storm sewer system would generally not be required to obtain permit coverage for their discharge (unless designated as a significant contributor of pollution pursuant to section 402(p)(2)(E)) provided the municipality was notified of: The name, location and type of facility and a certification that the discharge has been tested (if feasible) for non-storm water (including the results of any testing). The notification procedure also required the operator of the storm water discharge associated with industrial activity to determine that: The discharge is composed entirely of storm water; the discharge does not contain hazardous substances in excess of reporting quantities; and the facility is in compliance with applicable provisions of the NPDES permit issued to the municipality for storm water.

In the proposal, EPA also requested comments on whether a decision on regulatory requirements for storm water discharges associated with industrial activity through other municipal separate storm sewer systems (generally those serving a population of less than 100,000) should be postponed until completion of two studies of storm water discharges required under section 402(p)(5) of the CWA.

EPA favored these approaches because they appeared to reduce the potential administrative burden associated with preparing and processing the thousands of permit applications associated with the rulemaking and provide EPA additional flexibility in developing permitting requirements for storm water discharges associated with industrial activity. EPA also expressed its belief, based upon an analysis of ordinances controlling construction site runoff in place in certain cities, that municipalities generally possessed legal authority sufficient to control contributions of industrial storm water pollutants to their separate storm sewers to the degree necessary to implement the proposed rule. EPA commented that municipal controls on industrial sources implemented to comply with an NPDES permit issued to the municipality would likely result in a level of storm water pollution control very similar to that put directly on the industrial source through its own NPDES permit. This was to be accomplished by requiring municipal permitees, to the maximum extent practicable, to require industrial facilities in the municipality to develop and implement storm water controls based on a consideration of the same or similar factors as those used to make BAT/BCT determinations. (See 40 CFR 125.3 (d)(2) and (d)(3)).

The great majority of commenters on the December 7, 1988, notice addressed this aspect of the proposal. Based on consideration of the comments received on the notice, EPA has decided that it is appropriate to revise the approach in its proposed rule to require direct permit coverage for all storm water discharges associated with industrial activity, including those that discharge through municipal separate storm sewers. In response to this decision, EPA has continued to analyze the appropriate manner to respond to the large number of storm water discharges subject to this rulemaking. The development of EPA's policy regarding permitting these discharges is discussed in more detail in the section VI.D of today's preamble.

EPA notes that the status of discharges associated with industrial activity which pass through a municipal separate storm sewer system under section 402(p) raises difficult legal and policy questions. EPA believes that treating these discharges under permits

  

separate from those issued to the municipality will most fully address both the legal and policy concerns raised in public comment.

Certain commenters supported EPA's proposal. Some commenters claimed that EPA lacked any authority to permit industrial discharges which were not discharged immediately to waters of the U.S. Other commenters agreed with EPA's statements in the proposal that its approach would result in a more manageable administrative burden for EPA and the NPDES states. However, numerous comments also were received which provided various arguments in support of revising the proposed approach. These comments addressed several areas including the definition of discharge under the CWA, the requirements and associated statutory time frames of section 402(p), as well as the resource and enforcement constraints of municipalities. EPA is persuaded by these comments and has modified its approach accordingly. The key comments on this issue are discussed below.

EPA disagrees with commenters who suggested that EPA lacks authority to permit separately industrial discharges through municipal sewers. The CWA prohibits the discharge of a pollutant except pursuant to an NPDES permit. Section 502(12)(A) of the CWA defines the "discharge of a pollutant" as "any addition of any pollutant to navigable waters from any point source." [FN1] There is no qualification in the statutory language regarding the source of the pollutants being discharged. Thus, pollutants from a remote location which are discharged through a point source conveyance controlled by a different entity (such as a municipal storm sewer) are nonetheless discharges for which a permit is required.

EPA's regulatory definition of the term "discharge" reflects this broad construction. EPA defines the term to include

additions of pollutants into waters of the United States from: surface runoff which is collected or channelled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which does not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works.

40 CFR § 122.2 (1989) (emphasis added). The only exception to this general rule is the one contemplated by section 307(b) of the CWA, i.e., the introduction of pollutants into publicly-owned treatment works. EPA treats these as "indirect discharges," subject not to NPDES requirements, but to pretreatment standards under section 307(b).
In light of its construction of the term discharge, EPA has consistently maintained that a person who sends pollutants from a remote location through a point source into a water of the U.S. may be held liable for the unpermitted discharge of that pollutant. Thus, EPA asserts the authority to require a permit either from the operator of the point source conveyance, (such as a municipal storm sewer or a privately-owned treatment works), or from any person causing pollutants to be present in that conveyance and discharged through the point source, or both. See Decision of the General Counsel (of EPA) No. 43 ("In re Friendswood Development Co.") (June 11, 1976) (operator of privately owned treatment work and dischargers to it are both subject to NPDES permit requirements). See also, 40 CFR 122.3(g), 122.44(m) ***47999** (NPDES permit writer has discretion to permit contributors to a privately owned treatment works as direct dischargers). In other words, where pollutants are added by one person to a conveyance owned/operated by another person, and that conveyance discharges those pollutants through a point source, EPA may permit either person or both to ensure that the discharge is properly controlled. Pollutants from industrial sites discharged through a storm sewer to a point source are appropriately treated in this fashion.

Furthermore, EPA believes that storm water from an industrial plant which is discharged through a municipal storm sewer is a "discharge associated with industrial activity." Today's rule, as in the proposal, defines discharges associated with industrial activity solely in terms of the origin of the storm water runoff. There is no distinction for how the storm water reaches the waters of the U.S. In other words, pollutants in storm water from an industrial plant which are discharged are "associated with industrial activity," regardless of whether the industrial facility operates the conveyance discharging the storm water (or whether the storm water is ultimately discharged through a municipal storm sewer). Indeed, there is no distinction in the "industrial" nature of these two types of discharges. The pollutants of concern in an industrial storm water discharge are present when the storm water leaves the facility, either through an industrial or municipal storm water conveyance. EPA has no data to suggest that the pollutants in industrial storm water entering a municipal storm sewer are any different than those in storm water discharged immediately to a water of the U.S. Thus, industrial storm water in a municipal sewer is properly classified as "associated with

industrial activity." Although EPA proposed not to cover these discharges by separate permit, the Agency believes that it is clearly not precluded from doing so.

Many comments also supported the proposed approach, noting that holding municipalities primarily responsible for obtaining a permit which covers industrial storm water discharges through municipal systems would reduce the administrative burden associated with preparing and processing thousands of permit applications—permit applications that would be submitted if each industrial discharger through a large or medium municipal separate storm sewer system had to apply individually (or as part of a group application).

EPA appreciates these concerns. Yet EPA also recognizes that there are also significant problems with putting the burden of controlling these sources on the municipalities (except for designated discharges) which must be balanced with the concerns about the permit application burden on industries. The industrial permitting strategy discussed in section VI.D below attempts to achieve this balance.

EPA also does not believe that the administrative burden will be nearly as significant as originally thought, for several reasons. First, as discussed in section VI.F.2 below and in response to significant public comment, EPA has significantly narrowed the scope of the definition of "associated with industrial activity" to focus in on those facilities which are most commonly considered "industrial" and thought to have the potential for the highest levels of pollutants in their storm water discharges. EPA believes this is a more appropriate way to ensure a manageable scope for the industrial storm water program in light of the statutory language of section 402(p), since it does not attempt to arbitrarily distinguish industrial facilities on the basis of the ownership of the conveyance through which a facility discharges its storm water. Second, EPA's industrial permitting strategy discussed in section VI.D is designed around aggressive use of general permits to cover the vast majority of industrial sources. These general permits will require industrial facilities to develop storm water control plans and practices similar to those that would have been required by the municipality. Yet, general permits will eliminate the need for thousands of individual or group permit applications, greatly reducing the burden on both industry EPA/States. Finally, even under the proposal, EPA believes that a large number of industrial dischargers would have been appropriate for designation for individual permitting under section 402(p)(2)(E), with the attendant individual application requirements. Today's approach will actually decrease the overall burden on these facilities; rather than filing an individual permit application upon designation, these facilities will generally be covered by a general permit.

By contrast, several commenters asserted that not only does EPA have the authority to cover these discharges by separate permit, it is required to by the language of section 402(p). As discussed above, storm water from an industrial plant which passes through a municipal storm sewer to a point source and is discharged to waters of the U.S. is a "discharge associated with industrial activity." Therefore, it is subject to the appropriate requirements of section 402(p). The operator of the discharge (or the industrial facility where the storm water originates) must apply for a permit within three years of the 1987 amendments (i.e., Feb. 4, 1990); [FN2] EPA must issue a permit by one year later (Feb. 4, 1991); and the permit must require compliance within three years of permit issuance. That permit must ensure that the discharge is in compliance with all appropriate provisions of sections 301 and 402. Commenters asserted that EPA's proposal would violate these two requirements of the law. First, the statute requires all industrial storm water discharges to obtain a permit in the first round of permitting (i.e., February 4, 1990). However, Congress established a different framework to address discharges from small municipal separate storm sewer systems. Section 402(p) requires EPA to complete two studies of storm water discharges, and based on those studies, promulgate additional regulations, including requirements for state storm water management programs by October 1, 1992. EPA is prohibited from issuing permits for storm water discharges from small municipal systems until October 1, 1992 unless the discharge is designated under section 402(p)(2)(E). Thus, industrial storm water discharges from these systems would not be covered by a permit until later than contemplated by statute. Second, permits for municipal storm sewer systems require controls on storm water discharges "to the maximum extent practicable," as opposed to the BAT/BCT requirements of section 301(b)(2). Yet, all industrial storm water discharges must comply with section 301(b)(2). Thus, covering industrial storm water under a municipal storm water permit will not ensure the legally-required level of control of industrial storm water discharges.

  

In addition to comments on the requirements of section 402(p), EPA received several comments questioning whether EPA's proposal to cover industrial pollutants in municipal separate storm sewers solely in the permit issued to the municipality would ensure adequate control of these pollutants due to both inadequate ***48000** resources and enforcement. Some municipalities stated that the burdens of this responsibility would be too great with regard to source identification and general administration of the program. These commenters claimed they lacked the necessary technical and regulatory expertise to regulate such sources. Commenters also noted that additional resources to control these sources would be difficult to obtain given the restrictions on local taxation in many states and the fact that EPA will not be providing funding to local governments to implement their storm water programs.

Municipalities also expressed concerns regarding enforcement of EPA's proposed approach. Some municipalities remarked that they did not have appropriate legal authority to address these discharges. Several commenters also stated that requiring municipalities to be responsible for addressing storm water discharges associated with industrial activity through their municipal system would result in unequal treatment of industries nationwide because of different municipal requirements and enforcement procedures. Several municipal entities expressed concern with regard to their responsibility and liability for pollutants discharged to their municipal storm sewer system, and further asserted that it was unfair to require municipalities to bear the full cost of controlling such pollutants. Other municipalities suggested that overall municipal storm water control would be impaired, since municipalities would spend a disproportionate amount of resources trying to control industrial discharges through their sewers, rather than addressing other storm water problems. In a related vein, certain commenters suggested that, where industrial storm water was a significant problem in a municipal sewer, EPA's proposed approach would hamper enforcement at the federal/state level, since all enforcement measures could be directed only at the municipality, rather than at the most direct source of that problem.

In response to all of these concerns, EPA has decided to require storm water discharges associated with industrial activity which discharge through municipal separate storm sewers to obtain separate individual or general NPDES permits. EPA believes that this change will adequately address all of the key concerns raised by commenters.

The Agency was particularly influenced by concerns that many municipalities lacked the authority under state law to address industrial storm water practices. EPA had assumed that since several cities regulate construction site activities, that they could regulate other industrial operations in a similar manner. Several commenters suggested otherwise. In light of these concerns, EPA agrees with certain commenters that municipal controls on industrial facilities, in lieu of federal control, might not comply with section 402(p)(3)(A) for those facilities.[FN3] This calls into question whether EPA's proposed approach would have reasonably implemented Congressional intent to address industrial storm water early and stringently in the permitting process.

EPA also agrees with those commenters who argued that municipal controls on industrial storm water sources were not directly analogous to the pretreatment program under section 307(b), as EPA suggested in the preamble to the proposal. The authority of cities to control the type and volume of industrial pollutants into a POTW is generally unquestioned under the laws of most states, since sewage and industrial waste treatment is a service provided by the municipality. Thus, EPA has greater confidence that cities can and will adopt effective pretreatment programs. By contrast, many cities are limited in the types of controls they can impose on flows into storm sewers; cities are more often limited to regulations on quantity of industrial flows to prevent flooding the system. So too, the pretreatment program allows for federal enforcement of local pretreatment requirements. Enforcement against direct dischargers (including dischargers through municipal storm sewers) is possible only when the municipal requirements are contained in an NPDES permit.

Although today's rule will require industrial discharges through municipal storm sewers to be covered by separate permit, EPA still believes that municipal operators of large and medium municipal systems have an important role in source identification and the development of pollutant controls for industries that discharge storm water through municipal separate storm sewer systems is appropriate. Under the CWA, large and medium municipalities are responsible for reducing pollutants in discharges from municipal separate storm sewers to the maximum extent practicable. Because storm water from industrial facilities may be a major contributor of pollutants to municipal separate storm sewer systems, municipalities are obligated to develop controls

for storm water discharges associated with industrial activity through their system in their storm water management program. (See section VI.H.7. of today's preamble.) The CWA provides that permits for municipal separate storm sewers shall require municipalities to reduce pollutants to the maximum extent practicable. Permits issued to municipalities for discharges from municipal separate storm sewers will reflect terms, specified controls, and programs that achieve that goal. As with all NPDES permits, responsibility and liability is determined by the discharger's compliance with the terms of the permit. A municipality's responsibility for industrial storm water discharged through their system is governed by the terms of the permit issued. If an industrial source discharges storm water through a municipal separate storm sewer in violation of requirements incorporated into a permit for the industrial facility's discharge, that industrial operator of the discharge may be subject to an enforcement action instituted by the Director of the NPDES program.

Today's rule also requires operators of storm water discharges associated with industrial activity through large and medium municipal systems to provide municipal entities of the name, location, and type of facility that is discharging to the municipal system. This information will provide municipalities with a base of information from which management plans can be devised and implemented. This requirement is in addition to any requirements contained in the industrial facility's permit. As in the proposal, the notification process will assist cities in development of their industrial control programs.

EPA intends for the NPDES program, through requirements in permits for storm water discharges associated with industrial activity, to work in concert with municipalities in the industrial component of their storm water management program efforts. EPA believes that permitting of municipal storm sewer systems and the industrial discharges through them will act in a complementary manner to fully control the pollutants in those sewer systems. This will fully implement the intent of ***48001** Congress to control industrial as well as large and medium municipal storm water discharges as expeditiously and effectively as possible. This approach will also address the concerns of municipalities that they lack sufficient authority and resources to control all industrial contributions to their storm sewers and will be liable for discharges outside of their control.

The permit application requirements for large and medium municipal separate storm sewer systems, discussed in more detail later in today's preamble, address the responsibilities of the municipal operators of these systems to identify and control pollutants in storm water discharges associated with industrial activity. Permit applications for large and medium municipal separate storm sewer systems are to identify the location of facilities which discharge storm water associated with industrial activity to the municipal system (see section VI.H.7. of the preamble). In addition, municipal applicants will provide a description of a proposed management program to reduce, to the maximum extent practicable, pollutants from storm water discharges associated with industrial activity which discharge to the municipal system (see section VI.H.7.c of this preamble). EPA notes that each municipal program will be tailored to the conditions in that city. Differences in regional weather patterns, hydrology, water quality standards, and storm sewer systems themselves dictate that storm water management practices will vary to some degree in each municipality. Accordingly, similar industrial storm water discharges may be treated differently in terms of the requirements imposed by the municipality, depending on the municipal program. Nonetheless, any individual or general permit issued to the industrial facility must comply with section 402(p)(3)(A) of the CWA.

EPA intends to provide assistance and guidance to municipalities and permitting authorities for developing storm water management programs that achieve permit requirements. EPA intends to issue a guidance document addressing municipal permit applications in the near term.

Controls developed in management plans for municipal system permits may take a variety of forms. Where necessary, municipal permittees can pursue local remedies to develop measures to reduce pollutants or halt storm water discharges with high levels of pollutants through municipal storm sewer systems. Some local entities have already implemented ordinances or laws that are designed to reduce the discharge of pollutants to municipal separate storm sewers, while other municipalities have developed a variety of techniques to control pollutants in storm water. Alternatively, where appropriate, municipal permittees may develop end-of-pipe controls to control pollutants in these discharges such as regional wet detention ponds or diverting flow to publicly owned treatment works. Finally, municipal applicants may bring individual storm water discharges, which cannot be adequately controlled by the municipal permittees or general permit coverage, to the attention of the permitting authority. Then, at the

  

Director's discretion, appropriate additional controls can be required in the permit for the facility generating the targeted storm water discharge.

One commenter suggested that municipal operators of municipal separate storm sewers should have control over all storm water discharges from a facility that discharges both through the municipal system and to waters of the United States. In response, under this regulatory and statutory scheme, industries that discharge storm water directly into the waters of the United States, through municipal separate storm sewer systems, or both are required to obtain permit coverage for their discharges. However, municipalities are not precluded from exercising control over such facilities through their own municipal authorities.

It is important to note that EPA has established effluent guideline limitations for storm water discharges for nine subcategories of industrial dischargers (Cement Manufacturing (40 CFR part 411), Feedlots (40 CFR part 412), Fertilizer Manufacturing (40 CFR part 418), Petroleum Refining (40 CFR part 419), Phosphate Manufacturing (40 CFR part 422), Steam Electric (40 CFR part 423), Coal Mining (40 CFR part 434), Ore Mining and Dressing (40 CFR part 440) and Asphalt (40 CFR part 441)). Most of the existing facilities in these subcategories already have individual permits for their storm water discharges. Under today's rule, facilities with existing NPDES permits for storm water discharges through a municipal storm sewer will be required to maintain these permits and apply for an individual permit, under § 122.26(c), when existing permits expire. EPA received numerous comments supporting this decision because requiring facilities that have existing permits to comply with today's requirements immediately would be inefficient and not serve improved water quality.

Sections 402(p) (1) and (2) of the CWA provide that discharges from municipal separate storm sewer systems serving a population of less than 100,000 are not required to obtain a permit prior to October 1, 1992, unless designated on a case-by-case basis under section 402(p)(2)(E). However, as discussed above, storm water discharges associated with industrial activity through such municipal systems are not excluded. Thus, under today's rule, all storm water discharges associated with industrial activity that discharge through municipal separate storm sewer systems are required to obtain NPDES permit coverage, including those which discharge through systems serving populations less than 100,000. EPA believes requiring permits will address the legal concerns raised by commenters regarding these sources. In addition, it will allow for control of these significant sources of pollution while EPA continues to study under section 402(p)(6) whether to require the development of municipal storm water management plans in these municipalities. If these municipalities do ultimately obtain NPDES permits for their municipal separate storm sewer systems, early permitting of the industrial contributions may aid those cities in their storm water management efforts.

In the December 7, 1988, proposal, EPA recognized that storm water discharges associated with industrial activity from Federal facilities through municipal separate storm sewer systems may pose unique legal and administrative situations. EPA received numerous comments on this issue, with most of these comments coming from cities and counties. The comments reflected a general concern with respect to a municipality's ability to control Federal storm water discharges through municipal separate storm sewer systems. Most municipalities stated that they do not have the legal authority to adequately enforce against problem storm water discharges from Federal facilities and that these facilities should be required to obtain separate storm water permits. Some commenters stated that they have no Constitutional authority to regulate Federal facilities or establish regulation for such facilities. Some commenters indicated that Federal facilities could not be inspected, monitored, or subjected to enforcement for national security and other jurisdictional reasons. Some commenters argued that without clearly stated legal authority for the municipality, such dischargers should be required to obtain permits. One ***48002** municipality pointed out that Federal facilities within city limits are exempted from their Erosion and Sediment Control Act and that permits for these facilities should be required.

Under today's rule, Federal facilities which discharge storm water associated with industrial activity through municipal separate storm sewer systems will be required to obtain NPDES permit coverage under Federal or State law. EPA believes this will cure the legal authority problems at the local level raised by the commenters. EPA notes that this requirement is consistent with section 313(a) of the CWA.

  

***D. Preliminary Permitting Strategy for Storm Water Discharges Associated With Industrial Activity***

Many of the comments received on the December 7, 1988, proposal focused on the difficulties that EPA Regions and authorized NPDES States, with their finite resources, will have in implementing an effective permitting program for the large number of storm water discharges associated with industrial activity. Many commenters noted that problems with implementing permit programs are caused not only by the large number of industrial facilities subject to the program, but by the difficulties associated with identifying appropriate technologies for controlling storm water at various sites and the differences in the nature and extent of storm water discharges from different types of industrial facilities.

EPA recognizes these concerns; and based on a consideration of comments from authorized NPDES States, municipalities, industrial facilities and environmental groups on the permitting framework and permit application requirements for storm water discharges associated with industrial activity, EPA is in the process of developing a preliminary strategy for permitting storm water discharges associated with industrial activity. In developing this strategy, EPA recognizes that the CWA provides flexibility in the manner in which NPDES permits are issued.[FN4] EPA intends to use this flexibility in designing a workable and reasonable permitting system. In accordance with these considerations, EPA intends to publish in the near future a discussion of its preliminary permitting strategy for implementing the NPDES storm water program.

The preliminary strategy is intended to establish a framework for developing permitting priorities, and includes a four tier set of priorities for issuing permits to be implemented over time:

- Tier I—baseline permitting: One or more general permits will be developed to initially cover the majority of storm water discharges associated with industrial activity;

- Tier II—watershed permitting: Facilities within watersheds shown to be adversely impacted by storm water discharges associated with industrial activity will be targeted for permitting.

- Tier III—industry specific permitting: Specific industry categories will be targeted for individual or industry-specific permits; and

- Tier IV—facility specific permitting: A variety of factors will be used to target specific facilities for individual permits.

**Tier I—Baseline Permitting**

EPA intends to issue general permits that initially cover the majority of storm water discharges associated with industrial activity in States without authorized NPDES programs. These permits will also serve as models for States with authorized NPDES programs.

The consolidation of many sources under one permit will greatly reduce the otherwise overwhelming administrative burden associated with permitting storm water discharges associated with industrial activity. This approach has a number of additional advantages, including:

- Requirements will be established for discharges covered by the permit;

- Facilities whose discharges are covered by the permit will have an opportunity for substantial compliance with the CWA;

- The public, including municipal operators of municipal separate storm sewers which may receive storm water discharges associated with industrial activity, will have access under section 308(b) of the CWA to monitoring data and certain other information developed by the permittee;

  

- EPA will have the opportunity to begin to collect and review data on storm water discharges from priority industries, thereby supporting the development of subsequent permitting activities;

- Applicable requirements of municipal storm water management programs established in permits for discharges from municipal separate storm sewer systems will be enforceable directly against non-complying industrial facilities that generate the discharges;

- The public will be given an opportunity to comment on permitting activities;

- The baseline permits will provide a basis for bringing selected enforcement actions by eliminating many issues which might otherwise arise in an enforcement proceeding; and

- Finally, the baseline permits will provide a focus for public comment on the development of subsequent phases of the permitting strategy for storm water discharges, including the development of priorities for State storm water management programs developed under section 402(p)(6) of the CWA.

Initially, the coverage of the baseline permits will be broad, but the coverage is intended to shrink as other permits are issued for storm water discharges associated with industrial activities pursuant to Tier II through IV activities.

**2. Tier II—Watershed Permitting**

Facilities within watersheds shown to be adversely impacted by storm water discharges associated with industrial activity will be targeted for individual and general permitting. This process can be initiated by identifying receiving waters (or segments of receiving waters) where storm water discharges associated with industrial activity have been identified as a source of use impairment or are suspected to be contributing to use impairment.

**3. Tier III—Industry Specific Permitting**

Specific industry categories will be targeted for individual or industry-specific general permits. These permits will allow permitting authorities to focus attention and resources on industry categories of particular concern and/or industry categories where tailored requirements are appropriate. EPA will work with the States to coordinate the development of model permits for selected classes of industrial storm water discharges. EPA is also working to identify priority industrial categories in the two reports to Congress required under section 402(p)(5) of the CWA. In addition, group applications that are received can be used to develop model permits for the appropriate industries.

***48003 4. Tier IV—Facility Specific Permitting**

Individual permits will be appropriate for some storm water discharges in addition to those identified under Tier II and III activities. Individual permits should be issued where warranted by: the pollution potential of the discharge; the need for individual control mechanisms; and in cases where reduced administrative burdens exist. For example, individual NPDES permits for facilities with process discharges should be expanded during the normal process of permit reissuance to cover storm water discharges from the facility.

**5. Relationship of Strategy to Permit Applications Requirements**

The preliminary long-term permitting strategy described above identifies several permit schemes that EPA anticipates will be used in addressing storm water discharges associated with industrial activity. One issue that arises with this strategy is determining the appropriate information needed to develop and issue permits for these discharges. The NPDES regulatory scheme provides three major options for obtaining permit coverage for storm water discharges associated with industrial activity:

  

(1) Individual permit applications; (2) group applications; and (3) case-by-case requirements developed for general permit coverage.

a. Individual permit application requirements. Today's notice establishes requirements for individual permit applications for storm water discharges associated with industrial activity. These application requirements are applicable for all storm water discharges associated with industrial activity, except where the operator of the discharge is participating in a group application or a general permit is issued to cover the discharge and the general permit provides alternative means to obtain permit coverage. Information in individual applications is intended to be used in developing the site-specific conditions generally associated with individual permits.

Individual permit applications are expected to play an important role in all tiers of the Strategy, even where general permits are used. Although general permits may provide for notification requirements that operate in lieu of the requirement to submit individual permit applications, the individual permit applications may be needed under several circumstances. Examples include: where a general permit requires the submission of a permit application as the notice of intent to be covered by the permit; where the owner or operator authorized by a general permit requests to be excluded from the coverage of the general permit by applying for a permit (see 40 CFR 122.28(b)(2)(iii) for EPA issued general permits); and where the Director requires an owner or operator authorized by a general permit to apply for an individual permit (see 40 CFR 122.28(b)(2)(ii) for EPA issued general permits).

b. Group applications. Today's rule also promulgates requirements for group applications for storm water discharges associated with industrial activity. These applications provide participants of groups with sufficiently similar storm water discharges an alternative mechanism for applying for permit coverage.

The group application requirements are primarily intended to provide information for developing industry specific general permits. (Group applications can also be used to issue individual permits in authorized NPDES States without general permit authority or where otherwise appropriate). As such, group application requirements correlate well with the Tier III permitting activities identified in the long-term permitting Strategy.

c. Case-by-case requirements. 40 CFR 122.21(a) excludes persons covered by general permits from requirements to submit individual permit applications. Further, the general permit regulations at 40 CFR 122.28 do not address the issue of how a potential permittee is to apply to be covered under a general permit. Rather, conditions for notification of intent (NOI) to be covered by the general permit are established in the permits on a case-by-case basis, and operate in lieu of permit application requirements. Requirements for submitting NOIs to be covered by a general permit can range from full applications (this would be Form 1 and Form 2F for most discharges composed entirely of storm water discharges associated with industrial activity), to no notice. EPA recommends that the NOI requirements established in a general permit for storm water discharges associated with industrial activity be commensurate with the needs of the permit writer in establishing the permit and the permit program. The baseline general permit described in Tier I is intended to support the development of controls for storm water discharges associated with industrial activity that can be supported by the limited resources of the permitting Agency. In this regard, the burdens of receiving and reviewing NOI's from the large number of facilities covered by the permit should also be considered when developing NOI requirements. In addition, NOI requirements should be developed in conjunction with permit conditions establishing reporting requirements during the term of the permit.

NOI requirements in general permits can establish a mechanism which can be used to establish a clear accounting of the number of permittees covered by the general permit, the nature of operations at the facility generating the discharge, their identity and location. The NOI can be used as an initial screening tool to determine discharges where individual permits are appropriate. Also, the NOI can be used to identify classes of discharges appropriate for more specific general permits, as well as provide information needed to notify such dischargers of the issuance of a more specific general permit. In addition, the NOI can provide for the identification of the permittee to provide a basis for enforcement and compliance monitoring strategies. EPA will further address this issue in the context of specific general permits it plans to issue in the near future.

  

Today's rule requires that individual permit applications for storm water discharges associated with industrial activity be submitted within one year from the date of publication of this notice. EPA is considering issuing general permits for the majority of storm water discharges associated with industrial activity in those States and territories that do not have authorized State NPDES programs (MA, ME, NH, FL, LA, TX, OK, NM, SD, AZ, AK, ID, District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and the Trust Territory of the Pacific Islands) before that date to enable industrial dischargers of storm water to ascertain whether they are eligible for coverage under a general permit (and subject to any alternative notification requirements established by the general permit in lieu of the individual permit application requirements of today's rule) or whether they must submit an individual permit application (or participate in a group application) before the regulatory deadlines for submitting these applications passes. Storm water application deadlines are discussed in further detail below.

***E. Storm Water Discharge Sampling***

Storm water discharges are intermittent by their nature, and pollutant concentrations in storm water discharges will be highly variable. Not only will variability arise between given events, but the flow and pollutant ***48004** concentrations of such discharges will vary with time during an event. This variability raises two technical problems: how best to characterize the discharge associated with a single storm event; and how best to characterize the variability between discharges of different events that may be caused by seasonal changes and changes in material management practices, for example.

Prior to today's rulemaking, 40 CFR 122.21(g)(7) required that applicants for NPDES permits submit quantitative data based on one grab sample taken every hour of the discharge for the first four hours of discharge. EPA has modified this requirement such that, instead of collecting and analyzing four grab samples individually, applicants for permits addressing storm water discharges associated with industrial activity will provide data as indicators of two sets of conditions: data collected during the first 30 minutes of discharge and flow-weighted average storm event concentrations. Large and medium municipalities will provide data on flow-weighted average storm event concentrations only.

Data describing pollutants in a grab sample taken during the first few minutes of the discharge can often be used as a screen for non-storm water discharges to separate storm sewers because such pollutants may be flushed out of the system during the initial portion of the discharge. In addition, data from the first few minutes of a discharge are useful because much of the traditional structural technology used to control storm water discharges, including detention and retention devices, may only provide controls for the first portion of the discharge, with relatively little or no control for the remainder of the discharge. Data from the first portion of the discharge will give an indication of the potential usefulness of these techniques to reduce pollutants in storm water discharges. Also, such discharges may be primarily responsible for pollutant shocks to the ecosystem in receiving waters.

Studies such as NURP have shown that flow-weighted average concentrations of storm water discharges are useful for estimating pollutant loads and for evaluating certain concentration-based water quality impacts. The use of flow-weighted composite samples are also consistent with comments raised by various industry representatives during previous Agency rulemakings that continuous monitoring of discharges from storm events is necessary to adequately characterize such discharges.

EPA requested comment on the feasibility of the proposed modification of sampling procedures at § 122.21(g)(7) and the ability to characterize pollutants in storm water discharges with an average concentration from the first portion of the discharge compared to collecting and separately analyzing four grab samples. It was proposed that an event composite sample be collected, as well as a grab sample collected during the first 20 minutes of runoff. Comments were solicited as to whether or not this sampling method would provide better definition of the storm load for runoff characterization than would the requirement to collect and separately analyze four grab samples.

Many commenters questioned the ability to obtain a 20 minute sample in the absence of automatic samplers. Some believed that pollutants measured by such a sample can be accounted for in the event composite sample. Others argued that this is an unwarranted sampling effort if municipal storm water management plans are to be geared to achieving annual pollutant load

  

reductions. Many commenters advised that problems accessing sampling stations and mobilizing sampling crews, particularly after working hours, made sampling during the first 20 minutes impractical. These comments were made particularly with respect to municipalities, where the geographical areas could encompass several hundred square miles. Several alternatives were suggested including: the collection of a sample in the first hour, and representative grab sampling in the next three hours, one per hour; or perform time proportioned sampling for up to four hours.

Because of the logistical problems associated with collecting samples during the first few minutes of discharge from municipal systems, EPA will only require such sampling from industrial facilities. Municipal systems will be spread out over many square miles with sampling locations potentially several miles from public works departments or other responsible government agencies. Reaching such locations in order to obtain samples during the first few minutes of a storm event may prove impossible. For essentially the same reasons, the requirement has been modified to encompass the first 30 minutes of the discharge, instead of 20 minutes, for industrial discharges. The rule also clarifies that the sample should be taken during the first 30 minutes or as soon thereafter as practicable. Where appropriate, characterization of this portion of the discharge from selected outfalls or sampling points may be a condition to permits issued to municipalities. With regard to protocols for the collection of sample aliquots for flow-weighted composite samples, § 122.21(g)(7) provides that municipal applicants may collect flow-weighted composite samples using different protocols with respect to the time duration between the collection of sample aliquots, subject to the approval of the Director or Regional Administrator. In other words, the period may be extended from 15 minutes to 20 or 25 minutes between sample aliquots, or decreased from 15 to 10 or 5 minutes.

Other comments raised issues that apply both to the impact of runoff characterization and the first discharge representation. These primarily pertained to regions that have well defined wet and dry seasons. Comments questioned whether or not it is fair to assume that the initial storm or two of a wet season, which will have very high pollutant concentrations, are actually representative of the runoff concentrations for the area.

In response, EPA believes that it is important to represent the first part of the discharge either separately or as a part of the event composite samples. This loading is made up primarily of the mass of unattached fine particulates and readily soluble surface load that accumulates between storms. This load washes off of the basin's directly connected paved surfaces when the runoff velocities reach the level required for entrainment of the particulate load into the surface flow. It should be noted that for very fine particulates and solubles, this can occur very soon after the storm begins and much sooner than the peak flow. The first few minutes of discharge represents a shock load to the receiving water, in terms of concentration of pollutants, because for many constituents the highest concentrations of the event will occur during this initial period. Due to the need to properly quantify this load, it is not necessary to represent the first discharge from the upper reaches of the outfall's tributary area. In runoff characterization basins, the assumption is that the land use in the basin is homogeneous, or nearly so, and that the first discharge from the lower reaches for all intents and purposes is representative of the entire basin. If a sample is taken during the first 30 minutes of the runoff, it will be composed primarily of first discharge. If the sample is taken at the outfall an hour into the event, it may contain ***48005** discharge from the remote portions of the basin. It will not be representative of the discharge because it will also contain later washoff from the lower reaches of the basin, resulting in a low estimation of the first discharge load of most constituents. Conversely, larger suspended particulates that normally are not present in first discharge due to inadequate velocities will appear in this later sampling scenario because of the influence of higher runoff rates in the lower basin. Many commonly used management practices are designed based on their ability to treat a volume of water defined by the first discharge phenomenon. It is important to characterize the first discharge load because most management practices effectively treat only, or primarily, this load.

It should be noted that first discharge runoff is sometimes contaminated by non-storm water related pollutants. In many urban catchments, contaminants that result from illicit connections and illegal dumping may be stored in the system until “flushed” during the initial storm period. This does not negate the need for information on the characteristic first discharge load, but does indicate that the first phase field screen results for illicit connections should be used to help define those outfalls where this problem might exist.

  

Several methods can be used to develop an event average concentration. Either automatic or manual sampling techniques can be used that sample the entire hydrograph, or at least the first four hours of it, that will result in several discrete samples and associated flow rates that represent the various flow regimes of an event. These procedures have the potential for providing either an event average concentration, an event mean concentration, or discrete definition of the washoff process. Automatic sampling procedures are also available that collect a single composite sample, either on a time-proportioned or flow proportioned basis.

When discrete samples are collected, an event average composite sample can be produced by the manual composite of the discrete samples in equal volumes. Laboratory analysis of time proportioned composite samples will directly yield the event average concentration. Mathematical averaging of discrete sample analysis results will yield an event average concentration.

When discrete samples are collected, a flow-weighted composite sample can be produced based on the discharge record. This is done by manually flow proportioning the volumes of the individual samples. Laboratory analysis of flow weighted composite samples will directly yield an event mean concentration. Mathematical integration of the change in concentrations and mass flux of the discharge for discrete sample data can produce an event mean concentration. This procedure was used during the NURP program.

EPA wishes to emphasize that the reason for sampling the type of storm event identified in § 122.21(g)(7) is to provide information that represents local conditions that will be used to create sound storm water management plans. Based on the method to be used to generate system-wide estimates of pollutant loads, either method, discrete or event average concentrations, may be preferable to the other. If simulation models will be used to generate loading estimates, analysis of discrete samples will be more valuable so that calibration of water quality and hydrology may be performed. On the other hand, simple estimation methods based on event average or event mean concentrations may not justify the additional cost of discrete sample analysis.

EPA believes that the first discharge loading should be represented in the permit application from industrial facilities and, if appropriate, permitting authorities may require the same in the discharge characterization component of permits issued to municipalities. The first discharge load should also be represented as part of an event composite sample. This requirement will assist industries in the development of effective storm water management plans.

EPA requested comments on the appropriateness of the proposed rules and of proposed amendments to the rules regarding discharge sampling. Comments were received which addressed the appropriateness of imposing uniform national guidelines. Several commenters are concerned that uniform national guidelines may not be appropriate due to the geographic variations in meteorology, topography, and pollutant sources. While some assert that a uniform guideline will provide consistency of the sample results, others prefer a program based on regional or State guidelines that more specifically address their situation.

Several commenters, addressing industrial permit application requirements, preferred that the owner/operator be allowed to set an individual sampling protocol with approval of the permit writer. Some commenters were concerned that one event may not be sufficient to characterize runoff from a basin as this may result in gross over-estimation or underestimation of the pollutant loads. Others indicated confusion with regard to sampling procedures, lab analysis procedures, and the purpose of the program.

In response, today's regulations establish certain minimum requirements. Municipalities and industries may vary from these requirements to the extent that their implementation is at least as stringent as outlined in today's rule. EPA views today's rule as a means to provide assurance as to the quality of the data collected; and to this end, it is important that the minimum level of sampling required be well defined.

In response to EPA's proposal that the first discharge be included in “representative” storm sampling, several commenters made their concerns known about the possible equipment necessary to meet this requirement. Several commenters are concerned that in order to get a first discharge sample, automatic sampling equipment will be required. Concerns related to the need for this equipment surfaced in the comments frequently; most advised that the equipment is expensive and that the demand on sampling

  

equipment will be too large for suppliers and manufacturers to meet. Although equipment can be leased, some commenters maintained that not enough rental equipment is available to make this a viable option in many instances.

EPA is not promoting or requiring the use of automated equipment to satisfy the sampling requirements. A community may find that in the long run it would be more convenient to have such equipment since sampling is required not only during preparation of the application, but also may be required during the term of the permit to assure that the program goals are being met. Discharge measurement is necessary in order for the sample data to have any meaning. If unattended automatic sampling is to be performed, then unattended flow measurement will be required too.

EPA realizes that equipment availability is a legitimate concern. However, there is no practical recommendation that can be made relative to the availability of equipment. If automatic sampling equipment is not available, manual sampling is an appropriate alternative.

### *F. Storm Water Discharges Associated With Industrial Activity*

**1. Permit Applicability**

a. Storm water discharges associated with industrial activity to waters of the United States. Under today's rule dischargers of storm water associated ***48006** with industrial activity are required to apply for an NPDES permit. Permits are to be applied for in one of three ways depending on the type of facility: Through the individual permit application process; through the group application process; or through a notice of intent to be covered by general permit.

Storm water discharges associated with the industrial activities identified under § 122.26(b)(14) of today's rule may avail themselves of general permits that EPA intends to propose and promulgate in the near future. The general permit will be available to be promulgated in each non-NPDES State, following State certification, and as a model for use by NPDES States with general permit authority. It is envisioned that these general permits will provide baseline storm water management practices. For certain categories of industries, specific management practices will be prescribed in addition to the baseline management practices. As information on specific types of industrial activities is developed, other, more industry-specific general permits will be developed.

Today's rule requires facilities with existing NPDES permits for storm water discharges to apply for individual permits under the individual permit application requirements found at 122.26(c) 180 days before their current permit expires. Facilities not eligible for coverage under a general permit are required to file an individual or group permit application in accordance with today's rule. The general permits to be proposed and promulgated will indicate what facilities are eligible for coverage by the general permit.

b. Storm water discharges through municipal storm sewers. As discussed above, many operators of storm water discharges associated with industrial activity are not required to apply for an individual permit or participate in a group application under § 122.26(c) of today's rule if covered by a general permit. Under the December 7, 1988, proposal, dischargers through large and medium municipal separate storm sewer systems were not required, as a general rule, to apply for an individual permit or as a group applicant. Today's rule is a departure from that proposal. Today's rule requires all dischargers through municipal separate storm sewer systems to apply for an individual permit, apply as part of a group application, or seek coverage under a promulgated general permit for storm water discharges associated with industrial activity.

Municipal operators of large and medium municipal separate storm sewer systems are responsible for obtaining system-wide or area permits for their system's discharges. These permits are expected to require that controls be placed on storm water discharges associated with industrial activity which discharge through the municipal system. It is anticipated that general or individual permits covering industrial storm water dischargers to these municipal separate storm sewer systems will require industries to comply with the terms of the permit issued to the municipality, as well other terms specific to the permittee.

  

c. Storm water discharges through non-municipal storm sewers. Under today's rulemaking all operators of storm water discharges associated with industrial activity that discharge into a privately or Federally owned storm water conveyance (a storm water conveyance that is not a municipal separate storm sewer) will be required to be covered by an NPDES permit (e.g. an individual permit, general permit, or as a co-permittee to a permit issued to the operator of the portion of the system that directly discharges to waters of the United States). This is a departure from the "either/or" approach that EPA requested comments on in the December 7, 1988, notice. The "either/or" approach would have allowed either the system discharges to be covered by a permit issued to the owner/operator of the system segment that discharged to waters of the United States, or by an individual permit issued to each contributor to the non-municipal conveyance.

EPA requested comments on the advantages and disadvantages of retaining the "either/or" approach for non-municipal storm sewers. An abundance of comment was received by EPA on this particular part of the program. A number of industrial commenters and a smaller number of municipalities favored retaining the "either/or" approach as proposed, while most municipal entities, one industry, and one trade association favored requiring permits for each discharger.

Two commenters stated that private owners of conveyances may not have the legal authority to implement controls on discharges through their system and would not want to be held responsible for such controls. EPA agrees that this is a potential problem. Therefore, today's rule will require permit coverage for each storm water discharge associated with industrial activity.

One commenter supported the concept of requiring all the facilities that discharge to a non-municipal conveyance to be co-permittees. EPA agrees that this type of permitting scheme, along with other permit schemes such as area or general permits, is appropriate for discharges from non-municipal sewers, as long as each storm water discharge through the system is associated with industrial activity and thus currently subject to NPDES permit coverage.

One State agency commented that in the interest of uniformity, all industries that discharge to non-municipal conveyances should be required to conform to the application requirements. One industry stated that the rules must provide a way for the last discharger before the waters of the U.S. to require permits for facilities discharging into the upper portions of the system. EPA agrees with these comments. Today's rule provides that each discharger may be covered under individual permits, as co-permittees to a single permit, or by general permit rather than holding the last discharger to the waters of the United States solely responsible.

In response to one commenter, the term "non-municipal" has been clarified to explain that the term refers to non-publicly owned or Federally-owned storm sewer systems.

Some commenters supporting the approach as proposed, noted that industrial storm water dischargers into such systems can take advantage of the group application process. EPA agrees that in appropriate circumstances, such as when industrial facilities discharging storm water to the same system are sufficiently similar, group applications can be used for discharges to non-municipal conveyances. However, EPA believes that it would be inappropriate to approve group applications for those facilities whose only similarity is that they discharge storm water into the same private conveyance system. The efficacy of the group application procedures is predicated on the similarity of operations and other factors. The fact that several industries discharge storm water to the same non-municipal sewer system alone may not make these discharges sufficiently similar for group application approval.

One commenter suggested that EPA has not established any deadlines for submission of permit applications for storm water discharges associated with industrial activity through non-municipal separate storm sewer systems. EPA wants to clarify that industrial storm water dischargers into privately owned or Federally owned storm water conveyances are required to apply for permits in the same time frame as individual or group applicants (or as otherwise provided for in a general permit).

***48007** One commenter stated that the operator of the conveyance that accepts discharges into its system has control and police power over those that discharge into the system by virtue of the ability to restrict discharges into the system. This commenter

  

stated that these facilities should be the entity required to obtain the permit in all cases. Assuming that this statement is true in all respects, the larger problem is that one's theoretical ability to restrict discharges is not necessarily tied to the reality of enforcing those restrictions or even detecting problem discharges when they exist. In a similar vein one commenter urged that a private operator will not be in any worse a position than a municipal entity to determine who is the source of pollution up-stream. EPA agrees that from a hydrological standpoint this may be true. However, from the standpoint of detection resources, police powers, enforcement remedies, and other facets of municipal power that may be brought to bear upon problem dischargers, private systems are in a far more precarious position with respect to controlling discharges from other private sources.

In light of the comments received, EPA has decided that the either/or approach as proposed is inappropriate. Operators of non-municipal systems will generally be in a poorer position to gain knowledge of pollutants in storm water discharges and to impose controls on storm water discharges from other facilities than will municipal system operators. In addition, best management practices and other site-specific controls are often most appropriate for reducing pollutants in storm water discharges associated with industrial activity and can often only be effectively addressed in a regulatory scheme that holds each industrial facility operator directly responsible. The either/or approach as proposed is not conducive to establishing these types of practices unless each discharger is discharging under a permit. Also, some non-municipal operators of storm water conveyances, which receive storm water runoff from industrial facilities, may not be generating storm water discharges associated with industrial activity themselves and, therefore, they would otherwise not need to obtain a permit prior to October 1, 1992, unless specifically designated under section 402(p)(2)(E). Accordingly, EPA disagrees with comments that dischargers to non-municipal conveyances should have the flexibility to be covered by their permit or covered by the permit issued to the operator of the outfall to waters to the United States.

**2. Scope of "Associated with Industrial Activity"**

The September 26, 1984, final regulation divided those discharges that met the regulatory definition of storm water point source into two groups. The term Group I storm water discharges was defined in an attempt to identify those storm water discharges which had a higher potential to contribute significantly to environmental impacts. Group I included those discharges that contained storm water drained from an industrial plant or plant associated areas. Other storm water discharges (such as those from parking lots and administrative buildings) located on lands used for industrial activity were classified as Group II discharges. The regulations defined the term "plant associated areas" by listing several examples of areas that would be associated with industrial activities. However, the resulting definition led to confusion among the regulated community regarding the distinctions between the Group I and Group II classifications.

In amending the CWA in 1987, Congress did not explicitly adopt EPA's regulatory classification of Group I and Group II discharges. Rather, Congress required EPA to address "storm water discharges associated with industrial activity" in the first round of storm water permitting. In light of the adoption of the term "associated with industrial activity" in the CWA, and the ongoing confusion surrounding the previous regulatory definition, EPA has eliminated the regulatory terms "Group I storm water discharge" and "Group II storm water discharge" pursuant to the December 7, 1987, Court remand and has not revived it. In addition, today's notice promulgates a definition of the term "storm water discharge associated with industrial activity"at § 122.26(b)(14) and clarified the scope of the term.

In describing the scope of the term "associated with industrial activity", several members of Congress explained in the legislative history that the term applied if a discharge was "directly related to manufacturing, processing or raw materials storage areas at an industrial plant." (Vol. 132 Cong. Rec. H10932, HI0936 (daily ed. October 15, 1986); Vol. 133 Cong. Rec. H176 (daily ed. January 8, 1987)). Several commenters cited this language in arguing for a more expansive or less expansive definition of "associated with industrial activity." EPA believes that the legislative history supports the decision to exclude from the definition of industrial activity, at § 122.26(b)(14) of today's rule, those facilities that are generally classified under the Office of Management and Budget Standard Industrial Classifications (SIC) as wholesale, retail, service, or commercial activities.

Two commenters recommended that all commercial enterprises should be required to obtain a permit under this regulation. Another commenter recommended that all the facilities listed in the December 7, 1988, proposal, including those listed in

  

paragraphs (xi) through (xvi) on page 49432 of the December 7, 1988, proposal, should be included. EPA disagrees since the intent of Congress was to establish a phased and tiered approach to storm water permits, and that only those facilities having discharges associated with industrial activity should be included initially. The studies to be conducted pursuant to section 402(p)(5) will examine sources of pollutants associated with commercial, retail, and other light business activity. If appropriate, additional regulations addressing these sources can be developed under section 402(p)(6) of the CWA. As further discussed below, EPA believes that the facilities identified in paragraphs (xi) through (xvi) are more properly characterized as commercial or retail facilities, rather than indutrial facilities.

Today's rule clarifies the regulatory definition of "associated with industrial activity" by adopting the language used in the legislative history and supplementing it with a description of various types of areas that are directly related to an industrial process (e.g., industrial plant yards, immediate access roads and rail lines, drainage ponds, material handling sites, sites used for the application or disposal of process waters, sites used for the storage and maintenance of material handling equipment, and known sites that are presently or have been used in the past for residual treatment, storage or disposal). The agency has also incorporated some of the suggestions offered by the public in comments.

Three commenters suggested that the permit application should focus only on storm water with the potential to come into contact with industrial-related pollutant sources, rather than focusing on how plant areas are utilized. These commenters suggested that facilities that are wholly enclosed or have their operations entirely protected from the elements should not be subject to permit requirements under today's rule. EPA agrees that these comments have merit with regard to certain types of facilities. Today's rule defines the term "storm water discharge associated with ***48008** industrial activity" to include storm water discharges from facilities identified in today's rule at 40 CFR 122.21(b)(I4)(xi) (facilities classified as Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-25) only if:

areas where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery at these facilities are exposed to storm water. Such areas include: material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at 40 CFR 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment; storage or disposal; shipping and receiving areas; manufacturing buildings; material storage areas for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water.
The critical distinction between the facilities identified at 40 CFR 122.26(b)(14)(xi) and the facilities identified at 40 CFR 122.26(b)(14)(i)-(x) is that the former are not classified as having "storm water discharges associated with industrial activity" unless certain materials or activities are exposed to storm water. Storm water discharges from the latter set of facilities are considered to be "associated with industrial activity" regardless of the actual exposure of these same materials or activities to storm water.

EPA believes this distinction is appropriate because, when considered as a class, most of the activity at the facilities in § 122.26(b)(14)(xi) is undertaken in buildings; emissions from stacks will be minimal or non-existent; the use of unhoused manufacturing and heavy industrial equipment will be minimal; outside material storage, disposal or handling generally will not be a part of the manufacturing process; and generating significant dust or particulates would be atypical. As such, these industries are more akin or comparable to businesses, such as retail, commercial, or service industries, which Congress did not contemplate regulating before October 1, 1992, and storm water discharges from these facilities are not "associated with industrial activity." Thus, these industries will be required to obtain a permit under today's rule only when the manufacturing processes undertaken at such facilities would result in storm water contact with industrial materials associated with the facility.

Industrial categories in § 122.26(b)(14)(xi) all tend to engage in production activities in the manner described in the paragraph above. Facilities under SIC 20 process foods including meats, dairy food, fruit, and flour. Facilities classified under SIC 21 make cigarettes, cigars, chewing tobacco and related products. Under SIC 22, facilities produce yarn, etc., and/or dye and finish fabrics. Facilities under SIC 23 are in the business of producing clothing by cutting and sewing purchased woven or knitted

  

textile products. Facilities under SIC 2434 and 25 are establishments engaged in furniture making. SIC 265 and 267 address facilities that manufacture paper board products. Facilities under SIC 27 perform services such as bookbinding, plate making, and printing. Facilities under SIC 283 manufacture pharmaceuticals and facilities under 285 manufacture paints, varnishes, lacquers, enamels, and allied products. Under SIC 30 establishments manufacture products from plastics and rubber. Those facilities under SIC 31 (except 311), 323, 34 (except 3441), 35, 36, and 37 (except 373) manufacture industrial and commercial metal products, machinery, equipment, computers, electrical equipment, and transportation equipment, and glass products made of purchased glass. Facilities under SIC 38 manufacture scientific and electrical instruments and optical equipment. Those under SIC 39 manufacture a variety of items such as jewelry, silverware, musical instruments, dolls, toys, and athletic goods. SIC 4221-25 are warehousing and storage activities.

In contrast, the facilities identified by SIC 24 (except and 2434), 26 (except 265 and 267), 28 (except 283 and 285), 29, 311, 32 (except 323), 33, 3441, 373 when taken as a group, are expected to have one or many of the following activities, processes occurring on-site: storing raw materials, intermediate products, final products, by-products, waste products, or chemicals outside; smelting; refining; producing significant emissions from stacks or air exhaust systems; loading or unloading chemical or hazardous substances; the use of unhoused manufacturing and heavy industrial equipment; and generating significant dust or particulates. Accordingly, these are classes of facilities which can be viewed as generating storm water discharges associated with industrial activity requiring a permit. Establishments identified under SIC 24 (except 2434) are engaged in operating sawmills, planing mills and other mills engaged in producing lumber and wood basic materials. SIC 26 facilities are paper mills. Under SIC 28, facilities produce basic chemical products by predominantly chemical processes. SIC 29 describes facilities that are engaged in the petroleum industry. Under SIC 311, facilities are engaged in tanning, currying, and finishing hides and skins. Such processes use chemicals such as sulfuric acid and sodium dichromate, and detergents, and a variety of raw and intermediate materials. SIC 32 manufacture glass, clay, stone and concrete products form raw materials in the form quarried and mined stone, clay, and sand. SIC 33 identifies facilities that smelt, refine ferrous and nonferrous metals from ore, pig or scrap, and manufacturing related products. SIC 3441 identifies facilities manufacturing fabricated structural metal. Facilities under SIC 373 engage in ship building and repairing. The permit application requirements for storm water discharges from facilities in these categories are unchanged from the proposal.

Today's rule clarifies that the requirement to apply for a permit applies to storm water discharges from plant areas that are no longer used for industrial activities (if significant materials remain and are exposed to storm water) as well as areas that are currently being used for industrial activities. EPA would also clarify that all discharges from these areas including those that discharge through municipal separate storm sewers are addressed by this rulemaking.

One commenter questioned the use of the word “or” instead of the word “and” to describe storm water “which is located at an industrial plant ‘or’ directly related to manufacturing, processing, or raw material storage areas at an industrial plant.” The comment expressed the concern that discharges from areas not located at an industrial plant would be subject to permitting by this language and questioned whether this was EPA's intent. EPA agrees that this is a potential source of confusion and has modified this language to reflect the conjunctive instead of the alternative. This change has been made to provide consistency in the rule whereby some areas at industrial plants, such as administrative parking lots which do not have storm water discharges commingled with discharges from manufacturing areas, are not included under this rulemaking.

Two commenters wanted clarification of the term “or process water,” in the definition of discharge associated with industrial activity at § 122.26(b)(14). This rulemaking replaces this term with the term “process waste water” which is defined at 40 CFR part 401.

***48009** One commenter took issue with the decision to include drainage ponds, refuse sites, sites for residual treatment, storage, or disposal, as areas associated with industrial activity, because it was the commenter's view that such areas are unconnected with industrial activity. EPA disagrees with this comment. If refuse and other sites are used in conjunction with manufacturing or the by-products of manufacturing they are clearly associated with industrial activity. As noted above, Congress intended to include discharges directly related to manufacturing and processing at industrial plants. EPA is convinced that wastes, refuse,

and residuals are the direct result or consequence of manufacturing and processing and, when located or stored at the plant that produces them, are directly related to manufacturing and processing at that plant. Storm water drainage from such areas, especially those areas exposed to the elements (e.g. rainfall) has a high potential for containing pollutants from materials that were used in the manufacturing process at that facility. One commenter supported the inclusion of these areas since many toxins degrade very slowly and the mere passage of time will not eliminate their effects. EPA agrees and finalizes this part of the definition as proposed. One commenter requested clarification of the term "residual" as used in this context. Residual can generally be defined to include material that is remaining subsequent to completion of an industrial process. One commenter noted that the current owner of a facility may not know what areas or sites at a facility were used in this manner in the past. EPA has clarified the definition of discharge associated with industrial activity to include areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. The Agency believes that the current owner will be in a position to establish these facts.

One commenter suggested including material shipping and receiving areas, waste storage and processing areas, manufacturing buildings, storage areas for raw materials, supplies, intermediates, and finished products, and material handling facilities as additional areas "associated with industrial activity." EPA agrees that this would add clarification to the definition, and has incorporated these areas into the definition at § 122.26(b)(14).

One commenter stated that the language "point source located at an industrial plant" would include outfalls located at the facility that are not owned or operated by the facility, but which are municipal storm sewers on easements granted to a municipality for the conveyance of storm water. EPA agrees that if the industry does not operate the point source then that facility is not required to obtain a permit for that discharge. A point source is a conveyance that discharges pollutants into the waters of the United States. If a facility does not operate that point source, then it would be the responsibility of the municipality to cover it under a permit issued to them. However, if contaminated storm water associated with industrial activity were introduced into that conveyance by that facility, the facility would be subject to permit application requirements as is all industrial storm water discharged through municipal sewers.

EPA disagrees with several comments that road drainage or railroad drainage within a facility should not be covered by the definition. Access roads and rail lines (even those not used for loading and unloading) are areas that are likely to accumulate extraneous material from raw materials, intermediate products and finished products that are used or transported within, or to and from, the facility. These areas will also be repositories for pollutants such as oil and grease from machinery or vehicles using these areas. As such they are related to the industrial activity at facilities. However, the language describing these areas of industrial activity has been clarified to include those access roads and rail lines that are "used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility." For the same reasons haul roads (roads dedicated to transportation of industrial products at facilities) and similar extensions are required to be addressed in permit applications. Two industries stated that haul roads and similar extensions should be covered by permits by rule. EPA is not considering the use of a permit by rule mechanism under this regulation, however this issue will be addressed in the section 402(p)(5) reports to Congress and in general permits to be proposed and promulgated in the near future. EPA would note however that facilities with similar operations and storm water concerns that desire to limit administrative burdens associated with permit applications and obtaining permits may want to avail themselves of the group application and/or general permits.

In response to comments, EPA would also like to clarify that it intends the language "immediate access roads" (including haul roads) to refer to roads which are exclusively or primarily dedicated for use by the industrial facility. EPA does not expect facilities to submit permit applications for discharges from public access roads such as state, county, or federal roads such as highways or BLM roads which happen to be used by the facility. Also, some access roads are used to transport bulk samples of raw materials or products (such as prospecting samples from potential mines) in small-scale prior to industrial production. EPA does not intend to require permit applications for access roads to operations which are not yet industrial activities.

  

EPA does agree with comments made by several industries that undeveloped areas, or areas that do not encompass those described above, should generally not be addressed in the permit application, or a storm water permit, as long as the storm water discharge from these areas is segregated from the storm water discharge associated with the industrial activity at the facility.

Numerous commenters stated that maintenance facilities, if covered, should not be included in the definition. EPA disagrees with this comment. Maintenance facilities will invariably have points of access and egress, and frequently will have outside areas where parts are stored or disposed of. Such areas are locations where oil, grease, solvents and other materials associated with maintenance activities will accumulate. In response to one commenter, such areas are only regulated in the context of those facilities enumerated in the definition at § 122.26(b)(14), and not similar areas of retail or commercial facilities.

Another commenter requested that "storage areas" be more clearly defined. EPA disagrees that this term needs further clarification in the context of this section of the rule. However, in response to one comment, tank farms at industrial facilities are included. Tank farms are in existence to store products and materials created or used by the facility. Accordingly they are directly related to manufacturing processes.

Regarding storage areas, one commenter stated that the regulations should emphasize that only facilities that are not totally enclosed are required to submit permit applications. EPA does not agree with this interpretation since use of the generic term storage area indicates no exceptions for certain physical characteristics. Thus discharges from enclosed storage areas are also covered by today's rule (except as discussed above). EPA also disagrees with one ***48010** comment asserting that small outside storage areas of finished products at industrial facilities should be excluded under the definition of associated with industrial activity. EPA believes that such areas are areas associated with industrial activity which Congress intended to be regulated under the CWA. As noted above, the legislative history refers to storage areas, without reference to whether they are covered or uncovered, or of a certain size.

The same language, in the legislative history cited above, was careful to state that the term "associated with industrial activity" does not include storm water "discharges associated with parking lots and administrative and employee buildings." To accommodate legislative intent, segregated storm water discharges from these areas will not be required to obtain a permit prior to October 1, 1992. Many commenters stated that this was an appropriate method in which to limit the scope of "associated with industrial activity." However, if a storm water discharge from a parking lot at an industrial facility is mixed with a storm water discharge "associated with industrial activity," the combined discharge is subject to permit application requirements for storm water discharges associated with industrial activity. EPA disagrees with some commenters who urged that office buildings and administrative parking lots should be covered if they are located at the plant site. EPA agrees with one commenter that inclusion of storm water discharge from these areas would be overstepping Congressional intent unless such are commingled with storm water discharges from the plant site. Several commenters requested that language be incorporated into the rule which establishes that storm water discharges from parking lots and administrative areas not be included in the definition of associated with industrial activity. EPA agrees and has retained language used in the proposal which addresses this distinction.

Storm water discharges from parking lots and administrative buildings along with other discharges from industrial lands that do not meet the regulatory definition of "associated with industrial activity" and that are segregated from such discharges may be required to obtain an NPDES permit prior to October 1, 1992, under certain conditions. For example, large parking facilities, due to their impervious nature may generate large amounts of runoff which may contain significant amounts of oil and grease and heavy metals which may have adverse impacts on receiving waters. The Administrator or NPDES State has the authority under section 402(p)(2)(E) of the amended CWA to require a permit prior to October 1, 1992, by designating storm water discharges such as those from parking lots that are significant contributors of pollutants or contribute to a water quality standard violation. EPA will address storm water discharges from lands used for industrial activity which do not meet the regulatory definition of "associated with industrial activity" in the section 402(p)(5) study to determine the appropriate manner to regulate such discharges.

  

Several commenters requested clarification that the definition does not include sheet flow or discharged storm water from upstream adjacent facilities that enters the land or comingles with discharge from a facility submitting a permit application. EPA wishes to clarify that operators of facilities are generally responsible for its discharge in its entirety regardless of the initial source of discharge. However, where an upstream source can be identified and permitted, the liability of a downstream facility for other storm water entering that facility may be minimized. Facilities in such circumstances may be required to develop management practices or other run-on/run-off controls, which segregates or otherwise prevents outside runoff from comingling with its storm water discharge. Some commenters expressed concern about other pollutants which may arrive on a facility's premises from rainfall. This comment was made in reference to runoff with a high or low pH. If an applicant has reason to believe that pollutants in its storm water discharge are from such sources, then that needs to be addressed in the permit application and brought to the attention of the permitting authority, which can draft appropriate permit conditions to reflect these circumstances.

EPA requested comments on clarifying the types of facilities that involve industrial activities and generate storm water. EPA preferred basing the clarification, in part, on the use of Standard Industrial Classification (SIC) codes, which have been suggested in comments to prior storm water rulemakings because they are commonly used and accepted and would provide definitions of facilities involved in industrial activity. Several commenters supported the use by EPA of Standard Industrial Classifications for the same reasons identified by EPA as a generally used and understood form of classification. It was also noted that using such a classification would allow targeting for special notification and educational mailings. Three municipalities and three State authorities commented that SICs were appropriate and endorsed their use as a sound basis for determining which industries are covered.

One municipality questioned how SIC classifications will be assigned to particular industries. SICs have descriptions of the type of industrial activity that is engaged in by facilities. Industries will need to assess for themselves whether they are covered by a listed SIC and submit an application accordingly. Another commenter questioned if Federal facilities that do not have an SIC code identification are required to file a permit application. Federal facilities will be required to submit a permit application if they are engaged in an industrial activity that is described under § 122.26(b)(14). The definition of industrial activity incorporates language that requires Federal facilities to submit permit applications in such circumstances. The language has been further clarified to include State and municipal facilities.

EPA requested comments on the scope of the definition (types of facilities addressed) as well as the clarity of regulation. EPA identified the following types of facilities in the proposed regulation as those facilities that would be required to obtain permits for storm water discharges associated with industrial activity:

(i) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR subchapter N (except facilities with toxic pollutant effluent standards which are also identified under category (xi) of this paragraph). One commenter (a municipality) agreed with EPA that these industries should be addressed in this rulemaking. No other comments were received on this category. EPA agrees with this comment since these facilities are those that Congress has required EPA to examine and regulate under the CWA with respect to process water discharges. The industries in these categories have generally been identified by EPA as the most significant dischargers of process wastewaters in the country. As such, these facilities are likely to have storm water discharges associated with industrial activity for which permit applications should be required.

One commenter stated that because oil and gas producers are subject to effluent guidelines, EPA is disregarding the intent of Congress to exclude ***48011** facilities pursuant to section 402(1). EPA disagrees with this comment. EPA is not prohibited from requiring permit applications from industries with storm water discharge associated with industrial activity. EPA is prohibited only from requiring a permit for oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water that is not contaminated by contact with or has not come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations such discharges. In keeping with this requirement, EPA is requiring permit applications from oil and gas exploration, production, processing, or treatment operations, or transmission facilities that fall into a class of dischargers as described in § 122.26(c)(iii).

  

(ii) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283 and 285), 29, 311, 32 (except 323), 33, 3411, 373 and (xi). Facilities classified as Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-25. One large municipality and one industry agreed with EPA that facilities covered by these SICs should be covered by this rulemaking. Many commenters, however, took exception to including all or some of these industries. However as noted elsewhere these facilities are appropriate for permit applications.

One commenter stated that within certain SICs industries, such as textile manufacturers use few chemicals and that there is little chance of pollutants in their storm water discharge. EPA agrees that some industries in this category are less likely than others to have storm water discharges that pose significant risks to receiving water quality. However, there are many other activities that are undertaken at these facilities that may result in polluted storm water. Further, the CWA is clear in its mandate to require permit applications for discharges associated with industrial activity. Excluding any of the facilities under these categories, except where the facility manufacturing plant more closely resembles a commercial or retail outlet would be contrary to Congressional intent.

One State questioned the inclusion of facilities identified in SIC codes 20-39 because of their temporary and transient nature or ownership. Agency disagrees that simply because a facility may transfer ownership that storm water quality concerns should be ignored. If constant ownership was a condition precedent to applying for and obtaining a permit, few if any facilities would be subject to this rulemaking.

One State estimated that the proposed definition would lead to permits for 18,000 facilities in its State. Consequently this commenter recommended that the facilities under SIC 20-39 should be limited to those facilities that have to report under section 313 of title III, Superfund Amendments and Reauthorization Act. However, as noted by another commenter, limiting permit requirements to these facilities would be contrary to Congressional intent. While use of chemicals at a facility may be a source of pollution in storm water discharges, other every day activities at an industrial site and associated pollutants such as oil and grease, also contribute to the discharge of pollutants that are to be addressed by the CWA and these regulations. While the number of permit applications may number in the thousands, EPA intends for group applications and general permits to be employed to reduce the administrative burdens as greatly as possible.

Two commenters felt the permit applications should be limited to all entities under SIC 20-39. EPA disagrees that all the industrial activities that need to be addressed fall within these SICs. Discharges from facilities under paragraphs (i) through (xi) such as POTWs, transportation facilities, and hazardous waste facilities, are of an industrial nature and clearly were intended to be addressed before October 1, 1992.

Two commenters stated that SIC 241 should be excluded in that logging is a transitory operation which may occur on a site for only 2-3 weeks once in a 20-30 year period. It was perceived that delays in obtaining permits for such operations could create problems in harvest schedule and mill demand. This commenter stated that runoff from such operations should be controlled by BMPs in effect for such industries and that such a permit would not be practical and would be cost prohibitive.

EPA agrees with the commenter that this provision needs clarification. The existing regulations at 40 CFR 122.27 currently define the scope of the NPDES program with regard to silvicultural activities. 40 CFR 122.27(b)(1) defines the term "silvicultural point source" to mean any discrete conveyance related to rock crushing, gravel washing, log sorting, or log storage facilities which are operated in connection with silvicultural activities and from which pollutants are discharged into waters of the United States. Section 122.27(b)(1) also excludes certain sources. The definition of discharge associated with industrial activity does not include activities or facilities that are currently exempt from permitting under NPDES. EPA does not intend to change the scope of 40 CFR 122.27 in this rulemaking. Accordingly, the definition of "storm water discharge associated with industrial activity" does not include sources that may be included under SIC 24, but which are excluded under 40 CFR 122.27.

  

Further, EPA intends to examine the scope of the NPDES silvicultural regulations at 40 CFR 122.27 as it relates to storm water discharges in the course of two studies of storm water discharges required under section 402(p)(5) of the CWA.

In response to one comment, EPA intends that the list of applicable SICs will define and identify what industrial facilities are required to apply. Facilities that warehouse finished products under the same code at a different facility from the site of manufacturing are not required to file a permit application, unless otherwise covered by this rulemaking.

(iii) Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 CFR 434.11(l) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990 and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations. Several commenters urged that Congress intended to require permits or permit applications only for the manufacturing sector of the oil and gas industry (or those activities that designated in SIC 20 through 39). EPA disagrees with this argument. The fact that Congress used the language cited above and not the appropriate the SIC definition explicitly does not indicate that a broader definition or less exclusive definition was contemplated. According to these comments, all storm water discharges from oil and gas ***48012** exploration and production facilities would be exempt from regulation. However, EPA is convinced that a facility that is engaged in finding and extracting crude oil and natural gas from subsurface formations, separating the oil and gas from formation water, and preparing that crude oil for transportation to a refinery for manufacturing and processing into refined products, will have discharges directly relating to the processing or raw material storage at an industrial plant and are therefore discharges associated with industrial activity.

For further clarification EPA is intending to focus only on those facilities that are in SIC 10-14. Furthermore, in response to several comments, this rulemaking will require permit applications for storm water discharges from currently inactive petroleum related facilities within SIC codes 10-14, if discharges from such facilities meet the requirements as described in section VI.F.7.a. and § 122.26(c)(1)(iii). Inactive facilities will have storm water associated with industrial activity irrespective of whether the activity is ongoing. Congress drew no distinction between active and inactive facilities in the statute or in the legislative history.

(iv) Hazardous waste treatment, storage, or disposal facilities that are operating under interim status or a permit under Subtitle C of the Resource, Conservation and Recovery Act. One commenter believed that all RCRA and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) facilities should be specifically identified using SIC codes for further clarification. EPA considers this to be unnecessarily redundant, since the RCRA/CERCLA identification is sufficient.

Several industries asserted that storm water discharge from landfills, dumps, and land application sites, properly closed or otherwise subject to corrective or remedial actions under RCRA, should not be included in the definition. One commenter noted that the runoff from these areas is like runoff from undeveloped areas. One commenter also concluded that landfills, dumps, and land application sites should also be excluded if they are properly maintained under RCRA.

One commenter also rejected the idea of requiring permits from all active and inactive landfills and open dumps that have received any industrial wastes, and subtitle C facilities. This commenter felt that these facilities were already adequately covered under RCRA.

Two industry commenters felt that it would be redundant to have hazardous waste facilities regulated by RCRA and the NPDES storm water program. One felt this was especially so if there are current pretreatment standards.

The Agency disagrees that all activities that may contribute to storm water discharges at RCRA subtitle C facilities are being fully controlled and that requiring NPDES permits for storm water discharges at RCRA subtitle C facilities is redundant. First, the vast

  

majority of permitted hazardous waste management facilities are industrial facilities involved in the manufacture or processing of products for distribution in commerce. Their hazardous waste management activities are incidental to the production-related activities. While RCRA subtitle C regulations impose controls in storm water runoff from hazardous waste management units and require cleanup of releases of hazardous wastes, they generally do not control non-systematic spills or process. These releases, from the process itself or the storage of raw materials or finished products are a potential source of storm water contamination. In addition, RCRA subtitle C (except via corrective action authority) does not address management of "non hazardous" industrial wastes, which nevertheless could also potentially contaminate storm water runoff.

Second, at commercial hazardous waste management facilities, the RCRA subtitle C permitting requirements and management standards do not control all releases of potentially toxic materials. For example, some permitted commercial treatment facilities may store and use chemicals in the treatment of RCRA hazardous wastes. Releases of these treatment chemicals from storage areas are a potential source of storm water contamination.

Finally, many RCRA subtitle C facilities have inactive Solid Waste Management Units (SWMU's) on the facility property. These SWMU's may contain areas on the land surface that are contaminated with hazardous constituents. RCRA requires that hazardous waste management facilities must investigate these areas of potential contamination, and then perform corrective action to remediate any SWMU's that are of concern. However, the corrective action process at these facilities will not be completed for a number of years due to the complexity of the cleanup decisions, and due to the fact that many hazardous waste management facilities do not yet have RCRA permits. Until corrective action has been completed at all such subtitle C facilities, SWMU's are a potential source of storm water contamination that should be addressed under the NPDES program. Finally, under section 1004(27) of RCRA, all point source discharges, including those at RCRA regulated facilities, are to be regulated by the NPDES program. Thus, there is no concern of regulatory overlap, and to the extent that the storm water regulations are effectively implemented, it will help address these units in a way that alleviates the need for expensive corrective action in the future.

(v) Landfills, land application sites, and open dumps that receive or have received industrial wastes and that are subject to regulation under subtitle D of RCRA. EPA received numerous comments supporting the regulation of municipal landfills which receive industrial waste and are subject to regulation under subtitle D of RCRA. EPA agrees with these comments. These industries have significant potential for storm water discharges that can adversely affect receiving water.

Two States argued that landfills should be addressed under the non-point source program. EPA disagrees that the non-point source program is sufficient for addressing these facilities. Further, addressing a class of facilities under the non-point source program does not exempt storm water discharges from these facilities from regulation under NPDES. The CWA requires EPA to promulgate regulations for controlling point source discharges of storm water from industrial facilities. Point sources from landfills consisting of storm water are such discharges requiring an NPDES permit. Several commenters argued that these discharges are adequately addressed by RCRA and that regulating them under this storm water rule would be redundant. However, as discussed above, RCRA expressly does not regulate point source discharges subject to NPDES permits. Given the nature of these facilities and of the material stored or disposed, EPA believes storm water permits are necessary. Similarly EPA rejects the comment that storm water discharges from these facilities are already adequately regulated by State authority. Congress has mandated that storm water discharges associated with industrial activity have an NPDES permit.

One commenter wanted EPA to define by size what landfills are covered. In response, it is the intent of these regulations to require permit applications from all landfills that receive industrial waste. Storm water discharges from such facilities are addressed because of the nature of the material with which the storm water comes in contact. The size of facility ***48013** will not dictate what type of waste is exposed to the elements.

One commenter requested that the definition of industrial wastes be clarified. For the purpose of this rule, industrial waste consists of materials delivered to the landfill for disposal and whose origin is any of the facilities described under § 122.26(b)(14) of this regulation.

  

(vi) Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093. One commenter suggested that the recycling of materials such as paper, glass, plastics, etc., should not be classified as an industrial activity. EPA disagrees that such facilities should be excluded on that basis. These facilities may be considered industrial, as are facilities that manufacture such products absent recycling.

Other facilities exhibit traits that indicate industrial activity. In junkyards, the condition of materials and junked vehicles and the activities occurring on the yard frequently result in significant losses of fluids, which are sources of toxic metals, oil and grease and polychlorinated aromatic hydrocarbons. Weathering of plated and non-plated metal surfaces may result in contributions of toxic metals to storm water. Clearly such facilities cannot be classified as commercial or retail.

One municipality felt that "significant recycling" should be defined or clarified. EPA agrees that the proposed language is ambiguous. It has been clarified to require permit applications from facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093. These SIC codes describe facilities engaged in dismantling, breaking up, sorting, and wholesale distribution of motor vehicles and parts and a variety of other materials. The Agency believes these SIC codes clarify the term significant recycling.

One municipality stated that regulation of these facilities under NPDES would be duplicative if they are publicly owned facilities. One State expressed the view that automobile junkyards, salvage yards could not legitimately be considered industrial activity. As noted above, EPA disagrees with these comments. Facilities that are actively engaged in the storage and recycling of products including metals, oil, rubber, and synthetics are in the business of storing and recycling materials associated with or once used in industrial activity. These activities are not commercial or retail because they are engaged in the dismantling of motors for distribution in wholesale or retail, and the assembling, breaking up, sorting, and wholesale distribution of scrap and waste materials, which EPA views as industrial activity. Further, being a publicly owned facility does not confer non-industrial status.

(vii) Steam electric power generating facilities, including coal handling sites, and onsite and offsite ancillary transformer storage areas. Most of the comments were against requiring permit applications for onsite and offsite ancillary transformer facilities. One commenter stated that these transformers did not leak in storage and if there were leakage problems in handling transformers, such leaks were subject to Federal and State spill clean-up procedures. The same commenter suggested that if EPA required applications from such facilities that it exclude those that have regular inspections, management practices in place, or those that store 50 transformers at any one time.

EPA agrees that such facilities should not be covered by today's rule. As one commenter noted, the Toxic Substances Control Act (TSCA) addresses pollutants associated with transformers that may enter receiving water through storm water discharges. EPA has examined regulations under TSCA and agrees that regulation of storm water discharges from these facilities should be the subject of the studies being performed under section 402(p)(5), rather than regulations established by today's rule. Under TSCA, transformers are required to be stored in a manner that prevents rain water from reaching the stored PCBs or PCB items. 40 CFR 761.65(b)(1)(i). EPA considers transformer storage to be more akin to retail or other light commercial activities, where items are inventoried in buildings for prolonged periods for use or sale at some point in the future, and where there is no ongoing manufacturing or other industrial activity within the structure.

One commenter stated that this category of industries should be loosened so that all steam electric facilities are addressed—oil fired and nuclear. EPA believes that the language as proposed broadly defines the type of industrial activity addressed without specifying each mode of steam electric production. One commenter noted that the EPA has no authority under the CWA (Train v. CPIR, Inc., 426 U.S. 1 (1976) to regulate the discharge of source, special nuclear and by-product materials which are regulated under the Atomic Energy Act. EPA agrees permit applications may not address those aspects of such facilities, however the

facility in its entirety may not necessarily be exempt. A permit application will be appropriate for discharges from non-exempt categories.

(viii) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221-25), 43, 44, 45, and 5171 which have vehicle maintenance shops, material handling facilities, equipment cleaning operations or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, or which are identified in another subcategory of facilities under EPA's definition of storm water discharges associated with industrial activity. One commenter requested clarification of the terms "vehicle maintenance." Vehicle maintenance refers to the rehabilitation, mechanical repairing, painting, fueling, and lubricating of instrumentalities of transportation located at the described facilities. EPA is declining to write this definition into the regulation however since "vehicle maintenance" should not cause confusion as a descriptive term. One commenter wanted railroad tracks where rail cars are set aside for minor repairs excluded from regulation. In response, if the activity involves any of the above activities then a permit application is required. Train yards where repairs are undertaken are associated with industrial activity. Train yards generally have trains which, in and of themselves, can be classified as heavy industrial equipment. Trains, concentrated in train yards, are diesel fueled, lubricated, and repaired in volumes that connote industrial activity, rather than retail or commercial activity.

One commenter argued that if gasoline stations are not considered for permitting, then all transportation facilities should be exempt. EPA disagrees with the thrust of this comment. Transportation facilities such as bus depots, train yards, taxi stations, and airports are generally larger than individual repair shops, and generally engage in heavier more expansive forms of industrial activity. In keeping with Congressional intent to cover all industrial facilities, permit applications from such facilities are appropriate. In contrast, EPA views gas stations as retail commercial facilities not covered ***48014** by this regulation. It should be noted that SIC classifies gas stations as retail.

(ix) POTW lands used for land application treatment technology/sludge disposal, handling or processing areas, and chemical handling and storage areas. One commenter wanted more clarification of the term POTW lands. Another commenter requested clarification of the terms sludge disposal, sludge handling areas, and sludge processing areas. One State recommended that a broader term than POTW should be used. EPA notes that on May 2, 1989, it promulgated NPDES Sewage Sludge Permit Regulations; State Sludge Management Program Requirements at 40 CFR part 501. This regulation identified those facilities that are subject to section 405(f) of the CWA as "treatment works treating domestic sewage."

In response to the above comments, EPA has decided to use this language to define what facilities are required to apply for a storm water permit. Under this rulemaking "treatment works treating domestic sewage," or any other sewage sludge or wastewater treatment device or system used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge, with a design flow of 1.0 mgd or more, or facilities required to have an approved pretreatment program under 40 CFR part 403, will be required to apply for a storm water permit. However, permit applications will not be required to address land where sludge is beneficially reused such as farm lands and home gardens or lands used for sludge management that are not physically located within the confines (offsite facility) of the facility or where sludge is beneficially reused in compliance with section 405 of the Clean Water Act (proposed rules were published on February 6, 1989, at 54 FR 5746). EPA believes that such activity is not "industrial" since it is agricultural or domestic application (non-industrial) unconnected to the facility generating the material.

EPA received many comments on the necessity and appropriateness of requiring permit applications for storm water discharges from POTW lands. It was anticipated by numerous commenters that the above cited sludge regulations would adequately address storm water discharges from lands where sludge is applied. However, the sewage sludge regulations do not directly address NPDES permit requirements for storm water discharges from POTW lands and related areas to the extent required by today's rulemaking; the regulations cover only permits for use or disposal of sludge. Also, the regulations proposed on February 4, 1989, cover primarily the technical standards for the composition of sewage sludge which is to be used or disposed. They do not include detailed permitting requirements for discharges of storm water from lands where sludge has been applied to the

  

land. To that extent, EPA is not persuaded by these commenters that POTWs and POTW lands should be excluded from these storm water permit application requirements.

Two commenters noted that some States already regulate sludge use or disposal activities substantially and that EPA should refrain from further regulation. EPA disagrees that this is a basis for excluding facilities from Federal requirements. Notwithstanding regulations in existence under State law, EPA is required by the CWA to promulgate regulations for permit application for storm water associated with industrial activity. Under the NPDES program, States are able to promulgate more rigorous requirements. However a minimum level of control is required under Federal law. One commenter also indicated that a State's sludge land application sites must follow a well defined plan to ensure there is no sludge related runoff. Notwithstanding that a State may require storm water controls for sludge land applications, as noted above, EPA is required to promulgate regulations requiring permit applications from appropriate facilities. EPA views facilities such as waste treatment plants that engage in on-site sludge composting, storage of chemicals such as ferric chloride, alum, polymers, and chlorine, and which may experience spills and bubbleovers are suitable candidates for storm water permits. Facilities using such materials are not characteristic of commercial or retail activities. Use and storage of chemicals and the production of material such as sludge, with attendant heavy metals and organics, is activity that is industrial in nature. The size and scope of activities at the facility will determine the extent to which such activities are undertaken and such materials used and produced at the facility. Accordingly, EPA believes limiting the facilities covered under this category to those of 1.0 mgd and those covered under the industrial pretreatment program is appropriate.

To the extent that permit applicants are already required to employ certain management practices regarding storm water, these may be incorporated into permits and permit conditions issued by Federal and State permitting authorities. EPA has selected facilities identified under 40 CFR part 501 (i.e. those with a design flow of 1.0 mgd or more or those required to have an approved pretreatment program) since these facilities will have largest contribution of industrial process discharges. Sludge from such facilities will contain higher concentrations of heavy metal and organic pollutants.

One commenter stated that sludge disposal is a public activity that should be addressed in a public facility's storm water management program under a municipal storm water management program. EPA disagrees. Industrial facilities, whether publicly owned or not, are required to apply for and obtain permits when they are designated as industrial activity.

Another comment stated that a permit should not be required for facilities that collect all runoff on site and treat it at the same POTW. EPA believes that a permit application should be required from such facilities. However, the above practice can be incorporated as a permit condition for such a facility. One commenter stated storm water from sludge and chemical handling areas can be routed through the headworks of the POTW. The agency agrees that this may be an appropriate management practice for POTWs as long as other NPDES regulatory requirements are fulfilled with regard to POTWs.

(x) Construction activities, including clearing, grading and excavation activities except operations that result in the disturbance of less than five acre total land area which are not part of a larger common plan of development or sale. EPA addresses whether these facilities should be covered by today's rule in section VI.F.8.

The December 7, 1988, proposal also requested comments on including the following other categories of discharges in the definition of industrial activities: (xii) Automotive repair shops classified as Standard Industrial Classification 751 or 753; (xiii) Gasoline service stations classified as Standard Industrial Code 5541; (xiv) Lands other than POTW lands (offsite facilities) used for sludge management; (xv) Lumber and building materials retail facilities classified as Standard Industrial Classification 5211; (xvi) Landfills, land application sites, and open dumps that do not receive industrial wastes and that are subject to regulation under subtitle D of RCRA; (xvii) Facilities classified as Standard Industrial Classification 46 (pipelines, except natural gas), and 492 (gas production and distribution); (xviii) Major electrical powerline corridors.

***48015** EPA received numerous comments on whether to require permit applications for these particular facilities. The December 7, 1988, proposal reflected EPA's intent not to require permits for these facilities, but rather to address these facilities

  

in the two studies required by CWA sections 402(p) (5) and (6). After reviewing the comments on this issue, EPA believes that these facilities should be addressed under these sections of the CWA. Most of these facilities are classified as light commercial and retail business establishments, agricultural, facilities where residential or domestic waste is received, or land use activities where there is no manufacturing. It should be noted that although EPA is not requiring the facilities identified as categories (xii) to (xviii), in the December 7, 1988, proposal to apply for a permit application under this rulemaking, such facilities may be designated under section 402(p)(2)(E) of the CWA.

Three commenters recommended that EPA clarify that non-exempt Department of Energy and Department of Defense facilities should be covered by the storm water regulation. The regulation clearly states that Federal Facilities that are engaged in industrial activity (i.e. those activities in § 122.26(b)(14)(i)-(xi)) are required to submit permit applications. Those applying for permits covering Federal facilities should consult the Standard Industrial Classifications for further clarification.

One commenter questioned how EPA intended to regulate municipal facilities engaged in industrial activities. Municipal facilities that are engaged in the type of industrial activity described above and which discharge into waters of the United States or municipal separate storm sewer systems are required to apply for permits. These facilities will be covered in the same manner as other industrial facilities. The fact that they are municipally owned does not in any way exclude them from needing permit applications under this rulemaking.

One commenter suggested exempting those facilities that have total annual sales less than five million dollars or occupy less than five acres of land. Another commenter thought that all minor permittees should be exempt. EPA believes that the quality of storm water and the extent to which discharges impact receiving water is not necessarily related to the size of the facility or the dollar value of its business. What is important in this regard, is the extent to which steps are taken at facilities to curb the quantity and type of material that may pollute storm water discharges from these facilities. Therefore EPA has not excluded facilities from permitting on such a basis. This same commenter stated that the proposed rules should not address facilities with multiple functions (industrial and retail). EPA disagrees. If a facility engages in activity that is defined in paragraphs (i) through (xi) above, it is required to apply for a permit regardless of the fact that it also has a retail element. Such facilities need only submit a permit application for the industrial portion of the facility (as long as storm water from the non-industrial portion is segregated, as discussed above). This commenter also felt that more studies needed to be undertaken to determine the best way to regulate industries. EPA agrees that storm water problems need further study and for that reason EPA has devoted substantial manpower and resources to complete comprehensive studies under section 402(p)(5), while also addressing industrial sources that need immediate attention under this rulemaking.

One commenter requested that EPA give examples of storm water discharges from each of the facilities that have been designated for submitting permit applications. Agency believes that this is unnecessary and impractical since every facility, regardless of the type of industry, will have different terrain, hydrology, weather patterns, management practices and control techniques. However, EPA intends to issue guidance on filing permit applications for storm water discharges from industrial facilities which details how an industry goes about filing an industrial permit and dealing with storm water discharges.

Today's rulemaking for storm water discharges associated with industrial activity at § 122.26(c)(1)(i) includes special conditions for storm water discharges originating from mining operations, oil or gas operations (§ 122.26(c)(1)(iii)), and from the construction operations listed above (§ 122.26(c)(1)(ii)). These requirements are discussed in more detail in section VI.F.7 and section VI.F.9 of today's notice.

**3. Individual Application Requirements**

Today's rule establishes individual and group permit application requirements for storm water discharges associated with industrial activity. These requirements will address facilities precluded from coverage under the general permits to be proposed and promulgated by EPA in the near future. EPA considers it necessary to obtain the information required in individual permit applications from certain facilities because of the nature of their industrial activity and because of existing institutional mechanisms for issuing and tracking NPDES permits. Furthermore, some States will not have general permitting authority.

Facilities located in such States will be required to submit individual applications or participate in a group application. The following response to comments received on these requirements pertains to these facilities.

Under the September 26, 1984, regulation operators of Group I storm water discharges were required to submit NPDES Form 1 and Form 2C permit applications. In response to post-regulation comments received on that rule, EPA proposed new permit application requirements (March 7, 1985, (50 FR 9362) and August 12, 1985, (50 FR 32548)) which would have decreased the analytical sampling requirements of the Form 2C and provided procedures for group applications. Passage of the WQA in 1987 gave the EPA additional time to consider the appropriate permit application requirements for storm water discharges. On December 7, 1988, application requirements were proposed and numerous comments were received. Based upon these comments, modifications and refinements have been made to the industrial storm water permit application.

Some commenters expressed the view that the permit application requirements are too burdensome, require too much paperwork, are of dubious utility, and focus too greatly on the collection of quantitative data. EPA disagrees. In comparison to prior approaches for permitting storm water discharges and other existing permitting programs, EPA has streamlined the permit application process, limited the quantitative data requirements, and required narrative information that will be used to determine permit conditions that relate to the quality of storm water discharge. To the extent that EPA needs non-quantitative information to develop appropriate permit conditions, EPA disagrees with the view of some commenters that the information required is excessive. In response to comments on earlier rulemakings and a comment received on the December 7, 1988, proposal (stressing that the emphasis should be on site management, rather than monitoring, sampling, and reporting) EPA has shifted the emphasis of the permit application requirements for storm water discharges associated with industrial activity from the existing requirements for collection of ***48016** quantitative data (sampling data) in Form 2C towards collection of less quantitative data supplemented by additional information needed for evaluation of the nature of the storm water discharges.

The permit application requirements proposed for storm water discharges reduce the amount of quantitative data required in the permit application and exempt discharges which contain entirely storm water (i.e. contain no other discharge that, without the storm water component, would require an NPDES permit), from certain reporting requirements of Form 2C. The proposed modifications also would exempt applicants for discharges which contain entirely storm water from several non-quantitative information collection provisions currently required in the Form 2C. The proposed modifications would rely more on descriptive information for assessing impacts of the storm water discharge. One commenter proposed that information that the applicant has submitted for other permits be incorporated by reference into the storm water permit application. EPA disagrees that incorporation by reference is appropriate. The permitting authority will need to have this information readily available for evaluating permit application and permit conditions. Furthermore, EPA feels that the applicant is in the best position to provide the information and verify its accuracy. However, if the applicant has such information and it accurately reflects current circumstances, then the applicant can rely on the information for meeting the information requirements of the application. Another commenter suggested that EPA should only require the information in § 122.26(c)(1)(A) and (B) (i.e., the requirement for a topographic map indicating drainage areas and estimate of impervious areas and material management practices). As explained in greater detail below, EPA is convinced that some quantitative data and the other narrative requirements are necessary for developing appropriate permit conditions.

Form 2F addressing permit applications for storm water discharges associated with industrial activity is included in today's final rule. A complete permit application for discharges composed entirely of storm water, will be comprised of Form 2F and Form 1. Operators of discharges which are composed of both storm water and non-storm water will submit, where required, a Form 1, an entire Form 2C (or Form 2D) and Form 2F when applying. In this case, the applicant will provide quantitative data describing the discharge during a storm event in Form 2F and quantitative data describing the discharge during non-storm events in Form 2C. Non-quantitative information reported in the Form 2C will not have to be reported again in the Form 2F.

Under today's rule, Form 2F for storm water discharges associated with industrial activity would not require the submittal of all of the quantitative information required in Form 2C, but would require that quantitative data be submitted for:

  

- Any pollutant limited in an effluent guideline for an industrial applicant's subcategory;

- Any pollutant listed in the facility's NPDES permit for its process wastewater;

- Oil and grease, TSS, COD, pH, BOD5, total phosphorus, total Kjeldahl nitrogen; nitrate plus nitrite nitrogen; and

- Any information on the discharge required under 40 CFR 122.2*I*(g)(7) (iii) and (iv).

In order to characterize the discharge(s) sampled, applicants need to submit information regarding the storm event(s) that generated the sampled discharge, including the date(s) the sample was taken, flow measurements or estimates of the duration of the storm event(s) sampled, rainfall measurements or estimates from the storm event(s) which generated the sampled runoff, and the duration between the storm event sampled and the end of the previous storm event. Information regarding the storm event(s) sampled is necessary to evaluate whether the discharge(s) sampled was generally representative of other discharges expected to occur during storm events and to characterize the amount and nature of runoff discharges from the site.

One commenter stated that the quantitative information should be limited to those pollutants that are expected to be known to the applicant. EPA believes this would be inappropriate since there will be no way of determining initially whether these pollutants are present despite the expectations of the applicant. Once the data is provided, permits can be drafted which address specific pollutants. This rulemaking requires that the applicant test for oil and grease, COD, pH, BOD5, TSS, total Kjeldahl nitrogen, nitrate plus nitrite nitrogen and total phosphorus. Oil and grease and TSS are a common component of storm water and can have serious impacts on receiving waters. Oxygen demand (COD and BOD5) will help the permitting authority evaluate the oxygen depletion potential of the discharge. BOD5 is the most commonly used indicator of potential oxygen demand. COD is considered a more inclusive indicator of oxygen demand, especially where metals interfere with the BOD5 test. The pH will provide the permitting authority with important information on the potential availability of metals to the receiving flora, fauna and sediment. Total Kjeldahl nitrogen, nitrate plus nitrite nitrogen and total phosphorus are measures of nutrients which can impact water quality. Because this data is useful in developing appropriate permit conditions, EPA disagrees with the argument made by one commenter that quantitative data requirements should be a permit condition and not part of the application process.

In the proposed rule, the Agency used total nitrogen as a parameter. This has been changed to total Kjeldahl nitrogen and nitrate plus nitrite nitrogen for clarity.

Today's rule defines sampling at industrial sites in terms of sampling for those parameters that have effluent limits in existing NPDES permits, as well as for any other conventional or nonconventional parameter that might be expected to be found at the outfall. Comments on the appropriateness of the defined parameters were solicited by the proposal. Numerous commenters maintained that either the parameter list be made industry specific, or that pollutant categories not detected in the initial screen be exempted from further testing. Some suggested that only conventional pollutants, inorganics, and metals be sampled unless reason for others is found.

In terms of specific water quality parameters, it was recommended that surfactants not be tested for unless foam is visible. One commenter also suggested that fecal coliform sampling is inappropriate for industrial permits applications. One commenter favored testing for TOC instead of VOC. In response, VOC has been eliminated from the list of parameters because it will not yield specific usable data. VOC is not specifically required in any sampling in today's rule, except where priority pollutant scans are required.

Some recommended that procedures be modified to facilitate quicker, less expensive lab analyses. Concern was also raised that industry might be required to collect its own rainfall data if there is no nearby observation station. Some commenters stated that EPA should not allow automatic sampling for either biological or oil and grease sampling due to the potential for contamination in sampling equipment.

  

***48017** In response, EPA believes that the sampling requirements for industry in today's rule are reasonable and not burdensome. These requirements address parameters that have effluent limits in existing NPDES permits, as well as for any other conventional or nonconventional parameter that might be expected to be found at the applicants outfall. Under this procedure both industry-specific and site-specific contaminants are already identified in the existing permit. Whether all these parameters need to be made a part of any discharge characterization plans, under the terms of the permit, will be a case-by-case determination for the permitting authority. EPA maintains that the test for surfactants (if in effluent guidelines or in the facility's NPDES permit for process water) is justifiable even when a foam is not obvious at the outfall. The presence of detergents in storm water may be indicated by foam, but the absence of foam does not indicate that detergents are not present.

EPA requested comments on fecal coliform as a parameter. Fecal coliform was included on the list as an indicator of the presence of sanitary sewage. In large concentrations, fecal coliform may be an effective indicator of sanitary sewage as opposed to other animal wastes. EPA believes that sanitary cross connections will also be found at industrial facilities. Furthermore, the test for fecal coliform is an inexpensive test and its inclusion or exclusion should make little impact financially on the individual application costs. Sampling for volatile organic carbon shall be accomplished when required, as it is an appropriate indicator of industrial solvents and organic wastes.

In response to comments, EPA acknowledges that there are certain pollutants that are capable of leaving residues in automatic sampling devices that will potentially contaminate subsequent samples. In these cases, such as for biological monitoring, if such a problem is perceived to exist and it is expected that the contaminant will render the subsequent samples unusable, manual grab samples may be needed. This would include grab samples for pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform, and fecal streptococcus. EPA is not disallowing the use of automatic sampling because of possible contamination, as this type of sampling may be the best method for obtaining the necessary samples from a selected storm events.

In addition to the conventional pollutants listed above, this final rule requires applicants, when appropriate, to sample other pollutants based on a consideration of site-specific factors. These parameters account for pollutants associated with materials used for production and maintenance, finished products, waste products and non-process materials such as fertilizers and pesticides that may be present at a facility. Applicants must sample for any pollutant limited in an effluent guideline applicable to the facility or limited in the facility's NPDES permit. These pollutants will generally be associated with the facility's manufacturing process or wastes. Other process and non-process related pollutants, will be addressed by complying with the requirements of 40 CFR 122.21(g)(7)(iii) and (iv).

Section 122.21(g)(7)(iii) requires applicants to indicate whether they know or have reason to believe that any pollutant listed in Table IV (conventional and nonconventional pollutants) of appendix D to 40 CFR part 122 is discharged. If such a pollutant is either directly limited or indirectly limited by the terms of the applicant's existing NPDES permit through limitations on an indicator parameter, the applicant must report quantitative data. For pollutants that are not contained in an effluent limitations guideline, the applicant must either report quantitative data or describe the reasons the pollutant is expected to be discharged. With regard to pollutants listed in Table II (organic pollutants) or Table III (metals, cyanide and total phenol) of appendix D, the applicant must indicate whether they know or have reason to believe such pollutants are discharged from each outfall and, if they are discharged in amounts greater than 10 parts per billion (ppb), the applicant must report quantitative data. An applicant qualifying as a small business under 40 CFR 122.21(g)(8), (e.g., coal mines with a probable total annual production of less than 100,000 tons per year or, for all other applicants, gross total annual sales averaging less than $100,000 per year (in second quarter 1980 dollars)), is not required to analyze for pollutants listed in Table II of appendix D (the organic toxic pollutants).

Section 122.21(g)(7)(iv) requires applicants to indicate whether they know or have reason to believe that any pollutant in Table V of appendix D to 40 CFR part 122 (certain hazardous substances) is discharged. For every pollutant expected to be discharged, the applicant must briefly describe the reasons the pollutant is expected to be discharged and report any existing quantitative data it has for the pollutant.

  

When collecting data for permit applications, applicants may make use of 40 CFR 122.2*I*(g)(7), which provides that "when an applicant has two or more outfalls with substantially identical effluents, the Director may allow the applicant to test only one outfall and report that the quantitative data also applies to the substantially identical outfalls." Where the facility has availed itself of this provision, an explanation of why the untested outfalls are "substantially identical" to tested outfalls must be provided in the application. Where the amount of flow associated with the outfalls with substantially identical effluent differs, measurements or estimates of the total flow of each of the outfalls must be provided. Several commenters stated that the time and expense associated with sampling and analysis would be saved if the applicant was able to pick substantially identical outfalls without prior approval of the permitting authority. EPA disagrees that this would be an appropriate devolution of authority to the permit applicant. The permitting authority needs to ensure that these outfalls have been grouped according to appropriate criteria (for example do the outfalls serve similar drainage areas at the facility). Furthermore, EPA is not requiring that the permit applicant engage in sampling to demonstrate that the outfalls are indeed substantially identical, because that would of course defeat the purpose of § 122.21(g)(7). The procedure for establishing identical outfalls is not that onerous and provides a means for industry to save substantially on time and resources for sampling.

EPA proposed and requested comment on a requirement that the facility must sample a storm event that is typical for the area in terms of duration and severity. The storm event must be greater than 0.1 inches and must be at least 96 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. In general, variance of the parameters (such as the duration of the event and the total rainfall of the event) should not exceed 50 percent from the parameters of the average rainfall event in that area. EPA also requested comments on addressing snow melt events under this definition.

Commenters stated that: median or average rainfall is not an acceptable approach; the minimum depth and duration of rainfall must be specified; the allowable 50% variation is questionable; the total depth of the storm is irrelevant; and the storm should be viewed based on the average intensity of the storm. One commenter ***48018** suggested that using the median rainfall event would be a better approach than the average rainfall event.

Others insisted that "representative" or typical storms do not exist in semi-arid climates and that representative rainfall must be site-specific (regional) and seasonal. Several commenters contended that the requirement for 96 dry hours between events is not acceptable, with 48 and 72 hours identified as possible alternatives.

One commenter believed that a typical standard design storm, such as the 1-year, 24-hour, or 10-year, 1-hour, would be preferable. Another commenter felt that the storm event should be based on the rainfall required to generate a minimum discharge level. One commenter questioned whether the storm is to be sampled at all sites simultaneously.

To clarify its decision on what storm event should be sampled, EPA notes that its selection of the storm event considers both regional and seasonal variation of precipitation. This is evidenced in the rule with regard to sites in the municipal application (three events sampled), and in the requirements for industrial group applications (a minimum of two applicants, or one applicant in groups of less than 10, to be represented in each precipitation zone (see section VI.F.4 below).

The definition of a 0.1 inch minimum was determined by NURP and other studies to be the minimum rainfall depth capable of producing the rainfall/runoff characteristics necessary to generate a sufficient volume of runoff for meaningful sample analysis. EPA believes by requiring the average storm to be used as the basis for sampling that depth, duration, and therefore average rainfall intensity are being regionally defined. The Agency has also added the option of using the median rainfall event instead of the average. The potential for monitoring events that may not meet this specification should be minimized by allowing the proposed 50 percent variation in rainfall depth and/or duration from event statistics. However, the 50 percent variation need only be met when possible. Further, there is flexibility in the rule where the Director may allow or establish site specific requirements such as the minimum duration between the previous measurable storm event and the storm event sampled, the amount of precipitation from the storm event to be sampled, and the form of precipitation sampled (snowmelt or rainfall). If data is obtained from a rain event that does not meet the criteria above, the Director has the discretion to accept the data as valid.

  

The December 7, 1988, proposal called for a 96-hour period between events of measurable rainfall, here defined as 0.1 inch, which provided a four day minimum for the accumulation of pollutants on the surface of the outfalls' tributary areas. The key word in the definition is "measurable", which means that the 96-hour period did not necessarily have to be dry, only that no cleansing rainfall (i.e. 0.1 inch rain event) has occurred. However, after reviewing comments on this issue EPA has decided to change the period to 72 hours. Many commenters indicated that 96 hours is too restrictive and that securing a sample under such circumstances would be unnecessarily difficult. EPA agrees that the quality or representativeness of the sample would not be adversely affected by this change.

EPA does not agree with comments that the requirement of a particular "design" storm would be appropriate. Many commenters have expressed concern that they might sample an event not meeting the requirements for industrial group applications as defined. Because there is no way to know with sufficient certainty beforehand that an upcoming event will approximate a one-year, twenty-four hour storm, many events would be unnecessarily sampled before this event is realized.

EPA does not intend that a municipality or industry be required to sample all required outfalls for a single storm. This would represent a unmanageable investment in equipment and manpower. In some areas, it may be necessary to sample multiple sites for a single event due to the irregularity of rainfall, but not all sites.

EPA described parameters for selecting storm events for sampling of municipal and industrial outfalls in the December 7, 1988, proposal. EPA has received several comments regarding the problems that rainfall measurement in general presents. A recurring comment relative to reporting rainfall, and in verifying that the storm itself is representative, deals with the spatial distribution of rainfall. The rainfall measured at an airport does not always represent rainfall at the site, particularly in summer months when thunderstorms are prevalent. One commenter stated that it would be easier to base the selected storm on either a minimum discharge, or on a discharge duration other than on the total precipitation, because these parameters are easily measured at the site and are not dependent on the airport gauges receiving the same rainfall as the site. A few commenters questioned how to determine typical storm characteristics. One commenter advised that NOAA rainfall reporting stations provide data that represent only daily rainfall totals, not storm event data. One commenter pointed out that the time frame of the sampling requirement does not consider that a particular region may be in the midst of a multi-year drought cycle, and that what little rainfall occurs may have uncharacteristically high levels of pollutants.

The type of rain event sampled is an important parameter in any attempt to characterize system-wide loads based on the sampling results. Rainfall gauges that report only event total depth will provide the information necessary to characterize most events, provided that a reasonable estimate of the event duration can be made. If simulation models are to be used in estimating system-wide loads, rainfall measurement based on time and depth of rainfall will be needed. If the recording stations are not believed to accurately reflect this distribution, then the data will need to be collected by the applicant at a location central to the tributary area of the outfall.

The rainfall data collected by NOAA are in most cases available in the form of hourly rainfall depths. This information can be analyzed to develop characteristic storm depths and durations. In some cases, this information has already been analyzed for many long term reporting stations by various municipalities, states, and universities. The results of these investigations should be available to the applicants.

EPA realizes that prolonged rainless periods occur for both semi-arid areas and areas experiencing droughts and that the first storm after a prolonged dry period may well not be representative of "normal" runoff conditions. In order for the appropriate system-wide characterization of loads to be made, data must be collected. With regard to the municipal permit application, today's rule states that runoff characterization data will be collected during three events at from five to ten sites. The rule gives the Director the flexibility of modifying these requirements.

EPA has defined the parameters for selecting the storm event to be sampled such that at the discretion of the Director, seasonal, including winter, sampling might be required. EPA has received several comments regarding the problems that snowmelt

  

sampling may present. Several commenters are ***48019** opposed to monitoring of snowmelt events. The reasons cited include equipment problems and the unreasonableness of expecting this sampling, because of temperatures and the time required for personnel to be waiting for events. A few comments addressed the issues of snow pack depth, ambient temperature, and solar radiation levels, and that the snow pack may filter suspended solids or refreeze such that final melting is uncharacteristically over-polluted relative to normal conditions. Another commenter contended that it is impossible to manage the melting process and therefore unreasonable to expect controls to be implemented relative to snowmelt. In essence, it is contended that there is no first discharge unless the snow pack depth is low and melts quickly.

A few commenters favor monitoring snowmelt, for precisely the same reason that most oppose it: that the runoff from snowmelt is the most polluted runoff generated in some areas on an annual basis. Where this is the case, sampling snowmelt should be undertaken in order to accurately assess impacts to receiving streams. EPA is confident that in areas where automated sampling cannot be relied upon, grab sampling can probably be performed because the nature of the snowmelt process tends to make the timing of samples less of a problem when compared to typical rainfall events. EPA disagrees that management practices, either at industrial facilities or with regard to municipalities, cannot address snowmelt. Some areas may need to reassess their salt application procedures. In addition retention and detention devices may address snowmelt, as well as erosion controls at construction sites. Thus, obtaining samples of snowmelt is appropriate to allow development of such permit conditions.

Today's rule also modifies the Form 2C requirements by exempting applicants from the requirements at § 122.21(g)(2) (line drawings), (g)(4) (intermittent flows), (g)(7) (i), (ii), and (v) (various sampling requirements to characterize discharges) if the discharge covered by the application is composed entirely of storm water. Permit applications for discharges containing storm water associated with industrial activity would require applicants to provide other non-quantitative information which will aid permit writers to identify which storm water discharges are associated with industrial activity and to characterize the nature of the discharge.

Numerous comments were received regarding the requirement to submit a topographic map and site drainage map. Many of these comments offered alternatives to EPA's proposal. Two commenters suggested that a simple sketch of the site would be sufficient. Two commenters stated that one or the other should be adequate. One commenter believed that the drainage map was a good idea, but that the topographic map should be optional. Several commenters submitted that a topographic map was sufficient and that only SPCC plans or SARA submittals should supplement that. Another commenter argued that information relating to the location of the nearest surface water or drinking wells would be sufficient. Other commenters believed that a drainage map alone would indicate all relevant site specific information. Numerous commenters expressed concern that the drainage area map would be too detailed and that one which depicts the general direction of flow should be sufficient. Clarification was requested on whether the final rule would require the location of any drinking water wells. One commenter stated that a U.S.G.S. 7.5 quadrangle map will not illustrate drainage systems in all cases, and that therefore the requirement should be optional.

Several commenters agreed with EPA's proposal. One commenter maintained that drainage maps should be required from developments greater than three acres and from all individual applicants. Several commenters agreed with EPA's proposal that both maps should be provided, with arrows indicating site drainage and entering and leaving points. It was advised that drainage maps are useful in locating sources of storm water contamination, and it is useful to identify areas and activities which require source controls or remedial action. One commenter recommended that the map should extend far enough offsite to demonstrate how the privately owned system connects to the publicly owned system.

After considering the merits of all the comments and the reasons supporting EPA's proposal, EPA is convinced that a topographic map and a site drainage map are necessary components of the industrial application. Existing permit application regulations at 40 CFR 122.21(f)(7) require all permit applicants to submit as part of Form 1 a topographic map extending one mile beyond the property boundaries of the source depicting: the facility and each intake and discharge structure; each hazardous waste treatment, storage, or disposal facility; each well where fluids from the facility are injected underground; and those wells, springs, other surface water bodies, and drinking water wells listed in the map area in public records or otherwise known to the applicant within one-quarter mile of the facility property boundary. (See 47 FR 15304, April 8, 1982.) However, as indicated

by the comments the information provided under § 122.21(f)(7) is generally not sufficient by itself for evaluating the nature of storm water discharges associated with industrial activity.

As stated in comments, a drainage map can provide more important site specific information for evaluating the nature of the storm water discharge in comparison to existing requirements, which require a larger map with only general information. The volume of a storm water discharge and the pollutants associated with it will depend on the configuration and activities occurring at the industrial site. One commenter suggested that it would be appropriate to submit an aerial photograph of the site with all the topographic and drainage information superimposed on the photograph. EPA agrees that this may be an appropriate method of providing this information. EPA is not requiring a specific format for submitting this information.

EPA is also requiring that a narrative description be submitted to accompany the drainage map. The narrative will provide a description of on-site features including: existing structures (buildings which cover materials and other material covers; dikes; diversion ditches, etc.) and non-structural controls (employee training, visual inspections, preventive maintenance, and housekeeping measures) that are used to prevent or minimize the potential for release of toxic and hazardous pollutants; a description of significant materials that are currently or in the past have been treated, stored or disposed outside; and the method of treatment, storage or disposal used. The narrative will also include: a description of activities at materials loading and unloading areas; the location, manner and frequency in which pesticides, herbicides, soil conditioners and fertilizers are applied; a description of the soil; and a description of the areas which are predominately responsible for first flush runoff. This requirement is unchanged from the proposal.

Some commenters believed that information on pesticides, herbicides, and fertilizers and similar products is irrelevant, incidental to the facility's production activities, and should not be ***48020** addressed by this rulemaking. EPA disagrees. As these materials are applied outside and hence subject to storm events, they are significant sources of pollutants in storm water discharges whether applied in residential or industrial settings. By providing this information in the permit application the permit writer will be able to determine whether such activity is associated with industrial activity and the subject of appropriate permit conditions. Nominal or incidental application of these materials at industrial facilities and non-detects in sampling of storm water discharges for the permit application will result, in most cases, in these materials not being addressed specifically in storm water permits.

Today's rule also requires that permit applicants for storm water discharges associated with industrial activity certify that all of the outfalls covered in the permit application have been tested or evaluated for non-storm water discharges which are not covered by an NPDES permit. (The applicant need not test for nonstorm water if the certification of the plant storm water discharges can be evaluated through the use of schematics or other adequate method). Section 405 of the WQA added section 402(p)(3)(B)(ii) to the CWA to require that permits for municipal separate storm sewers effectively prohibit non-storm water discharges to the storm sewer system. As discussed in part VI.F.7.b of today's preamble, untreated non-storm water discharges to storm sewers can create severe, wide-spread contamination problems and removing such discharges presents opportunities for dramatic improvements in the quality of such discharges. Although section 402(p)(3)(B)(ii) specifically addresses municipal separate storm sewers, EPA believes that illicit non-storm water discharges are as likely to be mixed with storm water at a facility that discharges directly to the waters of the United States as it is at a facility that discharges to a municipal storm sewer. Accordingly, EPA feels that it is appropriate to consider potential non-storm water discharges in permit applications for storm water discharges associated with industrial activity. The certification requirement would not apply to outfalls where storm water is intentionally mixed with process waste water streams which are already identified in and covered by a permit.

This rulemaking requires applicants for individual permits to submit known information regarding the history of significant spills at the facility. Several commenters indicated that the extent to which this information is required should be modified. One commenter stated that the requirement should be limited to those spills that resulted in a complaint or enforcement action. EPA disagrees. EPA believes that significant spills at a facility should generally include releases of oil or hazardous substances in excess of reportable quantities under section 311 of the Clean Water Act (see 40 CFR 110.10 and 40 CFR 117.21) or section 102 of CERCLA (see 40 CFR 302.4). Such a requirement is consistent with these regulations and the perception that such spills are

significant enough to mandate the reporting of their occurrence. Some commenters stated that industries have already submitted this information in other contexts and should not be required to have to do it again. For the same reason another commenter felt that submittal of this information represents a waste of manpower and resources. EPA disagrees that requiring this information is unduly burdensome. If this information has already been provided for another purpose it follows that it is readily available to the industrial applicant. Thus, the burden of providing this information cannot be considered undue. Furthermore, the permit authority will need to have this available in order to determine which drainage areas are likely to generate storm water discharges associated with industrial activity, evaluate pollutants of concern, and develop appropriate permit conditions. However, to keep this information requirement within reasonable limits and limited to information already available to individual facilities, EPA has declined to expand the reporting requirements to spills of other materials, such as food as one commenter has suggested. However, EPA has decided to add raw materials used in food processing or production to the list of significant materials. Materials such as these may find their way into storm water discharges in such quantities that serious water quality impacts occur. These materials may find there way into storm water from transportation vehicles carrying materials into the facility, loading docks, processing areas, storage areas, and disposal sites.

One commenter urged that any information requested should be limited to a period of three years, which is the general NPDES records retention requirement under 40 CFR 122.21(p) and 40 CFR 112.7(d)(8). EPA agrees with this comment and has limited historical information requirements to the 3 years prior to the date the application is submitted. In this manner this regulation will be consistent with records keeping practices under the NPDES and Oil Spill Prevention programs, except sludge programs.

The December 7, 1988, proposal required the applicant to submit a description of each past or present area used for outdoor storage or disposal of significant materials. One commenter felt that the definition of significant material was too imprecise. EPA disagrees that the language should be made more precise by delineating every conceivable material that may add pollutants to storm water. Rather the definition is broad, to encourage permit applicants to list those materials that have the potential to cause water quality impacts. Stating what materials are addressed in meticulous detail may result in potentially harmful materials remaining unconsidered in permits. However, EPA has decided to add “fertilizers, pesticides, and raw materials used in the production or processing of food” to the definition in response to the comment of one State authority that such materials need to be accounted for due to their potential danger to storm water discharge quality. This same commenter recommended that “hazardous chemicals” should be added. EPA agrees, and will delineate those chemicals as “hazardous substances” which are designated under section 101(14) of CERCLA. Further clarification has been added by requiring the listing of any chemical the facility is required to report pursuant to section 313 of title III of SARA.

Another commenter felt that EPA should not require information of past storage of significant materials. EPA agrees that this proposed requirement is overbroad and has limited the time frame to those materials that were stored in areas 3 years or fewer from the date of the permit application. The 3-year limit is consistent with other Agency reporting requirements as discussed above.

One commenter questioned EPA's proposal not to provide for a waiver from the requirement to submit quantitative data if the applicant can demonstrate that it is unnecessary for permit issuance. Another commenter said that a waiver is inappropriate. EPA believes relevant quantitative data are essential to the process, but in this rulemaking the number of pollutants that must be sampled and analyzed is reduced compared to previous regulations. The proposed requirements for quantitative data are limited to pollutants that are appropriate for given ***48021** site-specific operations, thereby making a waiver unnecessary.

Although the concept of a waiver is attractive because of the perceived potential reduction in burdens for applicants, EPA believes that because the storm water discharge testing requirements have already been streamlined, a waiver would not in practice provide significant reductions in burden for either applicants or permit issuing authorities. Requirements to provide and verify data demonstrating that a waiver is appropriate for a storm water discharge may prove to be more of a burden to the applicant and the permitting authorities. Establishing such a waiver procedure would be administratively complex and time-consuming for both EPA and the applicants, without any justifiable benefit. Therefore, this rulemaking does not include a waiver provision.

  

In response to one commenter, EPA wishes to emphasize that if a facility has zero storm water discharge because it is discharging to a detention pond only, a permit application is not required. Only those discharges to the waters of the United States or municipal systems need submit notifications, individual or group permit applications, or notices of intent where applicable. However, if the detention pond overflows or the discharger anticipates that it may overflow, then a permit application should be submitted.

Two commenters agreed with EPA's proposed requirement to have a description of past and present material management practices and controls. EPA believes that this is important information directly relating to the quality of storm water that can be expected at a particular facility and this requirement is retained in today's rule. However, as with other historical information requirements, EPA is limiting past practices to those that occurred within three years of the date that the application is submitted. One commenter argued that past practices should not be considered unless there is evidence that past practices cause current storm water quality problems. EPA anticipates that the information submitted by the applicant will be used to make this determination and that appropriate permit conditions can be developed accordingly.

One commenter requested clarification on the certification requirement that the data and information in the application is true and complete to the best of the certifying officer's knowledge. This is a fundamental and integral part of all NPDES permit applications. It essentially requires the signatory to assure the permit writer, based upon his or her personal knowledge, that the information has been submitted without a negligent, reckless, or purposeful misrepresentation. EPA intends to interpret this requirement in the same manner for storm water applications as other applications.

**4. Group Applications**

Today's final rule provides some industries with the option of participating in a group application, in lieu of submitting individual permits. There are several reasons for the group application. First, the group application procedure provides adequate information for issuing permits for certain classes of storm water discharges associated with industrial activity. Second, numerous commenters supported the concept of the group application as a way to reduce the costs and administrative burdens associated with storm water permit applications. Third, group applications will reduce the burden on the regulated community by requiring the submission of quantitative data from only selected members of the group. Fourth, the group application process will reduce the burden on the permit issuing authority by consolidating information for reviewing permit applications and for developing general permits suited to certain industrial groups. Where general permits are not appropriate or cannot be issued, a group application can be used to develop model individual permits, which can significantly reduce the burden of preparing individual permits.

As noted above in today's preamble, EPA intends to promulgate a general permit that will cover many types of industrial activity. Industrial dischargers eligible for such permits will generally be required to seek coverage by submittal of a notice of intent. Facilities that are ineligible for coverage under the general permit will be required to submit an individual permit application or submit a group application. The group application process promulgated today will serve as an important component to implement Tier III of EPA's industrial storm water permitting strategy discussed above. The general permit which EPA intends to promulgate in the near future shall set forth what types of facilities are eligible for coverage.

Some commenters criticized the group application procedure as an abdication of EPA's responsibility to effectively deal with pollutants in storm water discharges. One commenter stated that every facility subject to these regulations should be required to submit quantitative data. In response EPA believes, as do numerous commenters, that the group application procedure is a legitimate and effective way of dealing with a large volume of currently uncontrolled discharges. The only difference between the group application procedure and issuing individual permits based on individual applications is that the quantitative data requirements from individual facilities will be less if certain procedures are followed. EPA is convinced that marked improvements in the process of issuing permits will be achieved when these procedures are followed. Where the storm water discharge from a particular facility is identified as posing a special environmental risk, it can be required to submit individual

  

applications and therefore separate quantitative data. It should also be noted that submittal of a group application does not exempt a facility from submitting quantitative data on its storm water discharge during the term of the permit.

The final rule refines and clarifies some of the requirements of the group application approach set forth in the December 7, 1988 proposal. Several commenters requested that EPA add a provision which would allow a facility that becomes subject to the regulations to "add on" to a group application after that group application has already been submitted. One commenter indicated that some trade associations are prohibited from engaging in an activity which would not apply to all its members, and that an "add on" provision was needed in the event such a prohibition was invoked. Another commenter noted that where a group is particularly large, for example one that consists of several thousand members, that it would be a logistical feat to ensure that all facilities eligible as members of the group are properly identified and listed on the application within the 120 day deadline for submitting part 1A of the application.

EPA believes that a group applicant should have a limited ability to add facilities to the group after part 1A has been submitted and that a provision which allows a group or group representative an unbridled ability to "add on" is impractical for a number of reasons. First, 10% of the facilities must submit quantitative data. Adding facilities after the group has been formed and approved would change the number of facilities that have to submit quantitative data on behalf of the group. This would result in an unwarranted administrative burden on the reviewing authority, which is in the position of having to examine the quantitative data and determine the appropriateness of group members (and those that are ***48022** required to submit quantitative data) within 2 months of receiving part 1 of the group application. Further, during the permit application process permitting authorities will be developing permit conditions for an identified and pre-determined group of facilities. Allowing potentially significant numbers of permit applicants to suddenly inject themselves into a group application could unnecessarily hamper or disrupt the timely development of general and model permits. In addition, if a facility were "added on" the number of facilities having to submit quantitative data may drop below 10%. Thus the facility desiring to "add on" may be put in the position of having to submit the quantitative data themselves, which would clearly defeat the purpose of being a part of the group application.

Nevertheless, EPA has added a provision to 122.26(e) which enables facilities to add on to a group application at the discretion of the EPA's Office of Water Enforcement and Permits, and upon a showing of good cause by the group applicant. For the reasons noted above, EPA anticipates this provision will be invoked only in limited cases where good cause is shown. Facilities not properly identified in the group application, and which cannot meet the good cause test will be required to submit individual permit applications. EPA will advise such facilities within 30 days of receiving the request as to whether the facility may add on.

However, the "add on" facility must meet the following requirements: The application for the additional facility is made within 15 months of the final rule; and the addition of the facility does not reduce the percentage of the facilities that are required to submit quantitative data to below 10% unless there are over 100 facilities that are submitting quantitative data. Approval to become part of a group application is obtained from the group or the trade association and is certified by a representative of the group; approval for adding on to a group is obtained from the Office of Water Enforcement and Permits.

Several commenters stated that the application requirements for groups are so burdensome that the advantages of the process are undermined. These concerns are addressed in greater detail below. Among the requirements which commenters objected are the requirements to list every group member's company by name and address. EPA is convinced that a condition precedent to approving a group application is at least identifying the members of the group. Without such information it would be impossible to determine if all the facilities are sufficiently similar. EPA disagrees that industries will be dissuaded from using the group application process because the advantages of the process are undermined. Although commenters perceived many burdens associated with individual permit applications, by far the most significant burden identified by the comments is the requirement for obtaining and submitting quantitative data. The group application significantly reduces this burden by requiring only10% of the facilities to submit quantitative data if the number in the group is over 100. If the number in the group is over 1000, then only 100 of the facilities need submit quantitative information. If group applicants develop cost sharing procedures to reduce the financial and administrative burdens of submitting quantitative data, it is evident that utilizing the group application could save industries as much as 90% on the most economically burdensome aspect of the application.

  

Several commenters perceived that the group application procedure did not offer them significant savings because under the proposal their particular industry would only be required to test for COD, BOD5, pH, TSS, oil and grease, nitrogen, and phosphorous. These commenters stated that sampling for these pollutants is not particularly expensive. EPA believes that even if a group is required only to submit minimal quantitative data on particular pollutants, substantial savings can accrue to a particular industry if the group has many members. This is particularly true when the number of outfalls to be sampled, the information on storm events, and flow measurements are factored into the cost analysis. An additional benefit for members of the group as well as for permit issuing agencies is that the process of developing a permit, including drafting and responding to public comments on the permit, is consolidated by the group application process. Accordingly, it is less resource intensive for the group to work with permit issuance authorities to develop well founded permit conditions.

One commenter raised a concern about the situation where one of the facilities that is designated for submitting quantitative data drops out of the group. If this happened, then another facility would have to submit quantitative data. In response, EPA notes that one approach would be for the group to have one or two more facilities submit quantitative data than needed to avoid problems from such a departure or to account for new additions to the group. Certainly this issue goes directly to the facility selection process which is a critical component of the group application; the facilities need to be carefully selected and reviewed by the group to prevent such difficulties.

Several comments indicated a confusion over what facilities are eligible to take advantage of the group application procedure. Any industry or facility that is required to submit a storm water permit application under these regulations is eligible to participate in a group application. However, whether a facility can obtain a storm water permit under a group application procedure will depend upon whether that facility is a member of the same effluent guideline subcategory, or is sufficiently similar to other members of the group to be appropriate for a general permit or individual permit issued pursuant to the group application. Accordingly, group applications are not limited to national trade associations. The agency believes that the language in § 122.26(c)(2) adequately addresses these concerns. The process does not prohibit a particular company with multiple facilities from filing a group application as long as those facilities are sufficiently similar.

One commenter expressed concern that a single company would not be able to take advantage of the group application benefits unless the company had more than ten facilities. Under such circumstances the company would have to become integrated with a larger group of facilities owned by other companies in order to take advantage of the benefits afforded by the group application procedure. In response, the Agency is providing for a group application of between four and ten members, however at least half the facilities must submit data. One commenter stated that the number of facilities required to submit quantitative data should be determined on a case by case basis. EPA believes that 10 percent for groups with over ten members will be easiest to implement for both industry and EPA, and will ensure that adequate representative quantitative data are obtained so that meaningful determinations of facility similarity can be made and appropriate permit conditions in general or model permits can be developed.

Another commenter suggested that one facility with a multitude of storm water discharge points should be able to use the group permit application to reduce the amount of quantitative data ***48023** that it is required to submit. This is an accurate observation but only to the extent that the facility combines with several other facilities to form a group, in which case only 10% of the facilities need submit quantitative data. The group application procedure in today's rule is designed for use by multiple facilities only. However, if an individual facility has 10 outfalls with ten substantially identical effluents the discharger may petition the Director to sample only one of the outfalls, with that data applying to the remaining outfalls. See § 122.21(g)(7). Thus, existing authority already allows for a "group-like" process for sampling a subset of storm water outfalls at a single facility.

Concern was expressed that the spill reporting requirement from each facility in part 1B would preclude any group from demonstrating that the facilities sampled are "representative," because the incidence of past spills is very site-specific. EPA notes that since it has dropped the part 1B requirements for other reasons discussed below, this comment is now moot.

  

Numerous commenters noted that if a facility is part of a group application and is subsequently rejected as a group applicant, such an entity would not have a full year to submit an individual permit application. EPA agrees that this is a significant concern. Accordingly, those facilities that apply as a member of a group application will be afforded a full year from the time they are notified of their rejection as a member of the group to file an individual application. EPA notes that it intends to act on group application requests within 60 days of receipt; thus this approach will only provide facilities that are rejected from a group application a short extension of the deadline for other individual applications.

One commenter complained that the cost of defending a group's choice of representative facilities may exceed the cost of submitting an individual permit application, thereby reducing the incentive to apply as group. The agency anticipates that the selection process will be one open to negotiation between the affected parties and one that will end in a mutually satisfactory group of facilities. It is the intent of EPA to reduce the costs of submitting a permit application as much as possible, while providing adequate information to support permitting activities.

Another commenter argued that the use of model permits will create a disincentive for participating in a group because model permits may be used by the permit issuing authority to issue individual permits for discharges from similar facilities that did not participate in the group application. EPA does not agree. The benefit of applying as a group applicant is to take advantage of reduced representative quantitative data requirements. This incentive will exist regardless of whether or how model permits are used. Further, technology transfer can occur during the development of permits based on individual applications as well as those based on group applications.

One commenter suggested moving some of the facility specific information requirements of part 1 of the group application to part 2 of the group application in order to provide more incentive to apply as a group. EPA has considered this and believes such a change would be inappropriate. Part 1 information will be used to make an informed decision about whether individual facilities are appropriate as group members and appropriate for submitting representative quantitative data. Furthermore, information burdens from providing site specific factors in part 1 is relatively minimal, and the information requirements in the proposed part 1B application have been eliminated.

One commenter suggested that trade associations develop model permits since they have the most knowledge about the characteristics of the industries they represent. As noted above, EPA expects that the industries and trade associations will have input, through the permit application process, as to how permit conditions for storm water discharges are developed. While the applicant can submit proposed permit conditions with any type of application, EPA however cannot delegate the drafting of model permits to the permittees. EPA is developing and publishing guidance in conjunction with this rulemaking for developing permit conditions.

One commenter suggested that new dischargers should be able to take advantage of general permits developed pursuant to group applications. As with other general permits, EPA anticipates that such discharges will be able to fall within the scope of a general permit based on a group application where appropriate.

One commenter stated that the group application does not benefit municipalities since there is no requirement for industrial discharges through municipal sewers to apply for a permit. As noted in a previous discussion, industrial discharges through municipal sewers must be covered by an NPDES permit. Such facilities may avail themselves of the group application procedure. Also, municipalities are not precluded from developing a group application procedure under their management plan for industries that discharge into their municipal system, in order to streamline developing controls for such industries.

One industry wanted clarification that facilities located within a municipality would be eligible to participate in a group application. All industrial activities required to submit an individual permit are entitled to submit as part of group application, except those with existing NPDES permits covering storm water. Those facilities that discharge through a municipal separate storm sewer systems required to submit an individual application (because they do not fall within a general permit) are not precluded from using the group application procedure if appropriate.

  

Other municipalities expressed confusion over the industrial group application concept. The following responds to these comments. First, municipalities are not eligible for participation in a group application because the group application process is designed for industrial activities. Sampling requirements for municipal permit applications are already limited to a small subset of the outfalls from the system, as discussed below. Furthermore, permits for municipal separate storm sewer systems will be issued on a system-wide or jurisdiction-wide basis, rather than individually for each outfall. Thus, today's regulation already incorporates a “grouplike” permit application process for municipalities. Furthermore, it is highly unlikely that various municipal storm sewer systems would be “substantially similar” enough to justify group treatment in the same way as industrial facilities. In response to another comment, this regulation does not directly give the municipality enforcement power over members of an industrial group who may be discharging through its system. Only the permitting authority and private citizens and organizations (including the municipality acting in such a capacity) will have enforcement power over members of the group once permits are issued to those members.

One commenter believed that the States with authorized NPDES programs rather than EPA should establish permit terms for permits based on group applications. In response to this comment, EPA wishes to clarify its role in the group application process. Group applications will be submitted to EPA headquarters where they will be reviewed and summarized. The ***48024** summaries of the group application will be distributed to authorized NPDES States. EPA wishes to emphasize that NPDES States are not bound by draft model permits developed by EPA. States may adopt model permits for use in their particular area, making adjustments for local water quality standards and other regional characteristics. Where general permit coverage is believed to be inappropriate, facilities may be required to apply for individual permits. One commenter objected to the group application procedure because it is not consistent with existing Federal permitting procedures, which will lead to confusion in the regulated community. The agency disagrees with this assessment. The group application is a departure from established NPDES program procedures. However, the comments, when viewed in their entirety, reflect widespread support from the regulated community for a group application procedure. Further, the comments reflect that those affected by this rulemaking understand the components of the group application and the procedures under which permits will be obtained pursuant to the group application.

One commenter expressed concern regarding how BAT limits for groups of similar industries will be developed. Technology based limits will be developed based on the information received from the group applicants. If the group applicants possess similar characteristics in terms of their discharge, BAT/BCT limitations and controls will be developed accordingly for those members of the group. If the discharge characteristics are not similar then applying industries are not appropriate for the group.

One commenter has suggested that the proposed group application is too complex with regard to the part 1A, part 1B, and part 2 group application requirements and that EPA should repropose these provisions. As discussed below, EPA has simplified the industrial group application requirements by eliminating the part 1B application. Thus, reproposal is unnecessary.

One commenter criticized the group application concept as not achieving any type of reduction in administrative burden for NPDES States. EPA disagrees with this assessment. If industries take advantage of the group application procedure, EPA will have an opportunity to review information describing a large number of dischargers in an organized manner. EPA will perform much of the initial review and analysis of the group application, and provide NPDES States with summaries of the applications thereby reducing the burden on the States. Furthermore, the procedure encourages a potentially large number of facilities to be covered by a general permit, which will clearly reduce the administrative burden of issuing individual permits.

The final rule establishes a regulatory procedure whereby a representative entity, such as a trade association, may submit a group application to the Office of Water Enforcement and Permits (OWEP) at EPA headquarters, in which quantitative data from certain representative members of a group of industrial facilities is supplied. Information received in the group application will be used by EPA headquarters to develop models for individual permits or general permits. These model permits are not issued permits, but rather they will be used by EPA Regions and the NPDES States to issue individual or general permits for participating facilities in the State. In developing such permits, the Region or NPDES State will, where necessary, adapt the model permits to take into account the hydrological conditions and receiving water quality in their area. One commenter

  

expressed the view that having this procedure managed by EPA headquarters would cause delays and it should be delegated to the States and Regions. EPA disagrees that delay will ensue using this procedure. Furthermore, consistency in development of model and general permits can be achieved if application review is coordinated at EPA headquarters.

a. Facilities Covered. Under this rule the group application is submitted for only the facilities specifically listed in the application and not necessarily for an entire industry. The facilities in the group application selected to do sampling must be representative of the group, not necessarily of the industry.

Facilities that are sufficiently similar to those covered in a general permit (issued pursuant to a group application) that commence discharging after the general permit has been issued, must refer to the provisions of that general permit to determine if they are eligible for coverage. Facilities that have already been issued an individual permit for storm water discharges will not be eligible for participation in a group application. Several commenters believed that this restriction is inequitable since they have experienced the administrative burden of submitting a permit application. EPA disagrees. Industries that have already obtained a permit for storm water discharges have developed a storm water management program, engaged in the collection of quantitative data, and possess familiarity and experience with submitting storm water permit applications. The Agency sees no point to instituting an entirely new permit application process for facilities that have storm water permits issued individually. It makes little sense for these industries to be involved with submitting another permit application before their current permit expires.

As noted above, once a general permit has been issued to a group of dischargers, a new facility may request that they be covered by the general permit. The permitting authority can then examine the request in light of the general permit applicability requirements and determine whether the facility is suitable or not.

b. Scope of Group Applications. Numerous comments were received on how facilities should be evaluated as members of a group application. Several commenters stated that effluent limitation guideline subcategories are not relevant to pollutants found in storm water, but rather to the facility's everyday activities, and therefore similarity should be based on each facility's discharge or the similarity of pollutants expected to be found in a facility's discharge. Other commenters felt that similarity of operations at facilities should be the criteria. Others, believed that an examination of the facility's impact on storm water quality should be the applied criteria. Other commenters suggested that EPA provide more guidance as to how broadly groups can be defined and that a failure to do so would discourage facilities from going to the trouble and expense of entering into the group application process. Some commenters were concerned that facilities would be rejected as a group because of variations in processes and process wastewater characteristics.

EPA does not agree that effluent limitation guideline subcategories are inappropriate as a method for determining group applications. EPA guideline subcategories are functional classifications, breaking down facilities into groups, for purposes of setting effluent limitations guidelines. The use of EPA subcategories will save time for both applicants and permitting authorities in determining whether a particular group is appropriate for a group application. Furthermore, EPA believes that this method of grouping provides adequate guidance for determining what facilities are grouped together. Establishing groups on the extent to which a facility's discharge ***48025** affects storm water quality would not provide applicants with sufficient guidance as to the appropriateness of individual industries for group applications and would not provide information needed to draft appropriate model permit conditions for potentially different types of industries, industrial processes, and material management practices.

However, EPA recognizes that the subcategory designations may not always be available or an effective methodology for grouping applicants. Also, there are situations where processes that are subject to different subcategories are combined. EPA agrees that the group application option should be flexible enough to allow groups to be created where subcategories are too rigid or otherwise inappropriate for developing group applications or where facilities are integrated or overlap into other subcategories. For these reasons, this rulemaking does not limit the submission to EPA subcategories alone, but rather allows groups to be formed where facilities are similar enough to be appropriate for general permit coverage.

  

In determining whether a group is appropriate for general permit coverage, EPA intends that the group applicant use the factors set forth in 40 CFR 122.28(a)(2)(ii), the current regulations governing general permits, as a guide. If facilities all involve the same or similar types of operations, discharge the same types of wastes, have the same effluent limitation and same or similar monitoring requirements, where applicable, they would probably be appropriate for a group application. To that extent, facilities that attempt to form groups where the constituent makeup of its process wastewater is dissimilar may run the risk of not being accepted for purposes of a group application.

Some commenters expressed the view that categories formed using general permit factors are too broad or that the language is too vague. One commenter expressed the view that the standard is too subjective and that permit writers will be evaluating the similarity of discharge too subjectively, while other commenters felt that the criteria should be broad and flexible. Other commenters stated that the effluent guideline subcategory or general permit coverage factors are not related to storm water discharges, because much of the criteria are based upon what is occurring inside the plant, rather than activities outside of the plant. EPA believes that these criteria are reasonable for defining the scope of a group application. EPA disagrees that the procedure, which is adequate for the issuance of general permits, is inadequate for the development of a group application. EPA believes that the activities inside a facility will generally correspond to activities outside of the plant that are exposed to storm events, including stack emissions, material storage, and waste products. Furthermore, if facilities are able to demonstrate their storm water discharge has similar characteristics, that is one element in the analysis needed for establishing that the group is appropriate. EPA disagrees that the criteria are too vague. If facilities are concerned that general permit criteria is insufficient guidance, then subcategories under 40 CFR subchapter N should be used. EPA believes that the program will function best if flexibility for creating groups is maintained.

If a NPDES approved State feels that a tighter grouping of applicants is appropriate individual permit applications can be requested from those permit applicants. One commenter indicated that it was not clear whether the group application procedure could be used for all NPDES requirements. EPA would clarify that the group application is designed only to cover storm water discharges from the industrial facilities identified in § 122.26(b)(14).

As noted above, EPA wishes to clarify that facilities with existing individual NPDES permits for storm water are not eligible to participate in the group application process. From an administrative standpoint EPA is not prepared to create an entirely different mechanism for permitting industries which already have such permits.

c. Group Application Requirements. The group application, as proposed, included the following requirements in three separate parts. Part 1A of a group application included: (A) Identification of the participants in the group application by name and location; (B) a narrative description summarizing the industrial activities of participants; (C) a list of significant materials stored outside by participants; and (D) identification of 10 percent of the dischargers participating in the group application for submitting quantitative data. A proposed part 1B of the group application included the following information from each participant in the group application: (A) A site map showing topography (or indicating the outline of drainage areas served by the outfall(s) and related information; (B) an estimate of the area of impervious surfaces (including paved areas and building roofs) and the total area drained by each outfall and a narrative description of significant materials; (C) a certification that all outfalls that should contain storm water discharges associated with industrial activity have been tested for the presence of non-storm water discharges; (D) existing information regarding significant leaks or spills of toxic or hazardous pollutants at the facility; (E) a narrative description of industrial activities at the facility that are different from or that are in addition to the activities described under part 1A; and (F) a list of all constituents that are addressed in a NPDES permit issued to the facility for any of non-storm water discharge. Part 2 of a group application required quantitative data from 10 percent of the facilities identified.

Some commenters felt that spill histories, drainage maps, material management practices, and information on significant materials stored outside are too burdensome or meaningless for evaluating similarity of discharges among group applicants. Several commenters stated that such requirements where the group may consist of several thousand facilities were impractical and would not assist EPA in developing model permits. Many commenters insisted that the requirements imposed in part 1B would effectively discourage use of the group application procedure. EPA agrees in large part with these comments. After

  

reevaluating the components of part 1B, and the entire rationale for instituting the group application procedure, EPA has decided to excise part 1B from the requirements, and rely on part 1A and part 2 for developing appropriate permit condition. Where appropriate, EPA may require facilities to submit the information, formerly in part 1B, during the term of the permit. In other cases, EPA will establish which facilities must submit individual permit applications where more site specific permits are appropriate.

Under the revised part 1 and part 2, EPA will receive information pertaining to the types of industrial activity engaged in by the group, materials used by the facilities, and representative quantitative data. EPA can use such information to develop management practices that address pollutants in storm water discharges from such facilities. For most facilities, general good housekeeping or management practices will eliminate pollutants in storm water. Such requirements can be further refined by determining the nature of a group's industrial activity and by obtaining information on material used at the facility and representative quantitative data from a ***48026** percentage of the facilities. Thus, EPA is confident that model permits and general permits can be developed from the information to be submitted under part 1 and part 2.

One commenter felt that more guidance on what makes a facility representative for sampling as part of a group is needed. In response, the Agency believes the rule as currently drafted provides adequate notice.

Another commenter asked how much sampling needed to be done and how much monitoring will transpire over the life of the permit for members of a group. This will vary from permit to permit and will be determined in permit proceedings. This rulemaking only covers the quantitative data that is to be submitted in the context of the group permit application.

One commenter indicated that because of the amount of diversity in the operations of a particular industry, obtaining a sample that could be considered representative would be extremely difficult. EPA recognizes that obtaining representative quantitative data through the group application process will prove to be difficult; however, EPA has sought to minimize these perceived problems. Under the group application concept, industries must be sufficiently similar to qualify. Industries which have significantly different operations from the rest of the group that affects the quality of their storm water discharge may be required to obtain an individual permit. Use of the nine precipitation zones will enable the data in the permit application to be more easily analyzed and patterns observed on the basis of hydrology and other regional factors. How EPA will evaluate the representativeness of the sample is discussed below.

Several commenters asked why the precipitation zone of group members is relevant to the application. The need to identify precipitation zones arises because the amount of rainfall is likely to have a significant impact on the quality of the receiving water. According to an EPA study (Methodology for Analysis of Detention Basins for Control of Urban Runoff Quality; Office of Water, Nonpoint Source Branch, Sept. 1986) the United States can be divided into nine general precipitation zones. These zones are characterized by differences in precipitation volume, precipitation intensity, precipitation duration, and precipitation intervals. Industrial facilities that seek general permits via the group application option may show significantly different loading rates as a result of these regional precipitation differences. As an example, precipitation in Seattle, Washington, located in Zone 7, approaches the mean annual storm intensity of .024 inches/hour with a mean annual storm duration of 20 hours for that Zone. In contrast, precipitation in Atlanta, Georgia, located in Zone 3 approaches the mean annual storm intensity of .102 inches/hour and a mean storm duration of 6.2 hours for that Zone. Atlanta, receives on the average four times more precipitation per hour with storms lasting one-third as long. As a result of these differences, if identical facilities within a group application were situated in each of these areas, their storm water discharges would likely exhibit different pollutant characteristics. Accordingly, data should be submitted from facilities in each zone.

One commenter felt that the EPA should abandon or modify its rainfall zone concept, because storm water quality will depend more on what materials are used at the facility than rainfall. EPA disagrees. Because storm water loading rates may differ significantly as a result of regional precipitation differences, it is necessary that for each precipitation zone containing representatives of a group application, the group must provide samples from some of those representatives. In comments to

  

previous rulemakings it was argued that the amount of rainfall will affect the degree of impact a storm water discharge may have on the receiving stream.

One commenter stated that the precipitation zones illustrated in appendix E of the proposed rulemaking do not adequately reflect regional differences in precipitation and that in some cases the zones cut through cities where there are concentrations of industries without differences in their precipitation patterns. The rainfall zone map is a general guide to determining what areas of the country need to be addressed when determining representative rainfall events and quantitative data. When dealing with rainfall on a national scale, it is near impossible to make generalized statements with a great deal of accuracy. In the case of rainfall zones, rainfall patterns may be similar for facilities in close proximity to each other but none the less in different rainfall zones. In response, EPA has created these zones to reflect regional rainfall patterns as accurately as possible. Because of the variable nature of rainfall such circumstances are sure to arise. However, in order to obtain a degree of representativeness EPA is convinced that the use of these rainfall zones as described is appropriate for the submittal of group applications and the quantitative data therein.

The second and third requirements of part 1 of the group application instruct the applicant to describe the industrial activity (processes) and the significant materials used by the group. For the significant materials listed, the applicant is to discuss the materials management practices employed by members of the group. For example, the applicant should identify whether such materials are commonly covered, contained, or enclosed, and whether storm water runoff from materials storage areas is collected in settling ponds prior to discharge or diverted away from such areas to minimize the likelihood of contamination. Also, the approximate percentage of facilities in the group with no practices in place to minimize materials stored outside is to be identified.

EPA considers that the processes and materials used at a particular facility may have a bearing on the quality of the storm water. Thus, if there are different processes and materials used by members of the group, the application must identify those facilities utilizing the different processes and materials, with an explanation as to why these facilities should still be considered similar.

One commenter felt that a facility should be able to describe in its permit application the possibility of individual materials entering receiving waters. EPA supports the applicant adding site specific information which will assist the permit writer making an informed decision about the nature of the facility, the quality of its storm water discharge, and appropriate permit conditions.

The fourth element of part 1 of the group application is a commitment to submit quantitative data from ten percent of the facilities listed. EPA proposed that there must be a minimum of ten and a maximum of one hundred facilities within a group that submit data. Comments reflected some dissatisfaction with this requirement. Some commenters asserted that ten percent was too high a number and would discourage group applications, while one commenter suggested a lesser percentage would be appropriate where the group can certify that facilities are representative. One commenter suggested that EPA have the discretion to allow for a smaller percentage. Several commenters argued that EPA should be satisfied with fewer than ten percent because EPA often relies on data from less than ten percent of the plants in a subcategory when promulgating effuent guidelines and that EPA should rely on data collection goals ***48027** with affected groups as was done in the 1985 storm water proposal. Other commenters pointed out that an anomalous situation could arise where the group was small and facilities were scattered throughout the precipitation zones. For example, if a group consisted of 20 members where a minimum of ten facilities had to submit samples, and two or more members were in each precipitation zone; a total of 18 facilities (90% of the group) would have to submit quantitative data. EPA believes that there must be a sufficient number of facilities submitting data for any patterns and trends to be detectable. However, in light of these comments EPA has decided to modify the language in § 122.26(c) to allow 1 discharger in each precipitation zone to submit quantitative data where 10 or fewer of the group members are located in a particular precipitation zone. EPA believes, however, that one hundred facilities would in most cases be sufficient to characterize the nature of the runoff and thus 100 should remain the maximum. If the data are insufficient, EPA has the authority to request more sampling under section 308 of the CWA.

  

One commenter suggested that the ten facility cutoff was unreasonable, and that instead of cutting off the group at ten, allow a smaller number in the group and allow the facilities to sample ten percent of their outfalls instead. EPA agrees, in part, and will allow groups of between four and ten to submit a group application. However, the ten percent rule would not be effective in such cases. Therefore, at least half the facilities in a group of four to ten will be required to provide quantitative data from at least one outfall, with each precipitation zone represented by at least one facility.

For any group application, in addition to selecting a sufficient number of facilities from each precipitation zone, facilities selected to do the sampling should be representative of the group as a whole in terms of those characteristics identifying the group which were described in the narrative, i.e., number and range of facilities, types of processes used, and any other relevant factors. If there is some variation in the processes used by the group (40 percent of the group of food processors are canners and 60 percent are canners and freezers, for example), the different processes are to be represented. Also, samples are to be provided from facilities utilizing the materials management practices identified, including those facilities which use no materials management practices. The representation of these different factors, to the extent feasible, is to be roughly equivalent to their proportion in the group.

EPA wishes to emphasize that the provision that ten percent of the facilities need to submit quantitative data only applies to the permit application process. The general or individual permit itself may require quantitative data from each facility.

Submittal of Part 2 of the Group Application. As with part 1, part 2 of the Group Application would be submitted to the Office of Water Enforcement and Permits, in Washington, DC. If the information is incomplete, or simply is found to be an inadequate basis for establishing model permit limits, EPA has the authority under section 308 of the Clean Water Act to require that more information be submitted, which may include sampling from facilities that were part of the group application but did not provide data with the initial submission. If the group application is used by a Region or NPDES State to issue a general permit, the general permit should specify procedures for additional coverage under the permit.

If a part 2 is unacceptable or insufficient, EPA has the option to request additional information or to require that the facilities that participated in the group application submit complete individual applications (e.g. facilities that have submitted Form 1 with the group application may be required to submit Form 2F, or facilities which have submitted complete Form 1 and Form 2F information in the group application generally would not have to submit additional information).

Once the group applications are reviewed and accepted, EPA will use the information to establish draft permit terms and conditions for models for individual and general permits. NPDES approved States and EPA regional offices will continue to be the permit-issuing authority for storm water discharges. The NPDES approved States accepting the group application approach and the EPA Regions may then take the model permits and adapt them for their particular area, making adjustments for local water quality standards and other localized characteristics, and making determinations as to the need for an individual storm water permit where general permit coverage is felt to be inappropriate. Permits would be proposed by the Region or NPDES approved State in accordance with current regulations for public comment before becoming final. In NPDES States without general permit authority, or where an individual permit is deemed appropriate, the model permit can serve as the basis for issuing an individual permit.

The group application is an NPDES permit application just like any other and, as such, would be handled through normal permitting procedures, subject to the regulatory provisions applicable to permit issuance. Incomplete or otherwise inadequate submissions would be handled in the same manner as any other inadequate permit application. The permit issuing authority would retain the right to require submission of Form 1, Form 2C and Form 2F from any individual discharger it designates.

Some commenters offered other procedures for developing a group application procedure; however, these were frequently entirely different approaches or so novel that a reproposal would be required. One commenter suggested that those industries that are identified as being likely to pollute should be required to submit quantitative data. Numerous commenters contended

  

that a generic approach for meeting the required information requirements for group applications would allow EPA to develop adequate general permits. EPA does not view these approaches as appropriate.

**5. Group Application: Applicability in NPDES States**

Many commenters expressed concern about how the group application procedure will work within the framework of an NPDES approved State. The relationship between EPA and the States that are authorized to administer the NPDES program, including implementation of the storm water program, is a complicated aspect of this rulemaking. Approved States (there are 38 States and one territory so approved) must have requirements that are at least as stringent as the Federal program; they may be more stringent if they choose. Authority to issue general permits is optional with NPDES States.

EPA has determined that ten percent of the facilities must provide quantitative data in the permit application as noted above. Furthermore, these applications are submitted to EPA headquarters. Consequently States, whether NPDES approved or not, are not in a position to reject or modify this requirement. Such States may determine the amount of sampling to be done pursuant to permit conditions. If they choose to issue general permits they may include such authority in their NPDES program and, ***48028** upon approval of the program by EPA, may then issue general permits. Within the context of the NPDES provisions of the CWA, if States do not have general permitting authority, then general permits are not available in those States.

In response to one comment, EPA does not have authority to issue general or individual permits to facilities in NPDES approved states. Today's rule provides a means for affected industries to be covered by general permits developed via the group application procedure as well as from general permits developed independently of the group application process. Accordingly, today's rule anticipates that most NPDES States will seek general permit issuance authority to implement the storm water program in the most efficient and economical way. Without general permit issuance authority NPDES States will be required to issue individual permits covering storm water discharges to potentially thousands of industrial facilities.

One commenter recommended that States with approved NPDES programs should be involved in determining what industries are representative for submitting quantitative data. EPA recognizes that States will have an interest in this determination and may possess insight as to the appropriateness of using some facilities. However, EPA may be managing hundreds of group applications and approving or disapproving them as expeditiously as possible. EPA believes that involving the States in this already administratively complex and time consuming undertaking would be counterproductive. In any event, NPDES approved States are not bound by the determinations of EPA as to the appropriateness of groups or the issuance of permits based on model permits or individual permits. However, States will be encouraged to use model permits that are developed by EPA. EPA will endeavor to design general and model permits that are effective while also adaptable to the concerns of different States. Again, States are able to develop more stringent standards where they deem it to be appropriate. There are currently seventeen States that have authority to issue general permits: Arkansas, Colorado, Illinois, Kentucky, Minnesota, Missouri, Montana, New Jersey, North Dakota, Oregon, Rhode Island, Utah, Washington, West Virginia and Wisconsin. As suggested in the comments, EPA is encouraging more States to develop general permit issuing authority in order to facilitate the permitting process.

One commenter advised that the rules should state that a NPDES approved State may accept a group application or require additional information. EPA has decided not to explicitly state this in the rule. However, this comment does raise some points that need to be addressed. Because the group application option is a modification of existing NPDES permit application requirements, the State is free to adopt this option, but is not required to. If the State chooses to adopt the group application and it does not have general permit authority, the group application can be used to issue individual permits. If an approved NPDES State chooses to not issue permits based on the group application, facilities that discharge storm water associated with industrial activity that are located in that State must submit individual applications to the State permitting authority. Before submitting a group application, facilities should ascertain from the State permitting authority whether that State intends to issue permits based upon a group application approved by EPA for the purpose of developing general permits. For facilities that discharge storm water associated with industrial activity which are named in a group application, the Director may require an individual facility to submit an individual application where he or she determines that general permit coverage would be inappropriate for the particular facility.

  

One commenter stressed that EPA should streamline the procedure for States desiring to obtain general permit coverage. EPA has, over the last year, streamlined this procedure and encourages States to take advantage of this procedure. EPA recommends that States consider obtaining general permit authority as a means to efficiently issue permits for storm water discharges. These States should contact the Office of Water Enforcement and Permits at EPA Headquarters as soon as possible.

**6. Group Application: Procedural Concerns**

One commenter claimed that the proposed group application process and procedures violated federal law. This commenter claimed that EPA was abrogating its responsibility by allowing a trade association to design a data collection plan in lieu of completing an NPDES application form designed by EPA, thus violating the Federal Advisory Committee Act. The commenter stated that EPA would be improperly influenced by special interests if trade associations were able to design their own storm water data gathering plans. The commenter further asserted that any decisions by EPA on the content of specific group applications would be rulemakings and thus subject to the provisions of the Administrative Procedure Act.

EPA disagrees with the comment that the group application violates the Federal Advisory Committee Act (FACA). FACA governs only those groups that are established or "utilized" by an agency for the purpose of obtaining "advice" or "recommendations." The group application option does not solicit or involve any "advice" or "recommendations." It simply allows submission of data by certain members of a group in accordance with specific regulatory criteria for determining which facilities are "representative" of a group. As such, the group application is merely a submission in accordance and in compliance with specific regulatory requirements and does not contain discretionary uncircumscribed "advice" or "recommendations" as to which facilities are representative of a group.

Thus, the determination of which facilities should submit testing data in accordance with regulatory criteria is little different from many other regulatory requirements where an applicant must submit information in accordance with certain criteria. For example, under 40 CFR 122.21 all outfalls must be tested except where two or more have "substantially identical" effluents. Similarly, quantitative data for certain pollutants are to be provided where the applicant knows or "has reason to believe" such pollutants are discharged. Both of these provisions allow the applicant to exercise discretion in making certain judgments but such action is circumscribed by regulatory standards. EPA further has authority to require these facilities to submit individual applications. In none of these instances are "recommendations" or "advice" involved. EPA also notes that it is questionable whether, in providing for group applications, it is "soliciting" advice or recommendations from groups or that such groups are being "utilized" by EPA as a "preferred source" of advice. See 48 FR 19324 (April 28, 1983). Furthermore, this data collection effort may be supplemented by EPA if, after review of the data, EPA determines additional data is necessary for permit issuance. Other information gathering may act as a check on the group applications received.

EPA also does not agree with this commenter's claim that the group application scheme represents an ***48029** impermissible delegation of the Administrator's function in violation of the CWA regarding data gathering. The Administrator has the broadest discretion in determining what information is needed for permit development as well as the manner in which such information will be collected. The CWA does not require every discharger required to obtain a permit to file an application. Nor does the CWA require that the Administrator obtain data on which a permit is to be based through a formal application process (see 40 CFR 122.21). For years "applications" have not been required from dischargers covered by general permits. EPA currently obtains much information beyond that provided in applications pursuant to section 308 of the CWA. This is especially true with respect to general permit and effluent limitations guidelines development. The group application option is simply another means of data gathering. The Administrator may always collect more data should he determine it necessary upon review of a groups' data submission. And, he may obtain such additional data by whatever means permissible under the Statute that he deems appropriate. Thus, it can hardly be said that by this initial data gathering effort the Administrator has delegated his data gathering responsibilities. In addition, since groups are required to select "representative" facilities, etc., in accordance with specific regulatory requirements established by the Administrator and because EPA will scrutinize part 1 of the group applications and either accept or reject the group as appropriate for a group application, no impermissible delegation has occurred. EPA will make an independent determination of the acceptability of a group application in view of the information required to be submitted by the group applicant, other information available to EPA (such as information on industrial subcategories obtained in developing

effluent limitations guidelines as well as individual storm water applications received as a result of today's rule) and any further information EPA may request to supplement part 1 pursuant to section 308 of the CWA. Moreover, any concerns that a general permit may be based upon biased data can be dealt with in the public permit issuance process.

Finally, EPA also does not agree that the group application option violates the Administrative Procedures Act. Again, the group application scheme is simply a data gathering device. EPA could very well have determined to gather data informally via specific requests pursuant to section 308 of the CWA. In fact, general permit and effluent limitations guideline development proceed along these lines. It would make little sense if the latter informal data gathering process were somehow illegal simply because it is set forth in a rule that allows applicants some relief upon certain showings. In this respect, several of EPA's existing regulations similarly allow an applicant to be relieved from certain data submission requirements upon appropriate demonstrations. For example, testing for certain pollutants and or certain outfalls may be waived under certain circumstances. Most importantly, the operative action of concern that impacts on the public is individual or general permit issuance based upon data obtained. As previously stated, ample opportunity for public participation is provided in the permit issuance proceeding.

**7. Permit Applicability and Applications for Oil and Gas and Mining Operations**

Oil, gas and mining facilities are among those industrial sites that are likely to discharge storm water runoff that is contaminated by process wastes, toxic pollutants, hazardous substances, or oil and grease. Such contamination can include disturbed soils and process wastes containing heavy metals or suspended or dissolved solids, salts, surfactants, or solvents used or produced in oil and gas operations. Because they have the potential for serious water quality impacts, Congress recognized, throughout the development of the storm water provisions of the Water Quality Act of 1987, the need to control storm water discharges from oil, gas, and mining operations, as well as those associated with other industrial activities.

However, Congress also recognized that there are numerous situations in the mining and oil and gas industries where storm water is channeled around plants and operations through a series of ditches and other structural devices in order to prevent pollution of the storm water by harmful contaminants. From the standpoint of resource drain on both EPA as the permitting agency and potential permit applicants, the conclusion was that operators that use good management practices and make expenditures to prevent contamination must not be burdened with the requirement to obtain a permit. Hence, section 402(1)(2) creates a statutory exemption from storm water permitting requirements for uncontaminated runoff from these facilities.

To implement section 402(1)(2), EPA intends to require permits for contaminated storm water discharges from oil, gas and mining operations. Storm water discharges that are not contaminated by contact with any overburden, raw material, intermediate products, finished product, byproduct or waste products located on the site of such operations will not be required to obtain a storm water discharge permit.

The regulated discharge associated with industrial activity is the discharge from any conveyance used for collecting and conveying storm water located at an industrial plant or directly related to manufacturing, processing or raw materials storage areas at an industrial plant. Industrial plants include facilities classified as Standard Industrial Classifications (SIC) 10 through 14 (the mining industry), including oil and gas exploration, production, processing, and treatment operations, as well as transmission facilities. See 40 CFR 122.26(b)(14)(iii). This also includes plant areas that are no longer used for such activities, as well as areas that are currently being used for industrial processes.

a. Oil and Gas Operations. In determining whether storm water discharges from oil and gas facilities are “contaminated”, the legislative history reflects that the EPA should consider whether oil, grease, or hazardous materials are present in storm water runoff from the sites described above in excess of reportable quantities (RQs) under section 311 of the Clean Water Act or section 102 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). [Vol. 132 Cong. Rec. H10574 (daily ed. October 15, 1986) Conference Report].

  

Many of the comments received by EPA regarding this exemption focused on the concern that EPA's test for requiring a permit is and would subject an unnecessarily large number of oil and gas facilities to permit application requirements. Specific comments made in support of this concern are addressed below.

A primary issue raised by commenters centered on how to determine when a storm water discharge from an oil or gas facility is “contaminated”, and therefore subject to the permitting program under section 402 of the CWA. Many of the comments received from industry representatives objected to the Agency's intent as expressed in the proposal to use past discharges as a trigger for submitting permit applications.

The proposed rule provided that the notification requirements for releases in excess of RQs established under the CWA and CERCLA would serve as a ***48030** basis for triggering the submittal of permit applications for storm water discharges from oil and gas facilities. As described in the proposal, oil and gas operations that have been required to notify authorities of the release of either oil or a hazardous substance via a storm water route would be required to submit a permit application. In other words, any facility required to provide notification of the release of an RQ of oil or a hazardous substance in storm water in the past would be required to apply for a storm water permit under the current rule. In addition, any facility required to provide notification regarding a release occurring from the effective date of today's rule forward would be required to apply for a storm water permit.

Commenters maintained that the use of historical discharges to require permit applications is inconsistent with the language and intent of section 402(1)(2) of the CWA, and relevant legislative history, both of which focus on present contamination. Requiring storm water permits based solely on the occurrence of past contaminated discharges, even where no present contamination is evident, would go beyond the statutory requirement that EPA not issue a permit absent a finding present contamination. Commenters also noted that the proposal did not take into account the fact that past problems leading to such releases may have been corrected, and that requiring an NPDES permit may no longer be necessary. The result of such a requirement, commenters maintained, would be an excessive number of unnecessary permit applications being submitted, at significant cost and minimal benefit to both regulated facilities and regulating authorities.

Commenters also indicated that using the release of reportable quantities of oil, grease or hazardous substances as a permit trigger would identify discharges of an isolated nature, rather than the continuous discharges, which should be the focus of the NPDES permit program under section 402. Such an approach, commenters maintained, is inconsistent with existing regulations under section 311 of the CWA, and would result in permit applications from facilities that are more appropriately regulated under section 311.

Despite these criticisms, many commenters recognized that the Agency is left with the task of determining when discharges from oil and gas facilities are contaminated, in order to regulate them under section 402(1)(2). It was suggested by numerous commenters that the EPA adopt an approach similar to that used under section 311 of the CWA for Spill Prevention Control and Countermeasure (SPCC) Plans. Under SPCC, facilities that are likely to discharge oil into waters of the United States are required to maintain a SPCC plan. In the event the facility has a spill of 1,000 gallons or 2 or more reportable quantities of oil in a 12 month period, the facility is required to submit its SPCC plan to the Agency. The triggering events proposed by the commenters for storm water permits for oil and gas operations are six reportable sheens or discharges of hazardous substances (other than oil) in excess of section 311 or section 102 reportable quantities via a storm water point source route over any thirty-six month period. It was suggested that if this threshold is reached, an operator would then file a permit application (or join a group application) based upon the presumption that its current storm water discharges are contaminated.

In response to these comments, the Agency believes that past releases that are reportable quantities can be a valid indicator of the potential for present contamination of discharges. The legislative history as cited above supports this conclusion. EPA would note that the existence of a RQ release would serve only as a triggering mechanism for a permit application. Under the proposed rule, evidence of past contamination would merely require submission of a permit application and would not be used as conclusive evidence of current contamination. The determination as to whether a permit would be actually required

  

due to current contaminated discharge would be made by the permitting authority after reviewing the permit application. The fact of a past RQ release does not necessarily imply a conclusive finding of contamination, only that sufficient potential for contamination exists to warrant a permit application or the collection of other further information. Today's rule does not change the proposed approach in this respect. Thus, EPA does not believe that today's rule exceeds the authority of section 402(1)(2).

EPA believes that there is no legal impediment to using past RQ discharges as a trigger for requiring a storm water permit application. EPA notes that, as mentioned above, even those commenters who objected to the proposed test on legal authority grounds merely offered an alternate test that requires more releases to have occurred within a shorter period of time before a permit application is required.

Therefore, the only disagreement that remains is over what constitutes a reasonable test that will identify facilities with the potential for storm water contamination. EPA notes that neither the statute nor the legislative history provides any guidance on this question. Furthermore, EPA disagrees with the commenters who suggested that 6 releases in the past 3 years or 2 releases in the past year are necessarily more valid measures of the potential for current contamination than EPA's proposed test. There is no statistical or other basis for preferring one test to the other. However, EPA does agree with those commenters that suggest that a single release in the distant past may not accurately reflect current conditions and the current potential for contamination.

EPA has therefore amended today's rule to provide that only oil and gas facilities which have had a release of an RQ of oil or hazardous substances in storm water in the past three years will be required to submit a permit application. EPA believes that limiting the permit trigger to events of the past three years will address commenters' concerns regarding the use of "stale history" in determining whether an application is required. EPA notes that the three year cutoff is consistent with the requirement for industrial facilities to report significant leaks or spills at the facility in their storm water permit applications. See 40 CFR 122.26(c)(1)(i)(D).

Commenters asserted that EPA and the States must have some reasonable basis for concluding that a storm water discharge is contaminated before requiring permit applications or permits. Commenters believed that § 122.26(c)(1)(iii)(B) as proposed implied that the Agency's authority in this respect is unrestricted. In response, EPA may collect such data by whatever appropriate means the statute allows, in order to obtain information that a permit is required. Usually, the most practical tool for doing so is the permit application itself. However, if necessary to supplement the information made available to the Agency, EPA has broad authority to obtain information necessary to determine whether or not a permit is required, under section 308 of the Clean Water Act. Given the plain language of the CWA and the Congressional intent as manifested in the legislative history, the Agency is convinced that the approach described above is appropriate. Yet, as further discussed below, EPA has also deleted as redundant § 122.26(c)(1)(iii)(B).

Regarding the types of facilities included in the storm water regulation, a number of commenters suggested that the Agency has misconstrued the meaning of facilities "associated with ***48031** industrial activity", and has proposed an overly broad definition of such facilities in the oil and gas industry. Specifically, commenters suggested that only the manufacturing sector of the oil and gas industry should be subject to storm water permit application requirements, and that exploration and production activities, gas stations, terminals, and bulk plants should all be exempted from storm water permitting requirements. Commenters maintain that this broad interpretation would subject many oil and gas facilities to the storm water permit requirements, when these were not intended by Congress to be so regulated. As a second point related to this issue, some commenters felt that transmission facilities were not intended to be regulated under the storm water provisions, and should be exempted from permit requirements. This would be consistent, it was argued, with legislative history which concluded that transmission facilities do not significantly contribute to the contamination of water.

The Agency disagrees that these facilities do not fall under the storm water permitting requirements as envisioned by Congress. SIC 13, which is relied upon by EPA to identify these oil and gas operations, describes oil and gas extraction industries as including facilities related to crude oil and natural gas, natural gas liquids, drilling oil and gas wells, oil and gas exploration and field services. Moreover, legislative history as it applies to industrial activities, and thus to oil and gas (mining) operations,

  

expressly includes exploration, production, processing, transmission, and treatment operations within the purview of storm water permitting requirements and exemptions. EPA's intent is for storm water permit requirements (and the exemption at hand) to apply to the activities listed above (exploration, production, processing, treatment, and transmission) as they relate to the categories listed in SIC 13.

Commenters requested clarification from the Agency that storm water discharges from oil and gas facilities require a permit or the filing of a permit application only when they are contaminated at the point of discharge into waters of the United States. Commenters noted that large amounts of potentially contaminated stormwater may not enter waters of the United States, or may enter at a point once the discharge is no longer “contaminated”. In these cases, it should be clear that no permit or permit application is required.

EPA agrees that oil and gas exploration, production, processing, or treatment operations or transmission facilities must only obtain a storm water permit when a discharge to waters of the U.S. (including those discharges through municipal separate storm sewers) is contaminated. A permit application will be required when any discharge in the past three years or henceforth meets the test discussed above.

Under the proposed rule, the Agency stated at § 122.26(c)(1)(iii)(B) that the Director may require on a case-by-case basis the operator of an existing or new storm water discharge from an oil or gas exploration, production, processing, or treatment operation, or transmission facility to submit an individual permit application. The Agency has removed this section since CWA section 402(1)(2), as codified in 122.26(c)(1)(iii)(A), adequately addresses every situation where a permit should be required for these facilities.

b. Use of Reportable Quantities to Determine if a Storm Water Discharge from an Oil or Gas Operation is Contaminated. Section 311(b)(5) of the CWA requires reporting of certain discharges of oil or a hazardous substance into waters of the United States (see 44 FR 50766 (August 29, 1979)). Section 304(b)(4) of the Act requires that notification levels for oil and hazardous substances be set at quantities which may be harmful to the public health or welfare of the United States, including but not limited to fish, shellfish, wildlife, and public or private property, shorelines and beaches. Facilities which discharge oil or a hazardous substance in quantities equal to or in excess of an RQ, with certain exceptions, are required to notify the National Response Center (NRC).

Section 102 of CERCLA extended the reporting requirement for releases equal to or exceeding an RQ of a hazardous substance by adding chemicals to the list of hazardous substances, and by extending the reporting requirement (with certain exceptions) to any releases to the environment, not just those to waters of the United States.

Pursuant to section 311 of the CWA, EPA determined reportable quantities for discharges by correlating aquatic animal toxicity ranges with 5 reporting quantities, i.e., 1-, 10-, 100-, 1000-, and 5000- pounds per 24 hour period levels. Reportable quantity adjustments made under CERCLA rely on a different methodology. The strategy for adjusting reportable quantities begins with an evaluation of the intrinsic physical, chemical, and toxicological properties of each designated hazardous substance. The intrinsic properties examined, called “primary criteria,” are aquatic toxicity, mammalian toxicity (oral, dermal, and inhalation), ignitability, reactivity, and chronic toxicity. In addition, substances that were identified as potential carcinogens have been evaluated for their relative activity as potential carcinogens. Each intrinsic property is ranked on a five-tier scale, associating a specific range of values on each scale with a particular reportable quantity value. After the primary criteria reportable quantities are assigned, the hazardous substances are further evaluated for their susceptibility to certain extrinsic degradation processes (secondary criteria). Secondary criteria consider whether a substance degrades relatively rapidly to a less harmful compound, and can be used to raise the primary criteria reportable quantity one level.

Also pursuant to section 311, EPA has developed a reportable quantity for oil and associated reporting requirements at 40 CFR part 110. These requirements, known as the oil sheen regulation, define the RQ for oil to be the amount of oil that violates

applicable water quality standards or causes a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or causes a sludge or emulsion to be deposited.

Reportable quantities developed under the CWA and CERCLA were not developed as effluent guideline limitations which establish allowable limits for pollutant discharges to surface waters. Rather, a major purpose of the notification requirements is to alert government officials to releases of hazardous substances that may require rapid response to protect public health, welfare, and the environment. Notification based on reportable quantities serves as a trigger for informing the government of a release so that the need for response can be evaluated and any necessary response undertaken in a timely fashion. The reportable quantities do not themselves represent any determination that releases of a particular quantity are actually harmful to public health, welfare, or the environment.

EPA requested comment on the use of RQs for determining contamination in discharges from oil and gas facilities. As noted above numerous commenters supported the concept of using reportable quantities under certain circumstances. Comments on the measurement of oil sheens for the purpose of triggering a permit application were divided. Some commented that it is much too stringent because the amount of oil creating a ***48032** sheen may be a relatively small amount. Others viewed the test as a quick, easy, practical method that has been effective in the past.

In relying on the reporting requirements associated with releases in excess of RQs for oil or hazardous substances to trigger the submittal of permit applications for oil and gas operations, the Agency believes that the use of the reporting requirements for oil will be particularly useful. The Agency believes that the release of oil to a storm water discharge in amounts that cause an oil sheen is a good indicator of the potential for water quality impacts from storm water releases from oil and gas operations. In addition, given the extremely high number of such operations (the Agency estimates that there are over 750,000 oil wells alone in the United States), relying on the oil sheen test to determine if storm water discharges from such sites are "contaminated" will be a far easier test for operators to determine whether to file a storm water permit application than a test based on sampling. The detection of a sheen does not require sophisticated instrumentation since a sheen is easily perceived by visual observation. EPA agrees with those comments calling the oil sheen test an appropriate measure for triggering a storm water permit application. In adopting this approach, EPA recognizes, as pointed out by many commenters that an oil sheen can be created with a relatively small amount of oil.

One commenter suggested that contamination must be caused by contact with on-site material before being subject to permit application requirements. The Agency agrees with this comment. Those facilities that have had releases in excess of reportable quantities will generally have contamination from contact with on-site material as described in the CWA. Thus, use of the RQ test is an appropriate trigger. As discussed above, determination of whether contamination is present to warrant issuance of a permit will be made in the context of the permit proceeding.

One commenter believed that the use of RQs is inappropriate because "the statute intended to exempt only oil and gas runoff that is not contaminated at all." The Agency wishes to clarify that reportable quantities are being used to determine what facilities need to file permit applications and to describe what is meant by the term "contaminated." The Director may require a permit for any discharges of storm water runoff contaminated by contact with any overburden, raw material, intermediate product, finished product, by product or waste product at the site of such operations. The use of RQs is solely a mechanism for identifying the facilities most likely to need a storm water permit consistent with the legislative history of section 402(l)(2).

c. Mining Operations. The December 7, 1988 proposal would establish background levels as the standard used to define when a storm water discharge from a mining operation is contaminated. When a storm water discharge from a mining site was found to contain pollutants at levels that exceed background levels, the owner or operator of the site was required to submit a permit application for that operation. The proposal was founded upon language in the legislative history stating that the determination of whether storm water is contaminated by contact with overburden, raw material, intermediate product, finished product, byproduct, or waste products "shall take into consideration whether these materials are present in such stormwater runoff . . . above natural background levels". [Vol. 132 Cong. Rec. H10574 (daily ed. Oct. 15, 1986) Conference Report].

  

Comments received on this component of the rule suggested that background levels of pollutants would be very difficult to calculate due to the complex topography frequently encountered in alpine mining regions. For example, if a mine is located in a mountain valley surrounded on all sides by hills, the site will have innumerable slopes feeding flow towards it. Under such circumstances, determining how the background level is set would prove impractical. Commenters indicated that it is very difficult to measure or determine background levels at sites where mining has occurred for prolonged periods. In many instances, data on original background levels may not be available due to long-term site activity. As a result, any background level established will vary based on the type and level of previous activity. In addition, mining sites typically have background levels that are naturally distinct from the surrounding areas. This is due to the geologic characteristics that makes them valuable as mining sites to begin with. This also makes it difficult to establish accurate background levels.

Because of these concerns EPA has decided to drop the use of background levels as a measure for determining whether a permit application is required. Accordingly, a permit application will be required when discharges of storm water runoff from mining operations come into contact with any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site. Similar to the RQ test for oil and gas operations, EPA intends to use the “contact” test solely as a permit application trigger. The determination of whether a mining operation's runoff is contaminated will be made in the context of the permit issuance proceedings.

If the owner or operator determines that no storm water runoff comes into contact with overburden, raw material, intermediate product, finished product, byproduct, or waste products, then there is no obligation to file a permit application. This framework is consistent with the statutory provisions of section 402(1)(2) and is intended to encourage each mining site to adopt the best possible management controls to prevent such contact.

Several commenters stated that EPA's use of total pollutant loadings for determining permit applicability is not consistent with the general framework of the NPDES program. Their concern is that such evaluation criteria depart from how the NPDES program has been administered in the past, based on concentration limits. In addition, commenters requested that EPA clarify that information on mass loading will be used for determining the need for a permit only. Since the analysis of natural background levels as a basis for a permit application has been dropped from this rulemaking, these issues are moot.

Commenters noted that the proposed rule did not specify what impact this rulemaking has on the storm water exemptions in 40 CFR 440.131. The commenters recommended not changing any of these provisions. Some commenters indicated that mining facilities that have NPDES permits should not be subject to additional permitting under the storm water rule. EPA does not intend that today's rule have any effect on the conditional exemptions in 40 CFR 440.131. Where a facility has an overflow or excess discharge of process-related effluent due to stormwater runoff, the conditional exemptions in 40 CFR 440.131 remain available.

Several commenters note that the term overburden, as used in the context of the proposed storm water rule, is not defined and recommended that this term should be defined to delineate the scope of the regulation. EPA agrees that the term overburden should be defined to help properly define the scope the storm water rule. In today's rule, the term ***48033** overburden has been clarified to mean any material of any nature overlying a mineral deposit that is removed to gain access to that deposit, excluding topsoil or similar naturally-occurring surface materials that are not disturbed by mining operations. This definition is patterned after the overburden definition in SMCRA, and is designed to exclude undisturbed lands from permit coverage as industrial activity. However, the definition provided in this regulation may be revised at a later date, to achieve consistency with the promulgation of RCRA Subtitle D mining waste regulations in the future.

Numerous commenters raised issues pertaining to the inclusion of inactive mining areas as subject to the stormwater rule. Some commenters indicated that including inactive mine operations in the rule would create an unreasonable hardship on the industry. EPA has included inactive mining areas in today's rule because some mining sites represent a significant source of contaminated stormwater runoff. EPA has clarified that inactive mining sites are those that are no longer being actively mined, but which have an identifiable owner/operator. The rule also clarifies that active and inactive mining sites do not include sites where

  

mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials, nor sites where minimal activities required for the sole purpose of maintaining the mining claim are undertaken. The Agency would clarify that claims on land where there has been past extraction, beneficiation, or processing of mining materials, but there is currently no active mining are considered inactive sites. However, in such cases the exclusion discussed above for uncontaminated discharges will still apply.

EPA's definition of active and inactive mining operations also excludes those areas which have been reclaimed under SMCRA or, for non-coal mining operations, under similar applicable State or Federal laws. EPA believes that, as a general matter, areas which have undergone reclamation pursuant to such laws have concluded all industrial activity in such a way as to minimize contact with overburden, mine products, etc. EPA and NPDES States, of course, retain the authority to designate particular reclaimed areas for permit coverage under section 402(p)(2)(E).

The proposed rule had included an exemption for areas which have been reclaimed under SMCRA, although the language of the proposed rule inadvertently identified the wrong universe of coal mining areas. The final rule language has been revised to clarify that areas which have been reclaimed under SMCRA (and thus are no longer subject to 40 CFR part 434 subpart E) are not subject to today's rule. Today's rule thus is consistent with the coal mining effluent guideline in its treatment of areas reclaimed under SMCRA.

In response to comments, EPA has also expanded this concept to exclude from coverage as industrial activity non-coal mines which are released from similar State or Federal reclamation requirements on or after the effective date of this rule. EPA believes it is appropriate, however, to require permit coverage for contaminated runoff from inactive non-coal mines which may have been subject to reclamation regulations, but which have been released from those requirements prior to today's rule. EPA does not have sufficient evidence to suggest that each State's previous reclamation rules and/or Federal requirements, if applicable, were necessarily effective in controlling future storm water contamination.

**8. Application Requirements for Construction Activities**

As discussed above, EPA has included storm water discharges from activities involving construction operations that result in the disturbance of five acres total land in the regulatory definition of storm water discharges associated with industrial activity.

This is a departure from the proposed rule which required permit applications for discharges from activities involving construction operations that result in the disturbance of less than one acre total land area and (which are not part of a larger common plan of development or sale; or operations that are for single family residential projects, including duplexes, triplexes, or quadruplexes, that result in the disturbance of less than five acre total land areas and which are not part of a larger common plan of development or sale). The reasons for this change are noted below.

Many commenters representing municipalities, States, and industry requested that clearing, grading, and excavation activities not be included in the definition of storm water discharges associated with industrial activity. It was suggested that EPA delay including construction activities until after the studies mandated in section 402(p)(5) of the CWA are completed. Other commenters felt that NPDES permits are not appropriate for construction discharges due to their short term, intermediate and seasonal nature. Another commenter felt that only the construction activities on the sites of the industrial facilities identified in the other subsections of the definition of “associated with industrial activity” should be included.

EPA believes that storm water permits are appropriate for the construction industry for several reasons. Construction activity at a high level of intensity is comparable to other activity that is traditionally viewed as industrial, such as natural resource extraction. Construction that disturbs large tracts of land will involve the use of heavy equipment such as bulldozers, cranes, and dump trucks. Construction activity frequently employs dynamite and/or other equipment to eliminate trees, bedrock, rockwork, and to fill or level land. Such activities also engage in the installation of haul roads, drainage systems, and holding ponds that are typical of the industrial activity identified in § 122.26(b)(14)(i-x). EPA cannot reasonably place such activity in the same category as light commercial or retail business.

  

Further, the runoff generated while construction activities are occurring has potential for serious water quality impacts and reflects an activity that is industrial in nature. Where construction activities are intensive, the localized impacts of water quality may be severe because of high unit loads of pollutants, primarily sediments. Construction sites can also generate other pollutants such as phosphorus, nitrogen and nutrients from fertilizer, pesticides, petroleum products, construction chemicals and solid wastes. These materials can be toxic to aquatic organisms and degrade water for drinking and water-contact recreation. Sediment runoff rates from construction sites are typically 10 to 20 times that of agricultural lands, with runoff rates as high as 100 times that of agricultural lands, and 1,000 to 2,000 times that of forest lands. Even small construction sites may have a significant negative impact on water quality in localized areas. Over a short period of time, construction sites can contribute more sediment to streams than was previously deposited over several decades.

EPA is convinced that because of the impacts of construction discharges that are directly to waters of the United States, such discharges should be addressed by permits issued by Federal or NPDES State permitting authorities. It is evident from numerous studies and reports submitted under section 319 of the CWA that discharges from construction sites continue to be a major source of water quality problems and water quality standard violations. ***48034** Accordingly EPA is compelled to address these source under these regulations and thereby regulate these sources under a nationally consistent program with an appropriate level of enforcement and oversight.

Techniques to prevent or control pollutants in storm water discharges from construction are well developed and understood. A primary control technique is good site planning. A combination of nonstructural and structural best management practices are typically used on construction sites. Relatively inexpensive nonstructural vegetative controls, such as seeding and mulching, are effective control techniques. In some cases, more expensive structural controls may be necessary, such as detention basins or diversions. The most efficient controls result when a comprehensive storm water management system is in place. Another reason that EPA has decided to address this class of discharges is that it is part of the Agency's recent emphasis on pollution prevention. Studies such as NURP indicate that it is much more cost effective to develop measures to prevent or reduce pollutants in storm water during new development than it is to correct there problems later on. Many of these prevention and control practices, which can take the form of grading patterns as well as other controls, generally remain in place after the construction activities are completed.

a. Permit Application Requirements. In today's rulemaking, EPA has set forth distinct permit application requirements for these construction activities, at § 122.26(c)(1)(ii), to be used where general permits to be developed and promulgated by EPA are inapplicable. Such facilities will be required to provide a map indicating the site's location and the name of the receiving water and a narrative description of:

- The nature of the construction activity;

- The total area of the site and the area of the site that is expected to undergo excavation during the life of the permit;

- Proposed measures, including best management practices, to control pollutants in storm water discharges during construction, including a description of applicable Federal requirements and State or local erosion and sediment control requirements;

- Proposed measures to control pollutants in storm water discharges that will occur after construction operations have been completed, including a description of applicable State or local requirements, and

- An estimate of the runoff coefficient (fraction of total rainfall that will appear as runoff) of the site and the increase in impervious area after the construction addressed in the permit application is completed, a description of the nature of fill material and existing data describing the soil or the quality of the discharge.

  

Permit application requirements for construction activities do not include the submission of quantitative data. EPA believes that the changing nature of construction activities at a site to be covered by the permit application requirements generally would not be adequately described by quantitative data. The comments received by EPA support this determination. One State commented that a program they instituted has been based on quantitative data for the past 10 years and has proven to be very awkward, even unworkable.

Twenty commenters responded to the issue of appropriate construction site application deadlines including: Three towns (<100,000 population); one medium municipality; one large municipality; one agency associated with a large municipality; three agencies associated counties; three agencies associated with States; two industries; five industrial associations; and one private organization representing industry. The commenters primarily focused on actual deadlines and permitting authority response time.

Applicants for permits to discharge storm water into the waters of the United States from a construction site would normally be required to submit permits in the same time frame as new sources and new discharges. This rulemaking requires permit applications from such sources to be submitted at least 180 days prior to the date on which the discharge is to commence. Four commenters agreed with the application deadline of 180 days prior to commencement of discharge. Three commenters felt it would be difficult to apply 180 days prior to when the discharge was to begin. Three commenters recommended shortening the time period to 90 days. Numerous other commenters were concerned over delays during the permitting authority's review of the permit application. The commenters requested that a maximum response time be set in the regulation. Suggested maximum response times were 90 and 30 days.

In response to these comments, EPA has changed the application deadline for construction permits from at least 180 days prior to discharge to at least 90 days prior to the date when construction is to commence. This change reflects EPA's recognition of the nature of construction operations in that developers/builders may not be aware of projects 180 days before they are scheduled to begin.

Numerous commenters expressed concern over who should be responsible for applying for the permit. Two commenters felt the owner should be responsible so that construction bid documents can include the storm water management requirements and to avoid confusion among multiple subcontractors. One commenter thought that either the owner/developer, or general contractor should be responsible. Another commenter suggested that the designer should obtain the permit which would allow all necessary erosion controls to be part of the project plan. Several commenters requested that the responsibility simply be more clearly defined.

In response to these comments, EPA would clarify that the operator will generally be responsible for submitting the permit application. Under existing regulations at § 122.21(b), when a facility is owned by one person but operated by another, then it is the duty of the operator to apply for the permit. Due to the temporary nature of construction activities, EPA believes that the operator is the most appropriate person to be responsible for both short and long term best management practices included on the site. EPA considers the term “operator” to include a general contractor, who would generally be familiar enough with the site to prepare the application or to ensure that the site would be in compliance with the permit requirements. General contractors, in many cases, will often be on site coordinating the operation among his/her staff and any subcontractors. Furthermore, the operator/general contractor would be much more familiar with construction site operations than the owner and should be involved in the site planning from its initial stages. The application requirements in today's rule are designed to provide flexibility in developing controls to reduce pollutants in storm water discharges from construction sites. A significant aspect to this is the role of State and local authorities in control of construction storm water discharges. Sixty-three commenters addressed the question of what the role of State and local authorities should be. Most of these commenters supported local government control of construction discharges and that qualified State programs should satisfy Federal requirements.

Many commenters representing municipalities, States, and industry, felt that local government should have full control over construction storm water ***48035** discharges, either under existing programs or those required by their municipal permit. EPA

  

agrees with these comments as far as discharges through municipal storm sewers are concerned. EPA is requiring municipalities that are required to submit municipal permit applications under this regulation to describe their program for controlling storm water discharges from construction activities into their separate storm sewers. It is envisioned that municipalities will have primary responsibility over these discharges through NPDES municipal storm water permits. However, EPA also plans to cover such discharges under general permits to be promulgated in the near future.

In response to several comments that the regulation should provide flexibility for qualified State programs to satisfy Federal requirements, the application requirements recognize that many States have implemented erosion and sediment control programs. The permit application requires a brief description of these programs. This is intended to ensure consistency between NPDES permit requirements and other State controls. Permit applicants will be in the best position to pass on this site-specific information to the permitting authority. States or Federal NPDES authorities will have the ability to exercise authority over these discharges as will other State and local authorities responsible for construction. EPA envisions NPDES permitting efforts will be coordinated with any existing programs.

The proposed rule requested comments on appropriate measures to reduce pollutants in construction site runoff. Numerous commenters representing municipalities, States, and industry responded. Some commenters recommended specific best management practices (BMPs) whereas others suggested ways in which the measures should be incorporated into the program. One commenter suggested that EPA establish design and performance standards for appropriate BMPs. One State commenter recommended requiring a schedule or sequence for use of BMPs. A municipality suggested developing guidance on erosion control at construction sites and disseminating the guidance to educate contractors and construction workers in proper erosion control techniques. The Agency is continuing to review these recommendations for the purposes of permit development and issuance.

Another commenter suggested that further research be done to determine the effectiveness of particular BMPs in reducing pollutants in construction site runoff. EPA agrees that more research and studies can be undertaken to develop methodologies for more effective storm water controls and will continue to lookat these concerns pursuant to section 402(p)(5) studies. However, EPA is convinced that enough information, technology, and proven BMP's are available to address these discharges in this regulation.

Specific BMPs suggested by the commenters include: wheel washing; locked exit roadways, street cleaning methods which exclude sheet washing; clearing and grading codes; construction standards; riparian corridors; solids retention basins; soil erosion barriers; selected excavation; adequate collection systems; vegetate disturbed areas; proper application of fertilizers; proper equipment storage; use of straw bales and filter fabrics; and use of diversions to reduce effective length of slopes. EPA is continuing to evaluate these suggestions for developing appropriate permit conditions for construction activity.

b. Administrative Burdens. Many commenters representing municipalities, States, and industry commented on the administrative burdens of individually permitting each construction site discharging to waters of the United States. The extensive use of general permits for storm water discharges from construction activities that are subject to NPDES requirements is anticipated to minimize administrative delays associated with permit issuance. Many commenters strongly endorsed extensive use of general permits. In addition the Agency will provide as much assistance as possible for developing appropriate permit conditions.

Many commenters responded to the use of acreage limits in determining which construction sites are required to submit a permit application, including several cities, counties and States. Some commenters generally supported the use of an acre limit. Many commenters suggested increasing the acreage limit. Several suggested using a five acre limit for both residential and nonresidential development. Others suggested greater acreage as the cutoff. Two commenters concurred with the proposed limit of one acre/five acres and one commenter suggested lowering the residential limit to one acre.

  

Other factors were suggested as a means to create a cutoff for requiring permit applications. Several commenters suggested exempting construction that would be completed with a certain time frame, such as construction of less than 12 months. EPA believes that this is inappropriate because some construction can be intensive and expansive, but nonetheless take place over a short period of time, such as a parking lot. One commenter suggested basing the limit on the quantity of soil moved, i.e., cubic yards. In response, this approach would not be particularly helpful since removal of soil will not necessarily relate to the amount of land surface disturbed and exposed to the elements. Another commenter suggested that where there is single family detached housing construction that should trigger applications as well as the proposed acreage limit. This would not be appropriate since EPA is attempting to focus only on those construction activities that resemble industrial activity. After considering these and similar comments EPA has limited the definition of "storm water discharge associated with industrial activity" by exempting from the definition those construction operations that result in the disturbance of less than five acres of total land area which are not part of a larger common plan of development or sale. In considering the appropriate scope of the definition of storm water discharge associated with industrial activity as it relates to construction activities, EPA recognized that a wide variety of factors can affect the water quality impacts associated with construction site runoff, including the quality of receiving waters, the size of the area disturbed, soil conditions, seasonal rainfall patterns, the slope of area disturbed, and the intensity of construction activities. These factors will be considered by the permit writer when issuing the permit. However, as noted above, EPA views such site-specific factors to be too difficult to define in a regulatory framework that is national in scope. For example, attempting to adjust permit application triggers based upon a myriad of regional rainfall patterns is not a practical solution. However, permit conditions adjusted for specific geographical areas may be appropriate.

Under the December 7, 1988, proposal the definition of industrial activity exempted: construction operations that resulted in the disturbance of less than one acre total land area which was not part of a larger common plan of development or sale; or operations for single family residential projects, including duplexes, triplexes, or quadruplexes, that result in the disturbance of less than five acre total land areas which were not part of a larger common plan of development or sale. EPA distinguished between single family residential development and ***48036** other commercial development because other commercial development is more likely to occur in more densely developed areas. Also, it was reasoned that other commercial development provides a more complete opportunity to develop controls that remain in place after the construction activity is completed, since continued maintenance after the permit has expired, is more feasible.

However, EPA has decided to depart from the proposal and use an unqualified five acre area in today's final rule. This limit has been selected, in part, because of administrative concerns. EPA recognizes that State and local sediment and erosion controls may address construction activities disturbing less five acres for residential development; the five acre limit in today's rule is not intended to supersede more stringent State or local sediment and erosion controls. In light of the comments, EPA is convinced that the acreage limit is appropriate for identifying sites that are amount to industrial activity. Several comments suggested higher acreage limits without giving a supporting rationale except administrative concerns. Several commenters agreed that the five acre limit is suitable, but again without specifying why they agreed. EPA is convinced, however, that the acreage limits as finalized in today's rule reflect an earth disturbance and/or removal effort that is industrial in magnitude. Disturbances on large tracts of land will employ more heavy machinery and industrial equipment for removing vegetation and bedrock.

For construction facilities that are not included in the definition of storm water discharge associated with industrial activity, EPA will consider the appropriate procedures and methods to reduce pollutants in construction site runoff under the studies authorized by section 402(p)(5) of the CWA. EPA will also consider under section 402(p)(5) appropriate procedures and methods during post-construction for maintaining structural controls developed pursuant to NPDES permits issued for storm water discharges associated with industrial activity from construction sites.

Numerous commenters requested clarification as to whether permits for storm water discharges from construction activities at an industrial facility are required. EPA is requiring permits for all storm water discharges from construction activities where the land disturbed meets the requirements established in § 122.26(b)(14)(x) and which discharge into waters of the United States. The location of the construction activity or the ultimate land use at the site does not factor into the analysis.

  

### *G. Municipal Separate Storm Sewer Systems*

**1. Municipal Separate Storm Sewers**

Today's rule defines "municipal separate storm sewer" at § 122.26(b)(8) to include any conveyance or system of conveyances that is owned or operated by a State or local government entity and is designed for collecting and conveying storm water which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2. It is important to note that today's permit application requirements for discharges from municipal separate storm sewer systems serving a population of 100,000 or more do not apply to discharges from combined sewers (systems designed as both a sanitary sewer and a storm sewer). For purposes of calculating whether a municipal separate storm sewer system meets the large or medium population criteria, a municipality may petition to have the population served by a combined sewer deducted from the total population.Section 122.26(f) of today's rule describes this procedure.

EPA requested comments on whether different language for the definition of municipal separate storm sewer would clarify responsibility under the NPDES permit system. Comments were also requested on whether the definition needed to be clarified by explicitly stating that municipal streets and roads with drainage systems (curb and gutter, ditches, etc.) are part of the municipal storm sewer system, and that the owners or operators of such roads are responsible for such discharges. Numerous comments were received by EPA on this issue. Some commenters questioned whether road culverts and road ditches were municipal separate storm sewers, while others specifically recommended that further clarifying language should be added so that owners and operators of roads and streets understand that they are covered by this regulation. In light of these comments, EPA has clarified that municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains that discharge into the waters of the United States are municipal separate storm sewers. One commenter asked if "other wastes" in the proposed definition of municipal separate storm sewer (40 CFR 122.26 (b)(8)(i)) included storm water. In response, EPA has added "storm water" to this definition in order to clarify that the rule addresses such systems.

EPA requested comments on whether legal classifications such as "storm sewers that are not private (e.g. public, district or joint district sewers)" would provide a clearer definition of municipal separate storm sewer than an owner or operator criterion, especially for the purpose of determining responsibility under the NPDES program. Most commenters agreed that the owner/operator concept, and the additional language noted above, is sufficient for this purpose. EPA also requested comments on to what extent the owner/operator concept should apply to municipal governments with land-use authority over lands which contribute storm water runoff to the municipal storm sewer system, and how the responsibility should be clarified. In response to comments on this point, EPA has addressed these concerns in the context of clarifying what municipal entities are responsible for applying for a permit covering storm water discharges from municipal systems in section VI.H. below.

One commenter expressed a desire for clarification as to whether conveyances that were once used for the conveyance of storm water, but are no longer used in that manner, are covered by the definition. EPA emphasizes that this rulemaking only addresses conveyances that are part of a separate storm sewer system that discharges storm water into waters of the United States.

One commenter stated that if EPA intends to regulate roadside collection systems then EPA must repropose since these were not considered by the public. EPA disagrees with this comment since one of the options specifically addressed the inclusion of roadside drainage systems and roads in the definition of municipal separate storm sewer system. In addition, the public recognized the issue in comments on the proposal. EPA would note that several commenters specifically endorsed EPA's inclusion of these conveyances.

**2. Effective Prohibition on Non-Storm Water Discharges**

Section 402(p)(3)(B)(ii) of the amended CWA requires that permits for discharges from municipal storm sewers shall include a requirement to effectively prohibit non-storm water discharges into the storm sewers. Based on the legislative history of section 405 of the WQA, EPA does not interpret the effective prohibition on non-storm water discharges to municipal separate storm sewers to apply to discharges that are not composed entirely of storm water, as long as such discharge has been issued

a separate NPDES permit. Rather, ***48037** an "effective prohibition" would require separate NPDES permits for non-storm water discharges to municipal storm sewers. In many cases in the past, applicants for NPDES permits for process wastewaters and other non-storm water discharges have been granted approval to discharge into municipal separate storm sewers, provided that the permit conditions for the discharge are met at the point where the discharge enters into the separate storm sewer. Permits for such discharges must meet applicable technology-based and water-quality based requirements of Sections 402 and 301 of the CWA. If the permit for a non-storm water discharge to a municipal separate storm sewer contains water-quality based limitations, then such limitations should generally be based on meeting applicable water quality standards at the boundary of a State established mixing zone (for States with mixing zones) located in the receiving waters of the United States.

All options will be considered when an applicant applies for a NPDES permit for a non-storm water discharge to a municipal separate storm sewer. In some cases, permits will be denied for discharges to storm sewers that are causing water quality problems in receiving waters. However, not all discharges present such problems; and in these cases EPA or State permit writers may allow such discharges to municipal separate storm sewers within appropriate permit limits.

Today's rule has two permit application requirements that are designed to begin implementation of the effective prohibition. The first requirement discussed in VI.H.6.a., below, addresses a screening analysis which is intended to provide sufficient information to develop priorities for a program to detect and remove illicit discharges. The second provision, discussed in VI.H.7.b., requires municipal applicants to develop a recommended site-specific management plan to detect and remove illicit discharges (or ensure they are covered by an NPDES permit) and to control improper disposal to municipal separate storm sewer systems.

Several commenters suggested that either the definition of "storm water" should include some additional classes of nonprecipitation sources, or that municipalities should not be held responsible for "effectively prohibiting" some classes of nonstorm water discharges into their municipal storm sewers. The various types of discharges addressed by these comments include detention and retention reservoir releases, water line flushing, fire hydrant flushing, runoff from fire fighting, swimming pool drainaqe and discharge, landscape irrigation, diverted stream flows, uncontaminated pumped ground water, rising ground water, discharges from potable water sources, uncontaminated waters from cooling towers, foundation drains, non-contact cooling water (such as heating, ventilation, air conditioning (HVAC) water that POTWs require to be discharged to separate storm sewers rather than sanitary sewers), irrigation water, springs, roofdrains, water from crawl space pumps, footing drains, lawn watering, individual car washing, flows from riparian habitats and wetlands. Most of these comments were made with regard to the concern that these were commonly occurring discharges which did not pose significant environmental problems.

EPA disagrees that the above described flows will not pose, in every case, significant environmental problems. At the same time, it is unlikely Congress intended to require municipalities to effectively prohibit individual car washing or discharges resulting from efforts to extinguish a building fire and other seemingly innocent flows that are characteristic of human existence in urban environments and which discharge to municipal separate storm sewers. It should be noted that the legislative history is essentially silent on this point. Accordingly, EPA is clarifying that section 402(p)(3)(B) of the CWA (which requires permits for municipal separate storm sewers to 'effectively' prohibit non-storm water discharges) does not require permits for municipalities to prohibit certain discharges or flows of nonstorm water to waters of the United States through municipal separate storm sewers in all cases. Accordingly, § 122.26(d)(2)(iv)(B)(1) states that the proposed management program shall include: "A description of a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal separate storm sewer system; the program description shall address the following categories of non-storm water discharges or flows only where such discharges are identified by the municipality as sources of pollutants to waters of the United States: Water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers, uncontaminated pumped ground water discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash waters. Program descriptions shall address discharges from fire fighting only where such discharges or flows are identified as significant sources of pollutants to waters of the United States."

  

However, the Director may include permit conditions that either require municipalities to prohibit or otherwise control any of these types of discharges where appropriate. In the case of fire fighting it is not the intention of these rules to prohibit in any circumstances the protection of life and public or private property through the use of water or other fire retardants that flow into separate storm sewers. However, there may be instances where specified management practices are appropriate where these flows do occur (controlled blazes are one example).

Conveyances which continue to accept other "non-storm water" discharges (e.g. discharges without an NPDES permit) with the exceptions noted above do not meet the definition of municipal separate storm sewer and are not subject to section 402(p)(3)(B) of the CWA unless the non-storm water discharges are issued separate NPDES permits. Instead, conveyances which continue to accept non-storm water discharges which have not been issued separate NPDES permits are subject to sections 301 and 402 of the CWA. For example, combined sewers which convey storm water and sanitary sewage are not separate storm sewers and must comply with permit application requirements at 40 CFR 122.21 as well as other regulatory criteria for combined sewers.

**3. Site-Specific Storm Water Quality Management Programs for Municipal Systems**

Section 402(p)(3)(iii) of the CWA mandates that permits for discharges from municipal separate storm sewers shall require controls to reduce the discharge of pollutants to the maximum extent practicable (MEP), including management practices, control techniques and systems, design and engineering methods, and such other provisions as the Director determines appropriate for the control of such pollutants.

When enacting this provision, Congress was aware of the difficulties in regulating discharges from municipal ***48038** separate storm sewers solely through traditional end-of-pipe treatment and intended for EPA and NPDES States to develop permit requirements that were much broader in nature than requirements which are traditionally found in NPDES permits for industrial process discharges or POTWs. The legislative history indicates, municipal storm sewer system "permits will not necessarily be like industrial discharge permits. Often, an end-of-the-pipe treatment technology is not appropriate for this type of discharge." [Vol. 132 Cong. Rec. S16425 (daily ed. Oct. 16, 1986)].

A shift towards comprehensive storm water quality management programs to reduce the discharge of pollutants from municipal separate storm sewer systems is appropriate for a number of reasons. First, discharges from municipal storm sewers are highly intermittent, and are usually characterized by very high flows occurring over relatively short time intervals. For this reason, municipal storm sewer systems are usually designed with an extremely high number of outfalls within a given municipality to reduce potential flooding. Traditional end-of-pipe controls are limited by the materials management problems that arise with high volume, intermittent flows occurring at a large number of outfalls. Second, the nature and extent of pollutants in discharges from municipal systems will depend on the activities occurring on the lands which contribute runoff to the system. Municipal separate storm sewers tend to discharge runoff drained from lands used for a wide variety of activities. Given the material management problems associated with end-of-pipe controls, management programs that are directed at pollutant sources are often more practical than relying solely on end-of-pipe controls.

In past rulemakings, much of the criticism of the concept of subjecting discharges from municipal separate storm sewers to the NPDES permit program focused on the perception that the rigid regulatory program applied to industrial process waters and effluents from publicly owned treatment works was not appropriate for the site-specific nature of the sources which are responsible for the discharge of pollutants from municipal storm sewers.

The water quality impacts of discharges from municipal separate storm sewer systems depend on a wide range of factors including: The magnitude and duration of rainfall events, the time period between events, soil conditions, the fraction of land that is impervious to rainfall, land use activities, the presence of illicit connections, and the ratio of the storm water discharge to receiving water flow. In enacting section 405 of the WQA, Congress recognized that permit requirements for municipal separate storm sewer systems should be developed in a flexible manner to allow site-specific permit conditions to reflect the wide range of impacts that can be associated with these discharges. The legislative history accompanying the provision explained

  

that "[p]ermits for discharges from municipal separate stormwater systems * * * must include a requirement to effectively prohibit non-stormwater discharges into storm sewers and controls to reduce the discharge of pollutants to the maximum extent practicable, * * * These controls may be different in different permits. All types of controls listed in subsection [(p)(3)(C)] are not required to be incorporated into each permit" [Vol. 132 Cong. Rec. HI0576 (daily ed. October 15, 1986) Conference Report]. Consistent with the intent of Congress, this rule sets out permit application requirements that are sufficiently flexible to allow the development of site-specific permit conditions.

Several commenters agreed with this approach. One municipality recommended that there be as much flexibility as possible so that the permitting authority can work with each municipality in developing meaningful long-term goals with plans for improving storm water quality. This commenter noted that too many specific regulations that apply nationwide do not take into consideration the climatic and governmental differences within the States. EPA agrees that as much flexibility as possible should be incorporated into the program. However, flexibility should not be built into the program to such an extent that all municipalities do not face essentially the same responsibilities and commitment for achieving the goals of the CWA. EPA believes that these final regulations build in substantial flexibility in designing programs that meet particular needs, without abandoning a nationally consistent structure designed to create storm water control programs.

**4. Large and Medium Municipal Storm Sewer Systems**

During the 1987 reauthorization of the CWA, Congress established a framework for EPA to implement a permit program for municipal separate storm sewers and establishing phased deadlines for its implementation. The amended CWA establishes priorities for EPA to develop permit application requirements and issue permits for discharges from three classes of municipal separate storm sewer systems. The CWA requires that NPDES permits be issued for discharges from large municipal separate storm sewer systems (systems serving a population of more than 250,000) by no later than February 4, 1991. Permits for discharges from medium municipal separate storm sewer systems (systems serving a population of more than 100,000, but less than 250,000) must be issued by February 4, 1992. After October 1, 1992, the requirements of sections 301 and 402 of the CWA are restored for all other discharges from municipal separate storm sewers.

The priorities established in the Act are based on the size of the population served by the system. Municipal operators of these systems are generally thought to be more capable of initiating storm water programs and discharges from municipal separate storm sewers serving larger populations are thought to present a higher potential for contributing to adverse water quality impacts. NURP and other studies have verified that the event mean concentration of pollutants in urban runoff from residential and commercial areas remains relatively constant from one area to another, indicating that pollutant loads from urban runoff strongly depend on the total area and imperviousness of developed land, which in turn is related to population.

The term "municipal separate storm sewer system" is not defined by the Act. By not defining the term, Congress intended to provide EPA discretion to define the scope of municipal systems consistent with the objectives of developing site-specific management programs in NPDES permits. EPA considered two key issues in defining the scope of municipal separate storm sewer system: (1) What is a reasonable definition of the term "system," and (2) how to determine the number of people "served" by a storm sewer system. EPA found these two issues to be intertwined. Different approaches to defining the scope of a system allowed for greater or lesser certainty in deterining the population served by the system.

In the December 7, 1988, proposal, EPA described seven options for defining "municipal separate storm sewer system." In developing these options the EPA considered:

- The inter-jurisdiction complexities associated with municipal governments;

- The fact that many municipal storm water management programs have traditionally focused on water quantity ***48039** concerns, and have not evaluated water quality impacts of system discharges or developed measures to reduce pollutants in such discharges;

  

- The advantages of developing system-wide storm water management programs for municipal systems;

- The geographic basis necessary for planning of comprehensive management programs to reduce pollutants in discharges from municipal separate storm sewers to the maximum extent practicable;

- The geographic basis necessary to provide flexibility to target controls on areas where water quality impacts associated with discharges from municipal systems are the greatest and to provide an opportunity to develop cost effective controls;

- The need to establish a reasonable number of permits for municipal systems during the initial phases of program development that will provide an adequate basis for a storm water quality management program for over 13,000 municipalities after the October 1, 1992 general prohibition on storm water permits expires; and

- Congressional intent to allow the development of jurisdiction-wide, comprehensive storm water management programs with priorities given to the most heavily populated areas of the country.

a. Overview of Proposed Options and Comments. The December 7, 1988, proposal requested comment on seven options for defining large and medium municipal separate storm sewer system. With the addition of a watershed-based approach suggested by certain commenters, eight options or approaches were addressed by the over 200 commenters on this issue: Option 1—systems owned or operated by incorporated places augmented by integrated discharges; Option 2—systems owned or operated by incorporated places augmented with significant other municipal discharges; Option 3—systems owned or operated by counties; Option 4—systems owned and operated by States or State departments of transportation; Option 5—systems within the boundaries of an incorporated place; Option 6—systems within the boundaries of counties; Option 7—systems in census designated urbanized areas; and Option 8—systems defined by watershed boundaries.

Generally, these options can be classified into two categories. The first category of options, Options 1, 2 and 3, define municipal systems in terms of the municipal entity which owns or operates storm sewers within municipal boundaries of the requisite population. The second category of options would define municipal systems on a geographic basis. Under Options 4, 5, 6, 7 and 8 all municipal separate storm sewers within the specified geographic area would be part of the municipal system, regardless of which municipal entity owns or operates the storm sewer. EPA did not propose to define the scope of a municipal separate storm sewer system in engineering terms because of practical problems determining the boundaries of and the populations served by "systems" defined in such a manner. In addition an engineering approach based on physical interconnections of storm sewer pipes by itself does not provide a rational basis for developing a storm water program to improve water quality where a large number of individual storm water catchments are found within a municipality.

In the December 7, 1988, proposal, EPA favored those options that relied primarily on the municipal entity which owns or operates or otherwise has jurisdiction over storm sewers. These options were preferred because it was anticipated that the administrative complexities of developing the permit programs would be reduced by decreasing the number of affected municipal entities. However, most commenters were not satisfied that such an approach would reduce administrative burdens or complexities.

The diversity of arguments and rationales offered in comments justifying the selection of particular option, or combinations thereof, were generally a function of geographic, climatic, and institutional differences around the country. As such, there was little substantive agreement with how this program should be implemented as far as defining large and medium municipal separate storm sewer systems. Of all the options, Option 1 generally received the most favorable comment. However, the overwhelming majority of comments suggested different options or other alternatives. Having reviewed the comments at length, EPA is convinced that the definition of municipal separate storm sewers should possess elements of several of the options enumerated above and a mechanism that enables States or EPA Regions to define a system that best suits their various political and geographical conditions.

  

The following comments were the most pervasive, and represent those issues and concerns of greatest importance to the public: (1) The approach chosen initially must be realistic and achievable administratively; (2) the definition must be flexible enough to accommodate development of the program on a watershed basis, and incorporate elements of existing programs and frameworks and regional differences in climate, geography, and political institutions; (3) permittees must have legal authority and control over land use; (4) discharges from State highways, identified as a significant source of runoff and pollutants, should be included in the program and combined in some manner with one or more of the other options; (5) the definition should address how the inclusion of interrelated discharges into the municipal separate storm sewer system are timed, decided upon, dealt with, etc.; (6) any approach must address the major sources of pollutants; (7) development of co-permittee management plans must be coordinated or developed on a regional basis and in the same time frame—fragmented or balkanized programs must be avoided; (8) municipalities should be regulated as equitably as possible; (9) flood control districts should be addressed as a system or part of a system; (10) the definition must conform to the legal requirements of the Clean Water Act; and (1*l*) the definition should limit the number of co-permittees as much as possible.

b. Definition of large and medium municipal separate storm sewer system. A combination of the options outlined in the 1988 proposal would address most of these concerns, while achieving a realistic and environmentally beneficial storm water program. Accordingly, EPA has adopted the following definition of large and medium municipal separate storm sewer systems. Large and medium separate storm sewer systems are municipal separate storm sewers that:

(i) Are located in an incorporated place with a population of 100,000 or more or 250,000 or more as determined by the latest Decennial Census by the Bureau of Census (see appendices F and G of part 122 for a list of these places based on the 1980 Census);

(ii) Are located within counties having areas that are designated as urbanized areas by latest decennial Bureau of Census estimates and where the population of such areas exceeds 100,000, after the population in the incorporated places, townships or towns within such counties is excluded (see appendices H and I for a listing of these counties based on the 1980 census) (incorporated places, towns, and townships within these counties are excluded from permit application requirements unless they fall under paragraph (i) or are designated under paragraph (iii)); or (iii) are owned or ***48040** operated by a municipality other than those described in paragraph (i) or (ii) that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraphs (i) or (ii). In making this determination the Director may consider the following factors:

(A) Physical interconnections between the municipal separate storm sewers;

(B) The location of discharges from the designated municipal separate storm sewer relative to discharges from municipal separate storm sewers described in subparagraph (i);

(C) The quantity and nature of pollutants discharged to waters of the United States;

(D) The nature of the receiving waters; or

(E) Other relevant factors.

(iv) The Director may, upon petition, designate as a system, any municipal separate storm sewers located within the boundaries of a region defined by a storm water management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described in paragraphs (i), (ii), and (iii).

Under today's rule at § 122.26(a)(3)(iii) the regional authority shall be responsible for submitting a permit application under the following guidelines: The regional authority together with co-applicants shall have authority over a storm water management

  

program that is in existence, or shall be in existence at the time part 1 of the application is due; the permit applicant or co-applicants shall establish their ability to make a timely submission of part 1 and part 2 of the municipal application; each of the operators of municipal separate storm systems described in paragraphs 122.26(b)(4) (i), (ii), and (iii) and (7)(i), (ii), and (iii), that are under the purview of the designated regional authority, shall comply with the application requirements of § 122.26(d).

As noted above, the finalized definition of large and medium municipal separate storm sewer system is combination of the approaches as proposed. (In the following discussion "paragraph (i)" refers to §§ 122.26 (b)(4)(i) and (b)(7)(i); "paragraph (ii)" refers to §§ 122.26(b)(4)(ii) and (b)(7)(ii); "paragraph (iii)" refers to §§ 122.26 (b)(4)(iii) and (b)(7)(iii); and "paragraph (iv)" refers to §§ 122.26 (b)(4)(iv) and (b)(7)(iv)). Paragraph (i) originates from proposed Option 5 (boundaries of incorporated places); paragraph (ii) originates from Option 6 (boundaries of counties) and Option 7 (urbanized areas); paragraph (iii) originates from Options 1 and 5; and paragraph (iv) is an outgrowth of comments on all options, especially Option 4 (State owned systems/State highways) and Option 8 (watersheds).

This definition creates a system by virtue of the fact that storm sewers within defined geographical and political areas, and the owner/operators of separate storm sewers in those areas, are addressed or required to obtain permits. Although within these systems, different segments and discharges of storm water conveyances may be owned or operated by different public entities, EPA is convinced by comments that discharges from such conveyances are interrelated to such an extent that all of these conveyances may be properly considered a "system." These comments are identified and discussed in greater detail below.

c. Response to comments. Many commenters urged that the approach taken must be administratively achievable. Option 5 of the proposal (boundaries of incorporated places), which can be equated to paragraphs (i) and (iii) above, was identified by several commenters as the most workable of all the options. Many commenters stated that Option 1 (systems owned or operated by incorporated places) was inappropriate because of special districts and other owners of systems within the incorporated area; and although EPA proposed a designation provision for interrelated discharges in Option 1, commenters advised that it would be impossible to identify these systems, account for their discharges, and exclude or include them in a timely manner if Option 1 was selected (Option 1 only addresses those systems owned or operated by the incorporated place). The final rule would obviate these concerns, since all the publicly owned sewers within the boundaries of the municipality will be required to be covered by a permit.

Other commenters noted that cities sometimes have storm water conveyances owned or operated by numerous entities. One municipality commented that these problems could be more easily resolved using a unified permit/district wide approach, which the final approach outlined above can accomplish. One county stated that Option 1 of the proposal would result in a permanent balkanization of stormwater programs and that a regional approach focusing on the entire system should be established. Another municipality recommended that all the systems of conveyances within the incorporated city boundaries be issued a permit. In rejecting Option 1 of the proposal, one municipality stated that program inefficiencies would result from implementing a piecemeal program in a contiguous urban environment with different owners and operators. One State conveyed similar concerns. Using a geographical approach, as described in paragraph (i) of the final definition, will best address all of these concerns.

One commenter criticized proposed Option 1 as being contrary to the legal requirements of the WQA, and a further example of EPA's continuing attempt to minimize the scope of a national storm water program. It was noted that the legislative history regarding requirements for large and medium municipal separate storm sewer systems in section 402(p) of the CWA generally does not reference incorporated cities or towns. As a result, the commenter recommended that the term "municipal" in municipal separate storm sewer system refer to separate storm sewers operated by municipal entities meeting the definition of "municipality" in section 502 of the CWA and that the scope of the term "municipal separate storm sewer system" be defined as broadly as possible. This approach would result in defining large and medium municipal separate storm sewer systems to include all municipal separate storm sewers within the 410 counties with a population of 100,000 or more. EPA has adopted the commenter's recommendation to extend the scope of the program to the extent that today's rule covers all municipal separate storm sewers within certain areas rather than only those operated by an incorporated place. EPA disagrees however that it must

define the term "system" to include sewers within any municipal boundary of sufficient population with reference to section 502(4). By not providing explicit definitions, section 402(p)(3)(B) of the CWA gives EPA discretion to define how municipal separate storm sewer systems are defined. There is no indication in the language of the CWA or the legislative history that Congress intended that the scope of "municipality" and the scope of "municipal separate storm sewer system" to be identical, particularly since the latter term is not defined in the statute. Furthermore, for the reasons discussed elsewhere in this section, EPA believes that today's definition is a reasonable accommodation of the many conflicting concerns surrounding the proper way to delineate the extent of a ***48041** municipal separate storm sewer system serving over 100,000 people.

Several commenters concluded that EPA should be flexible enough to allow the permitting authority broad discretion to establish system wide permits, with flood control districts and/or counties acting as co-permittees with the various incorporated cities within the district boundaries. Commenters expressed concern that Option 1 would not allow for such flexibility.

Arguments that were advanced by commenters in support of proposed Option 1 are equally applicable to paragraph (i), above. Like proposed Option 1, the approach outlined above targets major cities. However, it also has the advantage of addressing municipal separate storm sewer systems which may be interrelated to those owned by the city, a benefit recognized by one municipality that endorsed the selection of proposed Option 5. This will also give the permitting authority more discretion to establish co-permittee relationships.

Paragraph (ii) of the final definition also uses a geographical approach to the definition of municipal storm sewer systems to include municipal storm sewers within urbanized counties. Thus, it closely resembles Option 7 of the proposal. The counties identified in paragraph (ii) have, based on the 1980 Census, a population of 100,000 or more in urbanized,[FN5] unincorporated portions of the county. In the unincorporated areas of these counties (or in the 20 States where the Census recognizes minor civil divisions, unincorporated county areas outside of towns or townships), the county is the primary local government entity. In these cases, the county performs many of the same functions as incorporated cities with a population of 100,000, and is generally expected to have the necessary legal and land use authority in these areas to begin to implement storm water management programs. Due to the urbanized nature of their population, discharges from the municipal separate storm sewers in these counties will have many similarities to discharges from municipal systems in incorporated cities with a population of 100,000 or more. Addressing these counties in this fashion will not adversely affect small municipalities (incorporated places, towns and townships) within the county, as municipal separate storm sewers that are located in the small incorporated places, townships or towns within these counties are not automatically included as part of the system.

EPA has focused on the unincorporated areas because permit applications cannot be required from systems that serve a population less than 100,000, unless designated. EPA received the comment that if the sewers in incorporated places within such counties were included as part of the system for that county, there would be the potential for systems serving a population less than 100,000 to be improperly subject to permit requirements. EPA agrees with the comment, except that EPA reserves the authority to designate sewers in small incorporated places as part of the system subject to permitting, pursuant to paragraph (iii) of the final definition. Incorporated areas within the identified counties will be required to file permit applications if the population served by the municipal separate storm sewer system is 100,000 or more.

As one commenter noted, the counties addressed by the definition will generally be areas of high growth with a growing tax base that can finance a storm water management program. Numerous counties affected by paragraph (ii) commented on the proposal. Several of these indicated a preference for the county government as the permittee. Others indicated that their county had the ability to perform the functions of the permit applicant and permittee. One county brought to EPA's attention that the county had laid plans for a storm water utility scheduled to be in operation in 1989. Several of the counties supported the use of watersheds, or flexible regional approaches, as the basis for the definition of municipal separate storm sewer systems. The modified definition should satisfy these concerns.

EPA recognizes that some of the counties addressed by today's rule have, in addition to areas with high unincorporated urbanized populations, areas that are essentially rural or uninhabited and may not be the subject of planned development. While permits

  

issued for these municipal systems will cover municipal system discharges in unincorporated portions of the county, it is the intent of EPA that management plans and other components of the programs focus on the urbanized and developing areas of the county. Undeveloped lands of the county are not expected to have many, if any, municipal separate storm sewers.

Paragraphs (i) and (ii) above will help resolve the problems associated with permittees not having adequate land use controls, the legal authority to implement controls, and the ownership of the conveyances. This factor was mentioned by numerous commenters on the proposed options, especially county governments. Under paragraphs (i) and (ii), all publicly owned separate storm sewers within the appropriate municipal boundaries will be defined as part of the municipal system. In many cases, a number of municipal operators of these storm sewers will be responsible for discharges from these systems. Since a number of co-permittees may be addressed in the permits for these discharges, problems associated with the ability to control pollutants that are contributed from interrelated discharges will be minimized. State highways or flood control districts, which may have no land use authority in incorporated cities, will be co-permittees with the city which does possess land use authority. EPA envisions that permit conditions for these systems will be written to establish duties that are commensurate with the legal authorities of a co-permittee. For example, under a permit, a flood control district may be responsible for the maintenance of drainage channels that they have jurisdiction over, while a city is responsible for implementing a sediment and erosion ordinance for construction sites which relates to discharges to the drainage channel. Confusion over ownership of conveyances or systems, at least for the purposes of determining whether they require a permit, will be minimized since all conveyances will be covered. Similarly, under paragraph (ii), the affected counties are expected to have the necessary legal and land use authority to implement programs and controls in unincorporated, urbanized areas because the county government is the primary political or governing entity in these geographical areas.

Many commenters from all levels of State and local government expressed concern about controlling pollutants from State highways. Paragraphs (i) and (ii) will result in discharges from separate storm sewers serving State highways and other highways through storm sewers that are located within incorporated places with the appropriate population or highways in unincorporated portions of specified counties being included as part of the large or medium municipal separate storm sewer system, since all municipal separate storm sewers within the boundaries of these political entities are included. Paragraph (iv) can facilitate ***48042** the submission of a permit application for storm sewers operated as part of an entire State highway system. Paragraph (iv) would allow an entire system in a geographical region under the purview of a State agency (such as a State Department of Transportation) to be designated, where all the permit application requirements and requirements established under § 122.26(a)(iii)(C) can be met.

Paragraphs (i) and (ii) can effectively deal with many of the major sources of pollutants. One municipality noted that Option 5 (paragraph (i)) would require all systems in the incorporated boundaries to obtain permits and institute control measures, rather than just the few owned or operated by incorporated cities. Another municipality noted that this approach could deal with many of the regional variations in sources of pollution. Many commenters, including environmental groups, believed that proposed Option 3 (systems owned or operated by counties), Option 6 (systems within the boundaries of counties), and Option 7 (system in urbanized areas) were good approaches because more sources of pollution would be addressed. It was also maintained that Options 3, 6 and 7 could incorporate watershed planning which, in the view of some commenters, is the only effective way to address pollutants in storm water.

Commenters noted that addressing counties and urbanized areas would focus attention on developing areas which would otherwise be left out in the initial phases of permitting. One commenter noted that most new development in large urbanized areas occurs outside of core cities (incorporated cities with a population of 100,000 or more). Newly developing areas provide opportunities for installing pollutant controls cost effectively. EPA agrees with these comments and notes that paragraph (ii) addresses a significant number of counties with highly developed or developing areas.

However, EPA is convinced that addressing all counties or urbanized areas in the initial phases of the storm water program is ill-advised. Commenters noted that some counties have inappropriate or nonexistent governmental structures, and that a program that addressed all counties in the country with a population of 100,000 or more would be unmanageable, because too many

municipal entities nationwide would be involved in the program initially. Commenters advised that defining municipal storm sewer systems solely in terms of the boundaries of census urbanized areas (Option 7) would result in systems which did not correspond to jurisdictions that are in a position to implement a storm water programs. Thus, EPA has modified Option 7 and combined it with Option 6 to create paragraph (ii) above.

Paragraph (iii) incorporates a designation authority such that municipalities that own or operate discharges from separate storm sewers systems other than those described in paragraph (i) or (ii) may be designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the other discharges of the designated storm sewer and the discharges from the large or medium municipal separate storm sewers. In making this determination the physical interconnections between the municipal separate storm sewers, the location of discharges from the designated municipal separate storm sewer relative to discharges from large or medium municipal separate storm sewers, the quantity and nature of pollutants discharged to waters of the United States, the nature of the receiving waters, or other relevant factors may be considered.

Comments indicated that the designation authority as proposed and described above should be retained. One State noted that this approach gives the most flexibility in making the case-by-case designations, while also delineating in sufficient detail what criteria are used to make the determination. This commenter was concerned about being able to regulate many of the interrelated discharges from counties surrounding incorporated cities.

Paragraph (iv) of the final definition allows the permitting authority, upon petition, to designate as a medium or large municipal separate storm sewer system, municipal separate storm sewers located within the boundaries of a region defined by a storm water management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described in paragraphs (i), (ii), (iii).

Paragraph (iv) was added to the final definitions to respond to a variety of concerns of commenters. One of the prime concerns of commenters was that the definition of large and medium municipal separate storm sewer systems must be flexible enough to accommodate: Programs on a watershed basis, existing storm water programs and frameworks and regional differences in climate, geography, and political institutions. Some States were particularly expressive regarding this concern. One State maintained that an inflexible program could totally disrupt ongoing State efforts. Other commenters urged that the regulation encourage the establishment of regional storm water authorities or other mechanisms that can deal with storm water quality on a watershed basis. One State proposed defining the municipal separate storm sewer system to include all municipal separate storm sewers within a core incorporated place of 100,000 or more, and all surrounding incorporated places within the State defined watershed. One of the State water districts advised that the regulations should be flexible enough to allow regional water quality boards to apply the regulations geographically. One national association expressed concern that existing institutional arrangements for flood control and drainage would be ignored, while another warned against fostering a proliferation of inconsistent patchwork programs based on arbitrary definitions and jurisdictions which bear no relationship to water quality.

EPA is convinced that the mechanism described in paragraph (iv) provides a means whereby the mechanisms and concepts identified above can be utilized or created in appropriate circumstances. In addition, § 122.26(f)(4) provides a means for State or local government agencies to petition the Director for the designation of regional authorities responsible for a portion of the storm water program. For example, some States or counties may currently or in the near future have regional storm water management authorities that have the ability to apply for permits under today's rule and carry out the terms of the permit. Some of these authorities may encompass within their jurisdiction large or medium municipal separate storm sewer systems as defined in today's rule. EPA wishes to encourage such entities to assume the role as permittee under today's rule. That is the purpose of paragraph (iv). Such authorities may petition the Director to assume such a role.

Many commenters expressed the view that municipal management plans must be coordinated or developed among co-permittees on a regional basis and in the same timeframe. Paragraphs (i), (iii) and (iv) would bring in all appropriate municipal entities with jurisdiction over a specified geographical area in the same timeframe. Several commenters, including one State, noted proposed Option 1 would lead to fragmented, ill-coordinated programs. Paragraphs (i), (iii), and (iv) do not suffer this drawback

  

***48043** to the same extent since all the municipal separate storm sewers are addressed within the incorporated place, instead of only those owned or operated by the incorporated place.

Equal treatment of municipalities within a watershed or other specified area was a major subject of comment. Many commenters urged that a degree of fairness could be achieved by requiring permit applications, and the concomitant expenditure of municipal dollars and resources, from all municipalities within an entire urban area that contributes to storm water pollution, rather than from a discrete system within an arbitrary political boundary. Paragraph (i), especially when coupled with paragraphs (ii), (iii), and (iv), can best accomplish a more equitable approach, because all owners and operators of municipal separate storm sewers within a system have responsibilities. In addition, some of the areas outside the incorporated city limits which are engaged in expansive urban or suburban development will be brought into the program. Paragraph (iv) will provide a means for State or regional authorities to use existing or emerging mechanisms to set up storm water management programs, and would require multiple agencies either to become regional co-permittees or to be subject to a regional permit.

Paragraphs (i), (ii), (iii), and (iv) could also require flood control districts to be co-permittees, which was a major concern of counties and numerous cities. One municipality stated that the inclusion of flood control districts would greatly reduce the administrative burden required to prepare a single inter-city discharge agreement and would establish a common legal authority to implement the program. Numerous county agencies believed it imperative that flood control districts be brought into a system-wide permit strategy.

Paragraphs (i) and (iii) may not accommodate the concern of several commenters that the number of co-permittees be kept to a minimum. The fact that all the municipal separate storm sewers within the boundaries of the appropriate incorporated places will be addressed dictates that some permits will have several co-permittees. This is a major concern since it goes directly to achieving an effective initial storm water program. There is concern about being able to bring all the co-permittees together under intra-municipal agreements or contracts within regulatory deadlines. This problem would be resolved in the short term by selecting Option 1. However, Option 1 may still require inter-municipal agreements because of the designation authority under § 122.26 (b)(4)(ii) and (b)(7)(ii) of the proposal. In addition, such inter-jurisdictional problems will arise after October 1, 1992 when the moratorium on requiring NPDES permits for discharges from other municipal separate storm sewers ends. Under the permitting goals established by the CWA, multi-jurisdictional storm water programs and agreements cannot be avoided. Despite interest in limiting the number of co-permittees, EPA decided not to adopt Option 1 for the reasons already stated.

Section 402(p)(3)(B)(i) of the amended CWA provides that permits for municipal discharges from municipal storm sewers may be issued on a system-wide or jurisdiction-wide basis. This provision is an important mechanism for developing the comprehensive storm water management programs envisioned by the Act.

Under the permit application requirements of today's rule, if the appropriate co-applicants are identified, one permit application may be submitted for a large or medium municipal separate storm sewer system (see section VI.G.4 above). System-wide permit applications can in turn be used to issue system-wide permits which could cover all discharges in the system.

Where several municipal entities are responsible for obtaining a permit for various discharges within a single system, EPA will encourage system-wide permit applications involving the several municipal entities for a number of reasons. The system-wide approach not only provides an appropriate basis for planning activities and coordinating development, but also provides municipal entities participating in a system-wide application the means to spread the resource burden of monitoring, evaluating water quality impacts, and developing and implementing controls.

The system-wide approach provided in today's rule recognizes differences between individual municipalities with responsibilities for discharges from the municipal system. Today's application rule requires information to be submitted that enables the permit issuing authorities to develop tailored programs for each permittee with responsibility for certain components, segments, or portions of the municipal separate storm sewer system. The permit application requirements allow individual

  

municipal entities, participating in system-wide applications, to submit site specific information regarding storm water quality management programs to reduce pollutants in system discharges as a whole, or from specific points within the system.

In some cases, it may be undesirable for all municipal entities with storm water responsibility within a municipal system to be co-permittees under one system-wide permit. The permit application requirements in today's rule allow individual municipal entities within the system to submit permit applications and obtain a permit for that portion of the storm sewer system for which they are responsible. Thus, several permits may be issued to cover various subdivisions of a single municipal system.

In summary, EPA believes that the definition of municipal storm sewer system adopted in today's rule has several distinct advantages that were identified in comments:

- The definition adopts features of several options;

- The definition targets areas that have the necessary police powers and land use authority to implement the program;

- The definition can utilize watersheds or accommodate existing administrative frameworks and storm water programs;

- The definition provides that all systems within a geographical area including highways and flood control districts will be covered, thereby avoiding fragmented and ill-coordinated programs;

- The definition has flexible designation authority; and

- The definition addresses major sources of pollutants without being overly broad.

### *H. Permit Application Requirements for Large and Medium Municipal Systems*

#### 1. Implementing the Permit Program

Given the differing nature of discharges from municipal separate storm sewer systems in different parts of the country and the varying water quality impacts of municipal storm sewer discharges on receiving waters, today's permit application requirements are designed to lead to the development of site-specific storm water management programs. In order to effectively implement this goal, EPA intends to retain the overall structure of the municipal permit application as proposed in the December 7, 1988, proposal.

#### 2. Structure of the Permit Application

EPA proposed a two-part permit application designed to meet the goal of ***48044** developing site-specific storm water quality management programs in NPDES permits. In response to a request for comments on this aspect of the proposal, numerous comments were received. After reviewing these comments, EPA has decided to retain the two-part permit application. Many commenters agreed that the approach as proposed is appropriate for phasing in and developing site specific storm water management programs. One large municipality strongly endorsed the two-part application, stating that it would facilitate the identification of water quality problem areas and the development of priorities for control measures, thereby allowing for more cost-effective program development. Two State agencies expressed the same view, and noted that the two-part approach is reasonable and well structured for efficient development of programs. One large municipality noted it would allow the permit authority and the permit applicant the time needed to gain the knowledge and data to develop site-specific permits. A medium municipality expressed similar views.

Numerous commenters submitted endorsements of a proposal offered by one of the national municipal associations. This approach responded to EPA's request for comments on alternatives to a two-part application process. These comments recommended having permit applicants submit information regarding their existing legal authority, prepare source

identification information, describe existing management plans, provide discharge characterization information based on existing data, and prepare a monitoring, characterization and illicit discharge and removal plan in a one-part application. The remaining requirements such as: implementing plans to remove illicit connections, obtaining legal authority, monitoring and characterization, plans for structural controls, preparation of control assessments, preparation of fiscal analysis, and management plan implementation would be part of the permit and take place during the compliance period of the permit. It was argued that this would result in a more orderly development of stormwater management programs while allowing for quick implementation of efforts to eliminate illicit discharges and initiate some BMPs.

After careful review and consideration of these comments, EPA is convinced that this approach would not meet the goals and requirements of section 402 of the Clean Water Act. Section 402(p)(3)(B) of the CWA requires that permits effectively prohibit non-storm water discharges into storm sewers and incorporate controls that reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques, and system design and engineering methods. The above comments suggesting an alternative for achieving this goal are not entirely compatible with these requirements. In light of the language in the statute, permit conditions should do more than plan for controls during the term of the permit. A strong effort to have the necessary police powers and controls based on pollutant data should be undertaken before permits are issued. In short, the one-part application described by these comments would result in permits that would focus too much on preparation and not enough on implementing controls for pollutants.

In comparison, EPA's approach requires municipalities to submit a two-part application over a two year period. Part one of the application would require information regarding existing programs and the means available to the municipality to control pollutants in its storm water discharges. In addition, part one would require field screening of major outfalls to detect illicit connections. Part two of the permit application would require a limited amount of representative quantitative data and a description of proposed storm water management plans. The purpose of the two-part application process is to develop information, in a reasonable time frame, that would build successful municipal storm water management programs and allow the permit writer to make informed decisions with regard to developing permit conditions. This will include initiating efforts to effectively prohibit non-storm water discharges into storm sewers, and initially implementing controls that reduce the discharge of pollutants to the maximum extent practicable, including management practices and control techniques during the term of the permit. Such an approach clearly meets the statutory mandate of section 402(p)(3)(B).

a. Part 1 Application. Part 1 of the permit application is intended to provide an adequate basis for identifying sources of pollutants to the municipal storm sewer system, to preliminarily identify discharges of storm water that are appropriate for individual permits, and to formulate a strategy for characterizing the discharges from municipal separate storm sewer systems. Several commenters supported retaining these components of the application process. The components of part 1 of the permit application include:

- General information regarding the permit applicant or co-applicants (§ 122.26(d)(1)(i));

- A description of the existing legal authority of the applicant(s) to control pollutants in storm water discharges and a plan to augment legal authority where necessary (§ 122.26(d)(1)(ii));

- Source identification information including: a topographic map, description of the historic use of ordinances or other controls which limited the discharge of non-storm water discharges to municipal separate storm sewer systems, the location of known municipal separate storm sewer outfalls, projected growth, location of structural controls, and location of waste disposal facilities (§ 122.26(d)(1)(iii));

- Information characterizing the nature of system discharges including existing quantitative data, the results of a field screening analysis to detect illicit discharges and illegal dumping to the municipal system, an identification of receiving waters with known water quality impacts associated with storm water discharges, a proposed plan to characterize discharges from the municipal

storm sewer system by estimating pollutant loads and the concentration of representative discharges, and a plan to obtain representative data (§ 122.26(d)(1)(iv)); and

- A description of existing structural and non-structural controls to reduce the discharge of pollutants from the municipal storm sewer (§ 122.26(d)(1)(v)).

One commenter disagreed that source identification should be made part of the permit application process beyond the identification of major municipal storm sewer outfalls. In reply, EPA is convinced that the other elements of the source identification are critical for identifying sources of pollutants and creating a base of knowledge from which informed decisions about permit conditions and further data requirements can be determined. One county stated that it already had engaged in extensive monitoring and modeling of watersheds and that its programs should be substituted for EPA's. In response, EPA anticipates that information collected under various State, county or city programs that matches the information requirements in this rulemaking may be used by the applicants in submissions under this rulemaking where the requirements of the rule are met. However, because of the divergence in data collection techniques and information collected by ***48045** these programs, EPA disagrees that it would be appropriate to accept a substitution in its entirety without tailoring such a program to today's specific information requirements. One municipality noted that municipal systems are not well documented and responsibility for them is in question. In response, EPA notes that the source identification procedure is designed, in part, to address such shortcomings.

Several municipalities suggested that legal authority could be demonstrated by providing EPA with copies of appropriate local ordinances to demonstrate their legal authority and a statement from the city attorney. EPA agrees that these methods are appropriate for making this demonstration.

Several commenters noted that there was adequate existing municipal legal authority to carry out the program requirements or such authority could be obtained by the municipality. Other commenters stated that municipalities possess some authority over certain activities but may not have authority over discharges from roads and construction. Numerous commenters, however, claimed that certain municipalities had no existing legal authority to carry out the permit requirements and that obtaining all the necessary legal authority could take several years due to cumbersome legislative and political processes. In response, part 1 of the permit application will establish a schedule for the development of legal authority that will be needed to accomplish the goals of the permit application and permits. Some municipalities will have more advanced storm water programs with appropriate legal authority or the ability to establish necessary ordinances. Providing an appropriate schedule will not present difficulties in these circumstances. EPA also notes that the definitions of large and medium municipal separate storm sewer systems finalized in today's rule will in many cases result in a number of co-applicants participating in a system wide application. It is anticipated that the development of adequate inter-jurisdictional agreements specifying the various responsibilities of the co-permittees may in some cases be very complex, thereby justifying the development of a schedule to complete the task. For example, clarifying the authority over discharges from roads may present difficulties where a number of municipal entities operate different roads in a given jurisdiction. In other limited cases, the MEP standard for municipal permits may translate into permit conditions that extend the schedule for obtaining necessary legal authority into the term of the permit. These situations will be evaluated on a case-by-case basis by permit issuing authorities.

Numerous commenters supported the field screening analysis as proposed. Comments from three municipalities noted that it would be a cost effective means of identifying problem areas. One municipality noted that illicit connections can be reliably detected by the screening method proposed. In view of these comments EPA has decided to retain this portion of the regulation. However many commenters expressed concern over how the proposed approach would work given the particular circumstances under which some municipal storm water systems are arranged. Several commenters questioned the effectiveness of dry weather monitoring for several reasons, including the shallow depth of some cities' water tables. Accordingly, an alternative approach may be utilized by the municipal permittee, and this is discussed later in section VI.H.3.

Some comments suggested that if any field screening is required that it be done during the term of the permit. EPA believes that field screening should not be done during the term of the permit exclusively. Unless a field screening is accomplished during

  

the permit application phase there will be scant knowledge, if any, upon which illicit connection programs can be established for the term of the permits. EPA views field screening during the application process as an appropriate means of beginning to meet the CWA's requirement of effectively prohibiting non-storm water discharges into municipal separate storm sewers.

The submittal of part 1 of the permit application will allow EPA, or approved NPDES States, to adjust part 2 permit application requirements to assure flexibility for submitting information under part 2, given the site specific characteristics of each municipal storm sewer system.

EPA agrees with the concerns of commenters regarding the estimate of the reduction of pollutant loads from existing management programs. EPA agrees that sufficient data may not be available to establish meaningful estimates. Therefore this component of the proposed part 1 is not a requirement of today's rule.

b. Part 2 Application. Part 2 of the proposed permit application is designed to supplement information found in part 1 and to provide municipalities with the opportunity of proposing a comprehensive program of structural and non-structural control measures that will control the discharge of pollutants, to the maximum extent practicable, from municipal storm sewers. The components of the proposed part 2 of the permit application included:

- A demonstration that the legal authority of the permit applicant satisfies regulatory criteria (§ 122.26(d)(2)(i));

- Supplementation of the source identification information submitted in part 1 of the application to assure the identification of all major outfalls and land use activities (§ 122.26(d)(2)(ii);

- Information to characterize discharges from the municipal system;

- A proposed management program to control the discharge of pollutants to the maximum extent practicable, from municipal storm sewers (§ 122.26(d)(2)(iv));

- Assessment of the performance of proposed controls (§ 122.26(d)(2)(v));

- A financial analysis estimating the cost of implementing the proposed management programs along with identifying sources of revenue § 122.26(d)(2)(vi);

- A description of the roles and responsibilities of co-applicants (§ 122.26(d)(2)(vii)).

One municipality agreed that the assessment of the performance of controls was a critical component of establishing a viable program and one that could be accomplished within the time frame of the permit application deadlines. One commenter suggested that the applicant describe what financial resources are currently available. In response, EPA will require applicants to describe the municipality's existing budget for storm water programs in part 1 of the permit application requirements. This information will be useful to evaluate the municipality's ability to prepare and implement management plans. In response to other comments, this information will also include an overview of the municipality's financial resources and a description of the municipality's budget, including overall indebtedness and assets.

EPA has retained the financial analysis in this portion of the rule on the advice of two municipal commenters, who agreed that this was an important component of establishing a viable program and one that could be accomplished within the time frame of the permit application deadlines. Another commenter noted that this requirement is appropriate to justify a municipality's proposed management plan.

***48046 3. Major Outfalls**

In past rulemakings, a controversial issue has been the appropriate sampling requirements for municipal separate storm sewer systems. Earlier storm water rulemakings have been based primarily on the principle that all discharges to waters of the United States from municipal separate storm sewers located in urban areas must be covered by an individual permit. This approach requires that individual permit applications contain quantitative data to be submitted for all such discharges. This approach was criticized because of a potentially unmanageable number of outfalls in some municipal separate storm sewer systems. Most incorporated cities with a population of 100,000 or more do not know the exact number of outfalls from their municipal systems; but based on the comments, the number ranges from 500 to 8,000 or more.

In light of the increased flexibility provided by the WQA and the development of EPA's system-wide approach for regulating municipal separate storm sewer discharges, today's rule will not require submittal of individual permit applications with quantitative data for each outfall of a municipal system. Rather today's rule will encourage system-wide permit applications to provide information suitable for developing effective storm water management programs. Under this approach, not all outfalls of the municipal system will be sampled, but rather more specific and accurate models for estimating pollutant loads and discharge concentrations will be used. The use of these models will require the identification of sources which are responsible for discharging pollutants into municipal separate storm sewers and will not require as much data to calibrate due to the source-specific nature of the model. A number of standard and localized models have been developed for estimating pollutant loads from storm water discharges.

Several commenters support the use of models for developing management plans and estimating pollutant loadings and concentrations. EPA encourages their use where applicable to particular systems.

By adopting an approach that incorporates source identification measures, the amount of quantitative data required to characterize discharges from the municipal system will be reduced because of the increased accuracy of the site-specific models which can be used. Consistent with a system-wide permit application approach, EPA proposed to focus source identification measures on “major outfalls.” The proposed definition of major outfalls includes any municipal separate storm sewer outfall that discharges from a pipe with a diameter of more than 36 inches or its equivalent (discharges from a drainage area of more than 50 acres), or for municipal separate storm sewers that receive storm water from lands zoned for industrial activities, an outfall that discharges from a pipe with a diameter of more than 12 inches or its equivalent (discharges from a drainage area of 2 acres or more).

Numerous entities offered comments on this definition. Several commenters concurred with this proposed definition. One commenter maintained that the data collected at such outfalls would be sufficient to estimate pollutant loads as well as concentrations using well calibrated models. Another municipality stated that 50 acres was an excellent approximation for the average drainage area served by a 36-inch storm sewer. Two States and one county supported the definition as proposed. One large municipal entity supported the definition, stating that screening major outfalls could be accomplished with available staff over a three month period. In light of these comments, EPA has decided to retain, in part, the definition as proposed.

Numerous commenters suggested alternative definitions or otherwise disagreed with the proposed definition. Most of these comments expressed concern about the number of outfalls that would have to be tested or screened if the definition was retained. For this reason EPA has decided to limit the total number of major outfalls or equivalent sampling points that have to be tested to 250 or 500 for medium or large systems respectively. This change is discussed in further detail below.

The following are examples of comments that opposed the definition of a “major outfall” as proposed. Several commenters stated that, in the southwest, 6 to 12 foot outfalls are the norm, and that smaller outfalls should not be addressed unless there is a compelling reason to suspect illicit connections. One commenter suggested a size of 54 inches and 50 acres, while another commenter suggested that 48 inches would be appropriate. One commenter suggested that the diameter for industrial pipes should be 18 inches, while another commenter suggested that 50 acres should be the only criterion.

  

One commenter noted that pipe size will vary according to rainfall patterns and that a single approach would not work universally. This comment, and other similar points of view as noted herein, convinces that Agency that a more flexible approach is needed to identify field screening and sampling locations. However, EPA is also convinced that a universal standard is necessary for purposes of identifying drainage areas within the municipal system and discrete areas of land use that are drained by certain sized outfalls. This information is critical since these conveyances, and lands they drain, are sources of pollutants to waters of the United States from municipal systems and are properly the subject of appropriate permit conditions.

Many commenters suggested placing a limit on the number of major outfalls addressed during the field screening phase of the permit application. Two municipalities stated that the proposed definition of major outfalls in terms to the pipe diameter was too small and that too many outfalls would be covered. One municipality stated that under the proposed definition, it would have over 4700 “major outfalls,” a number viewed as being unacceptably large. Several municipalities argued that they would be penalized for over-design of their storm drain system. One municipality stated field screening of outfalls should be limited to 200 for medium cities and 500 for large cities. Some commenters suggested EPA set a percentage of major outfalls for screening, because all pipes in some municipalities meet the definition of major outfall. One commenter suggested that a sliding scale be used to determine the number of outfalls tested: those with 50 test all, those with 100-200 test 50%, etc. Other commenters suggested a flat percentage of outfalls or flat number such as 100.

**4. Field Screening Program**

EPA also received several comments in response to the proposed field screening methodology. Among the major concerns were: End of pipe sampling may not be practical and the more appropriate and accessible location is likely to be the nearest upstream manhole; the type of discharge should be the criterion for selecting sampling points as opposed to pipe size; a system wide evaluation is more appropriate than checking each outfall; within some systems, major outfalls or pipe size will not reflect discharges from suspect or old land use areas; efforts should be focused on locations where illicit connections are expected; sites should be determined by looking at sites within drainage basin areas based on land use within those basins; land use and hydrology of the watershed should be the criteria for selecting points; ***48047** screening should be performed at locations that will allow for the location of upstream discharges; the focus should be exclusively on drainage areas rather than pipe size, since pipe size will vary with slope; a prescribed percentage of total flow may be more appropriate; state water quality standards should be utilized along with focusing on actual quality in the reaches of a stream.

EPA is convinced by these comments that today's rule should allow applicants to either field screen all major outfalls as proposed (first procedure) or use a second procedure to provide for the strategic location of sampling points to pinpoint illicit connections. EPA agrees with comments that the size of the outfall will not always reflect the chance of uncovering illicit connections or discharges, and that field screening points should be easily accessible.

This second procedure is as follows: field screening points and/or outfalls are randomly located throughout the storm sewer system by placing a grid over a drainage system map and identifying those cells of the grid which contain a major outfall or segment of the storm sewer system. The grid shall be established using the following guidelines and criteria:

(1) A grid system consisting of perpendicular north-south and east-west lines spaced 1/4 mile apart shall be overlaid on a map of the municipal storm sewer system, creating a series of cells;

(2) All cells that contain a segment of the storm sewer system shall be identified; one field screening point shall be selected in each cell; major outfalls may be used as field screening points;

(3) Field screening points or major outfalls should be located downstream of any sources of suspected illegal or illicit activity;

(4) Field screening points shall be located to the degree practicable at the farthest manhole or other accessible location downstream in the system, within each cell; however, safety of personnel and accessibility of the location should be considered in making this determination;

  

(5) The assessment and selection of cells shall use the following criteria: Hydrological conditions; total drainage area of the site; population density of the site; traffic density; age of the structures or buildings in the area; history of the area; land use types;

(6) For medium municipal separate storm sewer systems, no more than 250 cells need have identified field screening points; in large municipal separate storm sewer systems, no more than 500 cells need to have identified field screening points for detecting illicit connections; cells established by the grid that contain no storm sewer segments will be eliminated from consideration; if fewer than 250 cells in medium municipal sewers are created, and fewer than 500 in large systems are created by the overlay on the municipal sewer map, then all those cells which contain a segment of the sewer system shall be subject to field screening (unless access to the separate storm sewer system is impossible);

(7) Large or medium municipal separate storm sewer systems which are unable to utilize the procedures described in paragraphs (1) through (6) above, because a sufficiently detailed map of the separate storm sewer systems is unavailable, shall field screen at least 250 or 500 major outfalls respectively using the following method: the applicant shall establish a grid system consisting of north-south and east-west lines spaced 1/4 mile apart overlaid on a map of the boundaries of a large or medium municipal entity described at § 122.26(b), thereby creating a series of cells; major outfalls in as many different cells as possible shall be selected until 500 major outfalls (large municipalities) or 250 major outfalls (medium municipalities) are selected; a field screening analysis shall be undertaken at these major outfalls.

The methodology outlined above is in response to public comments which indicated that the field screening and sampling of major outfalls as proposed would lead to insurmountable logistical problems in some municipal systems. EPA believes that the above is an effective approach to pinpointing suspected problem points along a given trunkline or segment of separate storm sewer system. Jurisdictions with no extensive or previous history of monitoring, or lack of an intensive monitoring program can utilize the methods described in establishing a program. Furthermore, the approach will allow for the prioritization of outfalls, sampling points, or areas within the municipality where there are suspected illicit connections or discharges, or other circumstances creating higher concentrations and loadings of pollutants.

Paragraph (7) enables municipalities to select major outfalls without regard to the municipal sewer system map that is required for using the procedure described in paragraphs (1) through (6). However, the applicant must still select outfalls within the cells created by overlaying a 1/4 mile grid over a map of the boundaries of the large or medium municipal entity defined under § 122.26(b), and select major outfalls within as many of those cells as possible, up to 500 (large municipal systems) or 250 (medium municipal systems). In this manner, as many different areas and land uses within the municipal system will be covered by the field screening component of the municipal application.

In order to keep the costs of the program within the anticipated limits of the proposed regulation, the number of outfalls or sampling locations using the grid system is to be limited to 500 for large municipal separate storm sewer systems and 250 for medium municipal separate storm sewer systems.

In response to several comments, EPA has clarified the definition of major outfalls with regard to the words, “pipe with an inside diameter of 36 inches or more or its equivalent” and “a pipe with an inside diameter of 12 inches or more or its equivalent.” This definition has been modified to specify that single pipes or single conveyances with the appropriate diameter or equivalent are covered.

EPA's proposal required municipal permit applicants to submit a fiscal analysis of expenditures that will be required in order to implement the proposed management plans required in part 2 of the application. The description of fiscal resources should include a description of the source of the funds. Some commenters felt that a fiscal analysis should only be required during the term of the permit. In response, EPA believes that during the two years of permit application development, the permit applicant should be in a position to submit information on the ability and means for financing storm water management programs during the term of the permit. EPA views this information as an important means of evaluating the scope of program and whether the

  

permittee will be devoting adequate resources to implementing the program before that program is mapped out in the permit itself.

**5. Source Identification**

The identification of sources which contribute pollutants to municipal separate storm sewers is a critical step in characterizing the nature and extent of pollutants in discharges and in developing appropriate control measures. Source identification can be useful for providing an analysis of pollutant source contribution and for identifying the relationship between pollutant sources and receiving water quality problems. In cases where end-of-pipe controls alone are not practicable, it is essential to identify the source of pollutants into the municipal storm ***48048** sewer systems to support a targeted approach to control pollutant sources.

The relative contribution of pollutants from various sources will be highly site-specific. The first step in developing a targeted approach for controlling pollutants in discharges from municipal storm sewer systems is identifying the various sources in each drainage basin that will contribute pollutants to the municipal storm sewer system.

This rulemaking phases in the source identification requirements of the permit program by establishing minimum objectives in part 1 of the application and by requiring applicants to submit a source identification plan in part 2 of the application to provide additional information during the term of the permit. The minimum source identification requirements of part 1 of the application have been designed to provide sufficient information to provide an initial characterization of pollutants in the discharges from the municipal storm sewer system. EPA realizes that with many large, complex municipal storm sewer systems, it may be difficult to identify all outfalls during the permit application process. Accordingly, EPA is requiring that known outfalls be reported in part 1 of the application. Part 1 of the application will also include: A description of procedures and a proposed program to identify additional major outfalls; the identification of the drainage area associated with known outfalls; a description of major land use classifications in each drainage area, descriptions of soils, the location of industrial facilities, open dumps, landfills or RCRA hazardous waste facilities which discharge storm water to the municipal storm sewer system; and ten year projections of population growth and development activities (population data and development projections will be useful for future predictions of loadings to receiving waters from municipal storm sewer systems, and capacities required for treatment systems). In general, population projections should reflect various scenarios of development (high, medium, low relative to recent trends).

Part 2 of the application will supplement the information reported in part 1 of the application so that, at a minimum, all major outfalls are identified.

Under today's rule, municipal or public entities responsible for applying for and obtaining an NPDES permit will be required to identify the location of an open dump, sanitary landfill, municipal incinerator or hazardous waste treatment, storage, and disposal facility under RCRA which may discharge storm water to the system as well as all facilities which discharge storm water associated with industrial activity into a large or medium municipal separate storm sewer system.

Requiring these source identification measures is supported by the legislative history of section 405 of the WQA, which instructs that “[i]n writing any permit for a municipal separate storm sewer, EPA or the State should pay particular attention to the nature and uses of the drainage area and the location of any industrial facility, open dump, landfill, or hazardous waste treatment, storage, or disposal facility which may contribute pollutants to the discharge.” (emphasis added) [Vol 133 Cong. Rec. S752 (daily ed. Jan. 14, 1987].

One municipality questioned the purpose of the topographic map and commented that the scale of the topographic map is too large to indicate any of the required outfall, drainage, industrial or structural control information. In response, the purpose of the topographic map is to identify receiving waters, major storm water sewer lines that contribute discharges to these waters, and potential sources of storm water pollution. EPA disagrees that a USGS 7.5 scale map is inappropriate for identifying these features within a municipal system. The scale afforded by such a map provides sufficient detail to allow specified delineation

of outfalls, while not requiring an overly burdensome map in terms of size. Numerous commenters noted the value of source identification information and generally supported submitting this information in the permit application.

Many commenters questioned the value of the source identification information for the purpose of characterizing pollutant loads and concentrations. Conversely, one commenter opined that the requirement would provide sufficient information to estimate pollutant loadings from each outfall using loading models to estimate loadings by watershed. In response, the source identification information serves several purposes. It is the first step for identifying potential sources of pollutants from which more in depth analysis can be accomplished, under the discharge characterization component of the application. Also, where appropriate, it may be used in conjunction with models to estimate loadings and concentrations. EPA has also taken note of the many comments that question or dismiss the concept of determining pollutant loads and concentrations solely from source identification. Accordingly, EPA is convinced that at least some of the sampling requirements as proposed are necessary to facilitate more accurate system specific estimates of pollutant concentrations and loadings. These are discussed below, in the discharge characterization section.

One commenter suggested that aerial photos be submitted in lieu of topographic maps. EPA agrees that an aerial photograph of the appropriate scale that communicates the same information as a topographic map may be substituted. Today's final rule reflects this flexibility.

The source identification component of the municipal application also requires that municipal applicants identify the industrial activity within the drainage area associated with each major outfall. One commenter stated that where multiple storm sewers outfalls discharge to a stream reach, municipalities should be allowed to delineate a single sewer-shed for identifying sources of industrial activity. In response, the rule does not delimit an applicant's ability to identify industries in groups according to a common series of storm sewer outfalls, if that is an easier or more appropriate methodology for that particular applicant. However, EPA would view this as appropriate only where the land use is of one type, such as industrial. Where land use is mixed within the drainage area associated with each major outfall, such differences need to be identified.

In response to comments, to the extent that EPA is requesting that applicants identify the types of industrial facilities operating within the municipality, the municipality is free to use Standard Industrial Classification (SIC) or other systems which identify the principal products or services of the facility. One commenter disagreed with EPA's decision to require a list of water bodies that are listed under CWA sections 304(1), 319(a), 314(a), and 320, because the States already have this information and that requesting it from permittees could result in “omissions, misunderstandings, and mistakes.” EPA believes that these waters should be identified in the application so that appropriate permit conditions can be developed that address storm water discharges that are adversely effecting such waters. EPA believes that having this information immediately at the disposal of the municipality and the permit writer will speed the process and alert the municipality of storm water discharges to listed water bodies and potentially polluted storm water discharges to those waters.

***48049 6. Characterization of Discharges**

The characterization plan and data collection required in today's rule as elements of Part-one and Part-two of the municipal permit application is comprised of several major components:

- A screening analysis to provide information to develop a program for detecting and controlling illicit connections and illegal dumping to the municipal separate storm sewer system;

- Initial quantitative data to allow the development of a representative sampling program to be incorporated as a permit condition;

- System-wide estimates of annual pollutant loadings and the mean concentration of pollutants in storm water discharges, and a schedule to provide estimates during the term of the permit for each major outfall of the seasonal pollutant loadings and the event mean concentration of pollutants in storm water discharges; and

  

- An identification of receiving waters with known water quality impacts associated with storm water discharges.

Several commenters noted the importance of developing and targeting management programs based on discharge characterization data and monitoring. Numerous other commenters stressed the importance of a program to identify and eliminate illicit connections and improper disposal. EPA agrees that discharge characterization is an important component of developing management programs. Most of the discharge characterization components of the municipal application procedure have been retained as proposed. However some changes and clarifications have been made, and these are noted below.

a. Screening analysis for illicit discharges (part 1 of application). Illicit discharges (non-storm water discharges without a NPDES permit), and illegal dumping to municipal separate storm sewer systems occur in a relatively haphazard manner. Due to the unpredictability of such discharges, today's permit applications require a field analysis for the development of priorities for detecting and controlling such discharges. A field screening approach will provide a means of detecting high levels of pollutants in dry weather flows, which is one indicator of illicit connections. Results of a field test of such discharges will provide further information about the nature of the discharge to determine if further investigation is warranted. Visual observation of dry weather flows has been shown to be one the most effective means for tracking down illicit connections and improper disposal.

As discussed in greater detail in section VI.H.7.b of today's preamble, EPA is proposing to require that municipal applicants submit a comprehensive plan to develop a program to detect and control illicit connections and illegal dumping. In order to develop appropriate priorities for these programs, applicants shall submit the results of a screening analysis to be performed on major outfalls or “field screening points” in the systems to detect the presence of illicit hookups and illegal dumping. The results of the screening analysis, referred to as the field screen, would be reported in part 1 of the permit application.

Under the requirements for a field screen, the applicant or co-applicants will submit a description of observations of dry weather discharges from major outfalls or “field screening points” identified in part 1 of the application. At a minimum, the field screen would include a description of visual observations made during a dry weather period. If any flow is observed during a dry weather period, two grab samples will be collected during a 24 hour period with a minimum period of four hours between samples. For all such samples, a description of the color, odor, turbidity, the presence of an oil sheen or surface scum as well as any other relevant observation regarding the potential presence of non-storm water discharges or illegal dumping would be provided. In addition, the applicant should provide the results of a field screen which includes on-site estimates of pH, total chlorine, total copper, total phenol, detergents (or surfacants) along with a description of the flow. EPA is not requiring analytical methods approved under 40 CFR part 136 be used exclusively in the field screen. Rather, the use of inexpensive field sampling techniques such as the use of colormetric detection methods is anticipated. Where the field screen does not involve analytical methods approved under 40 CFR part 136, the applicant is required to provide a description of the method used which includes the name of the manufacturer of the test method, including the range and accuracy of the test. Appropriate field techniques for a field screen of dry weather discharges are discussed in EPA guidance for municipal storm water discharge permit applications.

It should be clarified that data from the field screen is generally not appropriate for comprehensive evaluation of water quality impacts, or estimating pollutant loadings. Rather, the information from the field screen in part 1 of the application will be used along with other information, such as the age of development and degree of industrial activity in the drainage basin, to identify areas or outfalls which are appropriate targets for management programs and for investigations directed at identifying and controlling non-storm water discharges to separate storm sewers during the term of the permit.

In the December 7, 1988, proposal, EPA proposed a second phase of the screening analysis requiring that wet-weather and dry-weather samples be collected and analyzed in accordance with analytical methods approved under 40 CFR part 136 from designated major outfalls for a larger set of pollutants identified with illicit connections. Comments essentially viewed this proposal as too ambitious for the permit application. One commenter recommended that this procedure could best be accomplished during the term of the permit. Some comments maintained that the collection of analytical samples as a follow up to an initial field screen analysis was not the most cost-effective, practicable or efficient method for pinpointing illicit connections. EPA recognizes that several municipal programs to detect and control illicit connections and other non-storm water

discharges have been successfully developed and implemented without the use of extensive analytical sampling (for example, programs in Fort Worth, TX and Washtenaw County, MI). After identifying and analyzing the comments on this aspect of the proposal EPA has withdrawn this element of the proposal from today's rule. EPA believes that a follow-up phase to the initial field screening is more appropriate during the term of the permit. Thus, EPA has dropped the field screening requirement proposed for Part 2 of the application.

b. Representative data (Part 2 of application). The NURP study showed that pollutant concentrations in urban runoff can exhibit significant variation. Pollutant concentrations in such discharges vary during storm events and from storm event to storm event. Given the complex, variable nature of storm water discharges from municipal systems, EPA favors a permit scheme where the collection of representative data is primarily a task that will be accomplished through monitoring programs during the term of the permit. Permit writers have the necessary flexibility to develop monitoring requirements that more accurately reflect the true nature of highly variable and complex discharges.

***48050** Today's rule provides for an initial assessment of the quality of discharges from municipal separate storm sewers based primarily on source identification measures and existing information received in the permit application. This information will be used to begin to characterize system discharges. The analysis developed under this approach will not rely soley on sampling data collected during the application process, but will also incorporate existing data bases such as the one developed under the NURP study. Today's rule requires that some quantitative data will be collected to ensure the system discharges can be appropriately represented by the various existing data bases and to provide a basis for developing a monitoring plan to be implemented as a permit condition.

Today's rule requires that quantitative data be submitted for discharges from selected storm events at between 5 and 10 outfalls or field screening points. The municipality will recommend and the Director will then designate the outfalls or field screening points as representative of the commercial, residential and industrial land use activities of the drainage area contributing to the system, on the basis of information received in part 1 of the application. The applicant will be required to collect samples of a storm discharge from three storm events occurring one month apart for each designated outfall or field screening point. This is a modification to the December 7, 1988, proposal wherein only one of the 5 to 10 outfalls was to be sampled during three storm events, and the remaining sampled only once. This requirement may be modified by the Director if the type and frequency of storm events require different sampling. The Director may require samples of discharges to be collected during snow melts or during specified seasons. The Director may also require additional testing during a single event if it is unlikely that there will be three storm events suitable for sampling during the year. Furthermore, the Director may allow exemptions to the three storm event requirement when climatic conditions create good cause for such exemptions; for example, arid regions or areas experiencing drought conditions during the period when applications are developed could be exempted.

EPA has added requirements to sample more storm events in response to comments that the sampling procedure proposed would not necessarily yield representative data. Commenters indicated that: rain events of different intensity may yield different levels and types of pollutants; a rain event after a dry spell of several months will not be representative when compared to rain events occurring closer together, due to the build up of constituents; one sample may reflect short term effects such as improper disposal rather than long term effects; and that rain events are generally too variable to rely on the limited sampling as proposed. Clearly the data collected from sampling storm water discharges has a tendency to vary greatly. The more sampling that is accomplished, the greater extent to which this variability may be accounted for and appropriate management programs developed.

In selecting the amount of data to be collected during the permit application process, EPA has attempted to balance the usefulness of this data against the economic and logistical constraints in actually obtaining it. In some cases the data obtained will support initial loading and concentration estimates obtained using various modeling techniques, from which appropriate permit conditions can be developed. Data obtained may be supplemented with further data collection during the term of the permit.

EPA believes that the requirement that selected major municipal outfalls or “field screening points” be sampled for more than one event will provide verification that the characterization of discharge is valid. Where an ongoing sampling program is defined

  

for the term of the permit, samples taken during the first few years of this period can be used to verify the application results. If a municipality or an industry questions the conclusions drawn from the characterization sampling, it may at its discretion choose to perform additional sampling to either confirm or dispel these concerns.

All samples collected will be analyzed for all pollutants listed in Table II, (organic pollutants), and Table III, (toxic metals, cyanide and total phenol) of appendix D of 40 CFR part 122, and for the pollutants listed in Table M-1 below:

**Table M-1**

| | |
|---|---|
| Total suspended solids (TSS) | Total dissolved solids. |
| COD | BOD[5] . |
| Oil and grease | Fecal coliform. |
| Fecal streptococcus | pH. |
| Dissolved phosphorus | |
| Total ammonia plus organic nitrogen | Total phosphorus. |
| Total Kjeldahl nitrogen | Nitrate plus nitrite. |

A portion of the NURP program involved monitoring 120 priority pollutants in storm water discharges from lands used for residential, commercial and light industrial activities. The NURP program excluded testing for asbestos and dioxin. Results for seven other organic priority pollutants were not considered valid due to changes in, or constraints on test methods. Seventy-seven priority pollutants were detected in samples of storm water discharges from lands used for residential, commercial and light industries taken during the NURP study, including 14 inorganic and 63 organic pollutants. Table M-2 shows the priority pollutants which were detected in at least ten percent of the discharge samples which were sampled for priority pollutants.

**Table M-2.—Priority Pollutants Detected in at Least 10% of NURP Samples**

**[In percent]**

| Metals and inorganics | Frequency of detection |
|---|---|
| Antimony | 13 |
| Arsenic | 52 |
| Beryllium | 12 |
| Cadmium | 48 |
| Chromium | 58 |
| Copper | 91 |
| Cyanides | 23 |
| Lead | 94 |
| Nickel | 43 |

  

| | |
|---|---|
| Selenium | 11 |
| Zinc | 94 |
| Pesticides: | |
| Alpha-hexachlorocyclohexane | 20 |
| Alpha-endosulfan | 19 |
| Chlordane | 17 |
| Lindane | 15 |
| Halogenated aliphatics: | |
| Methane, dichloro- | 11 |
| Phenols and cresols: | |
| Phenol | 14 |
| Phenol, pentachloro- | 19 |
| Phenol, 4-nitro | 10 |
| Phthalate esters: | |
| Phthalate, bis(2-ethylhexyl) | 22 |
| Polycyclic aromatic hydrocarbons: | |
| Chrysene | 10 |
| Fluoranthene | 16 |
| Phenanthrene | 12 |
| Pyrene | 15 |

The NURP data also showed a significant number of these samples exceeded various freshwater water quality criteria. The exceedence of water quality criteria does not necessarily imply that an actual violation of standards will exist in the receiving water body in question. Rather, the enumeration of exceedences serves as a screening function to identify those constituents whose presence in urban storm water runoff may warrant high priority for further evaluation.

Members of this group represent all of the major organic chemical fractions ***48051** found in Table II of appendix D of 40 CFR part 122 (volatiles, acid compounds, base/neutrals, pesticides). Today's rule requires testing for all organic constituents in Table II rather than limiting the sampling requirements to the 24 toxic constituents found in the NURP study because they will provide a better description of the discharge at essentially the same cost. (The cost of analyzing samples for organic chemicals strongly depends on the number of major organic chemical fractions tested). The NURP study focused on characterizing storm water discharges from lands used for residential, commercial and light industrial activities. In general, the NURP study did not focus on other sources of pollutants to municipal separate storm sewer systems and, therefore, does not reflect all potential pollutants that may be present in discharges from municipal separate storm sewer systems.

  

The sampling requirements for the permit application address a limited number of sampling locations but require analysis for a wide range of pollutants. Sampling for a wide range of pollutants as a permit application requirement should provide permit writers with appropriate data to target more specific pollutants when developing requirements for a monitoring program during the term of the permit.

Numerous commenters stated that monitoring for all priority pollutants seemed excessive. However, EPA is convinced that it is more appropriate for permit conditions to focus on and prioritize particular pollutant problems after data covering a broad spectrum of pollutants are developed. As noted above, NURP identified 77 priority pollutants in urban runoff, but only from residential, commercial, and light industrial (e.g. industrial parks) areas. One municipal entity stated that this approach is a reasonable and realistic means of providing some useful baseline data, while others recommended sampling a variety of parameters that are included in Tables M-1 and M-2. Another municipal entity stated that characterization of outfall discharge quality during storm events is necessary as a means of targeting source control activities.

EPA is working with the United States Geological Survey (USGS) to evaluate the availability of USGS technical assistance to municipalities through cooperative funding programs to aid in collecting representative quantitative data of storm water discharges from municipal systems.

USGS data collection programs with municipalities typically include storm water discharge samples obtained at various times during a storm hydrograph event. Various USGS field procedures can be used to obtain discharge data for pipes, culverts, etc., typically found in urban areas. Pollutant models can be calibrated with data and long-term rainfall records to simulate the quality of system discharges and compared to other storm water models.

In addition, EPA recognizes that many municipalities have participated in studies, such as NURP, that involve sampling of urban runoff as well as other components of discharges from municipal separate storm sewer systems. All existing storm water sampling data along with relevant water quality data, sediment data, fish tissue data or biosurvey data taken over the last ten years is considered relevant and, under today's rule, must be submitted with part 1 of the application. Sampling data that is submitted must be accompanied with a narrative description of the drainage area served by the outfall monitored, a description of the sampling and quality control program, and the location of receiving water monitoring.

EPA requested comments on the use of existing data, such as that generated under the NURP study, to satisfy the requirement of providing representative sampling data. Commenters did not agree on the value of NURP results as an indicator of representative data. Several commenters expressed the view that existing data could be used to satisfy in whole or in part the representative sampling requirements of the storm water permit application. However, commenters generally did not offer suggested criteria that could be used to verify the validity of existing data. One commenter believed that intensive sampling over a period of ten years in 12 basins, when combined with NURP data, would be adequate.

One commenter supported the use of data, such as that obtained from the NURP study, to target sampling programs. EPA supports such a methodology and has retained this portion of the proposed discharge characterization component. EPA received strong support from an environmental group for retaining this information requirement in part 1 of the application.

In light of these comments EPA believes it is appropriate to retain the representative sampling requirements without resorting to the use of existing data exclusively. Because of the inherent variability in reliability and applicability of existing data, EPA is convinced that a nationally consistent methodology for collecting data is appropriate. This data can then be used in conjunction with other existing data and models to develop appropriate site specific management programs and more generalized management program strategies. Where existing data and data collected under today's rule varies or does not match, further sampling under the term of the permit will be accomplished to more accurately assess the discharge of pollutants.

  

c. Loading and Concentration Estimates (part 2 of application). The assessment of the water quality impacts of discharges from municipal separate storm sewer systems on receiving waters requires the analysis of both pollutant loadings and concentrations of pollutants in discharges.

The loading and concentration estimates in today's rule will be used to evaluate two types of water quality impacts: (1) Short-term impacts; and (2) long-term impacts. Specifically, the regulation requires estimates of the annual pollutant load of the cumulative discharges to waters of the United States from municipal outfalls and the event mean concentration of the cumulative discharges to waters of the United States municipal outfalls during a storm event for BOD5 , COD, TSS, dissolved solids, total nitrogen, total ammonia plus organic nitrogen, total phosphorus, dissolved phosphorus, cadmium, copper, lead, and zinc. Estimates shall be accompanied by a description of the procedures for estimating constituent loads and concentrations, including any modelling, data analysis, and calculation methods. Municipalities have options in the use of methodologies, including those presented in NURP for calculating loads.

Short term impacts from discharges from municipal separate storm sewers involve changes in water quality that occur during and shortly after storm events. Examples of short-term impacts that can lead to impairments include periodic dissolved oxygen depression due to the oxidation of contaminants, high bacteria levels, fish kills, acute effects of toxic pollutants, contact recreation impairments and loss of submerged macrophytes. Characterization of instream pollutant concentrations based on estimated pollutant concentrations in system discharges are important for evaluating these types of impacts.

Long-term water quality impacts from discharges from municipal separate storm sewers may be caused by contaminants associated with suspended solids that settle in receiving water sediments and by nutrients which enter receiving water systems with long ***48052** retention times. Pollutant loading data are important for evaluation of impairments such as loss of storage capacity in streams, estuaries, reservoirs, lakes and bays, lake eutrophication caused by high nutrient loadings, and destruction of benthic habitat. Other examples of the long-term water quality impacts include depressed dissolved oxygen caused by the oxidation of organics in bottom sediments and biological accumulation of toxics as a result of uptake by organisms in the food chain. An estimate of annual pollutant loading associated with discharges from municipal storm water sewer systems is necessary to evaluate the magnitude and severity of the environmental impacts of such discharges and to evaluate the effectiveness of controls which are imposed at a later time.

Municipal storm water sewer systems generally handle runoff from large drainage areas and the sources of pollution are usually very diffuse. The concentrations of many pollutants in discharges from these systems are often low relative to many industrial process and POTW discharges. The water quality impacts of low concentration pollution discharges tend to be cumulative and need to be evaluated in terms of aggregate loadings as well as pollutant concentrations. A site-specific loading analysis can be used to evaluate the relative contribution of various pollutant sources.

**7. Storm Water Quality Management Plans**

Today's rule facilitates the development of site-specific permit conditions by requiring large and medium municipal permit applicants to submit, along with other information, a description of existing structural and non-structural prevention and control measures on discharges of pollutants from municipal storm sewers in part I of the permit application. Section 122.26(d)(2)(iv) requires the applicant to identify in part 2 of the application, to the degree necessary to meet the MEP standard, additional prevention or control measures which will be implemented during the life of the permit. Although, in many cases, it will not be possible to identify all prevention and control measures that are appropriate as permit conditions, EPA believes that the process of identifying components of a comprehensive prevention and/or control program should begin early and that applicants should be given the opportunity to identify and propose the components of the program that they believe are appropriate for first preventing or controlling discharges of pollutants.

As noted earlier, EPA recognizes that problems associated with storm water, combined sewer overflows (CSOs) and infiltration and inflow (I&I) are all inter-related even though they are treated somewhat differently under the law. EPA believes that it is important to begin linking these programs and activities and, because of the potential cost to local governments, to investigate

the use of innovative, nontraditional approaches to reducing or preventing contamination of storm water. The application process for developing municipal storm water management plans provides an ideal opportunity between steps l and 2 for considering the full range of nontraditional, preventive approaches.

The permit application requirements in today's rule require the applicant or co-applicants to develop management programs for four types of pollutant sources which discharge to large and medium municipal storm sewer systems. Discharges from large and medium municipal storm sewer systems are usually expected to be composed primarily of: (1) Runoff from commercial and residential areas; (2) storm water runoff from industrial areas; (3) runoff from construction sites; and (4) non-storm water discharges. Part 2 of the permit application has been designed to allow the applicant the opportunity to propose MEP control measures for each of these components of the discharge. Discharges from some municipal systems may also contain pollutants from other sources, such as runoff from land disposal activities (leaking septic tanks, landfills and land application of sewage sludge). Where other sources, such as land disposal, contribute significant amounts of pollutants to a municipal storm sewer system, appropriate control measures should be included on a site-specific basis. Proposed management programs will then be evaluated in the development of permit conditions.

There is some overlap in the manner in which these pollutant sources are characterized and their sources identified. For instance, improper disposal of oil into storm drains is often associated with do-it-yourself automobile oil changes in residential areas, or improper application or over-use of herbicides and pesticides in residential areas can also occur in industrial areas. Also, some control measures will reduce pollutant loads for multiple components of the municipal storm sewer discharge. These measures should be identified under all appropriate places in the application; as discussed below, however, double counting of pollutant removal must be avoided when the total assessment of control measures is performed.

Although many land use programs have multiple purposes, including the reduction of pollutants in discharges from municipal separate storm sewer systems, the proposed management programs in today's rule are intended to address only those controls which can be implemented by the permit applicant or co-applicants. EPA cannot abrogate its responsibilities under the CWA to implement the NPDES permit program by relying on pollution control programs that are outside the NPDES program. For example, municipal permit management programs may not rely exclusively on erosion or sediment control laws for implementing that portion of management programs that address discharges from construction sites, unless such laws implement NPDES permit program requirements entirely and that such implementation is a part of the permit.

EPA anticipates that storm water management programs will evolve and mature over time. The permits for discharges from municipal separate storm sewer systems will be written to reflect changing conditions that result from program development and implementation and corresponding improvements in water quality. The proposed permit applications will require applicants to provide a description of the range of control measures considered for implementation during the term of the permit. Flexibility in developing permit conditions will be encouraged by providing applicants an opportunity to identify in the permit application priority controls appropriate for the initial implementation of management programs. Many commenters endorsed the flexible site-specific storm water program approach as proposed as a method for addressing regional water quality control programs in a cost effective manner. To this extent, EPA agrees with one municipality that management programs should focus on more serious problems and sources of pollutants identified in the municipal system. However, EPA believes that to implement section 402(p)(3), comprehensive storm water management programs which address a number of major sources of pollutants to a system are necessary. Municipal programs should not be focused solely on a single source of pollution, such as illicit connections.

One commenter maintained that management program development ***48053** should be flexible enough to allow for consideration of what is attainable based on the area's climate, vegetation, hydrology, and land uses. EPA agrees with this comment. Some strategies for reducing pollutants in the northeast will not be practical in the southwest, such as management programs for deicing activities. The permit application process will determine what strategies are appropriate in different locations.

  

Several commenters supported addressing storm water pollutant problems through management practices or programs rather than end of pipe controls or treatment. EPA agrees with this comment to the extent that storm water management practices are a general theme of this rulemaking with regard to municipal permits. However, there will be cases where such discharges are best addressed through technology such as retention, detention or infiltration ponds.

One commenter reacted unfavorably to the flexible site-specific management plan approach stating that there is no hard criteria upon which to judge the adequacy of programs. Another commenter felt that there should be a BAT standard for municipal permits. Another commenter stated that the rule should contain specific BMPs that the permittee must comply with. EPA disagrees with these comments. The Clean Water Act requires municipalities to apply for permits that will reduce pollutants in discharges to the maximum extent practicable and sets out the types of controls that are contemplated to deal with storm water discharges from municipalities. The language of CWA section 402(p)(3) contemplates that, because of the fundamentally different characteristics of many municipalities, municipalities will have permits tailored to meet particular geographical, hydrological, and climatic conditions. Management practices and programs may be incorporated into the terms of the permit where appropriate. Permit conditions, which require that storm water management programs be developed and implemented or require specific practices, are enforceable in accordance with the terms of the permit. EPA disagrees with the notion that this regulation, which addressed permit application requirements, should create mandatory permit requirements which may have no legitimate application to a particular municipality. The whole point of the permit scheme for these discharges is to avoid inflexibility in the types and levels of control. Further, to the degree that such mandatory requirements may be appropriate, these requirements should be established under the authority of section 402(p)(6) of the CWA and not in this rulemaking, which addresses permit application requirements.

Some commenters suggested that management programs should be developed as part of the permit conditions and not as part of the permit application. EPA agrees that management programs and their ongoing development should be part of the permit term. However, EPA is convinced, and many commenters agree, that the permit application should contain information on what the permittee has done to date and what it proposes and plans to do during the permit term based upon its discharge characterization and source identification data. This is a reasonable and logical approach and one that meets the intent and letter of section 402(p)(3) of the CWA. As stated above, this would be an appropriate method for implementing storm water management programs that should mature and evolve over time.

Applicants will propose priorities based on a consideration of appropriate controls including, but not limited to, consideration of controls that address: reducing pollutants to municipal separate storm sewer system discharges that are associated with storm water from commercial and residential areas (§ 122.26(d)(2)(iv)(A)); illicit discharges and illegal disposal (§ 122.26(d)(2)(iv)(B)); storm water from industrial areas (§ 122.26(d)(2)(iv)(C)); and runoff from construction sites (§ 122.26(d)(2)(iv)(D)). Permits for different municipalities will place different emphasis on controlling various components of discharges from municipal storm sewers. For example, the potential for cross-connections (such as municipal sewage or industrial process wastewater discharges to a municipal separate storm sewer) is generally expected to be greater in municipalities with older developed areas. On the other hand, municipalities with larger areas of new development will have a greater opportunity to focus controls to reduce pollutants in storm water generated by the area after it is developed, discharges from construction sites, and other planning activities.

EPA requested comments on the process and methods for developing appropriate priorities in management programs proposed in applications and how the development of these priorities can be coordinated with controls on other discharges to ensure the achievement of water quality standards and the goals of the CWA.

Discharges from diffuse sources in residential areas was recognized by several commenters as a significant source of pollutants. Accordingly, these elements of the management plans have been retained. In conjunction with the importance of developing programs for illicit connections, numerous commenters stated that education programs are a priority. Another commenter emphasized that ordinances prohibiting such discharges and their enforcement is a crucial means of a successful program in this regard. EPA agrees with these comments and consequently will retain those portions of management program development

that include a description of a program for educational activities such as public information for the proper disposal of oil and toxic materials and the use of herbicides, pesticides and fertilizers.

Some commenters noted that discharge characterization is necessary for development of appropriate management plans. EPA agrees with these comments and has retained the discharge characterization components in this rulemaking. However, EPA disagrees that the results of all discharge characterization procedures (i.e., part 1 and part 2) are necessary to describe and propose a program as required in part 2 of the application. The application of various models is available to permit applicants, where needed, to develop appropriate management programs. All available site specific discharge characterization data should be available to the permit writer to draft appropriate conditions for the term of the permit.

One commenter noted that an important aspect of developing management plans is establishing the necessary legal authority to improve water quality. EPA agrees with this comment and has retained those aspects of the regulation which call for development and attainment of adequate legal authority in both parts of the municipal application.

One commenter stated that programs should address previously identified water quality problems in other programs that are required by section 304(1) of the CWA. EPA agrees that identified water quality problems need to be addressed by management programs, and the municipal permit application will call for an identification of these waters. However, EPA does not endorse addressing these waters to the exclusion of all others within the boundaries of the municipal separate storm sewer system. Some waters may experience substantial degradation after rain events and still not be listed under ***48054** section 304(1). Further, water quality impacts in listed waters may not be related to storm water discharges, while other non-listed waters do have water quality impacts from storm water discharges. Similarly, EPA agrees with one commenter that it may be desirable to focus attention and resources on certain problem watersheds within a municipality, and controls may be imposed and programs prioritized on that basis. However, such a focus should not be to the exclusion of other waters and watersheds that have water quality problems (although less troublesome) traceable to storm water discharges. The CWA requires that permits address discharges to waters of the United States, not just waters previously targeted under special programs.

Some commenters expressed concern that the permit application requires the design of management programs before knowing what will be in the permits. EPA disagrees with the thrust of this comment, that is that the order of requirements is inappropriate. The permit applicant will have two years to develop proposed plans which can be considered by permit writers in the development of the permit. Based upon a consideration of the management program proposed by the municipality and other relevant information, permits can be tailored for individual programs. One commenter stated that the cornerstone of management programs are inspection and enforcement programs. EPA agrees that these two elements are important components. Without inspection and enforcement mechanisms the programs will undoubtedly falter. Accordingly these requirements in the description of management programs in the permit application have been retained. In a similar vein, one commenter emphasized the importance of developing legal authority, financial capability, and administrative infrastructure. EPA agrees with this comment and has retained those aspects of the regulation that call for a description of applicants plans and resources in these areas.

One commenter stressed that control of discharges into the municipal system from industries is an important goal of municipal storm water management programs. EPA agrees with this comment and has retained the proposed description of management programs to address discharges from industrial sources. Other commenters identified industries as the principal contributors of pollutants to municipal separate storm sewer systems.

In addition, EPA will continue to evaluate procedures and methods to control storm water discharges to the extent necessary to mitigate impacts on water quality in the studies required under section 402(p)(5) of the CWA. One purpose of these studies will be to evaluate the costs and water quality benefits associated with implementing these procedures and methods. This evaluation will address a number of factors which impact the implementation costs associated with these programs, such as the extent to which similar municipal ordinances are currently being implemented, the degree to which existing municipal programs (such as flood management programs or construction site inspections) can be expanded to address water quality concerns, the resource intensiveness of the control, and whether the control program will involve public or private expenditures. This information,

  

along with information gained during permit implementation will aid in the dynamic long-term development of municipal storm water management programs.

a. Measures to reduce pollutants in runoff from commercial and residential areas. The NURP program evaluated runoff from lands primarily dedicated to residential and commercial activities. The areas evaluated in the study reflect some other activities, such as light industry, which are commonly dispersed among residential and commercial areas. The NURP study selected sampling locations that were thought to be relatively free of illicit discharges and storm water from heavy industrial sites including storm water runoff from heavy construction sites. Of course, in a study such as NURP it was impossible to totally isolate various contributions to the runoff. In developing the permit application requirements in today's rule EPA has, in general, relied on the NURP definition of urban runoff—runoff from lands used for residential, commercial and light industrial activities.

NURP and numerous other studies have shown that runoff from residential and commercial areas washes a number of pollutants into receiving waters. Of equal importance is the volume of storm water runoff leaving urban areas during storm events. Large intermittent volumes of runoff can destroy aquatic habitat. As the percentage of paved surfaces increases, the volume and rate of runoff and the corresponding pollutant loads also increase. Thus, the amount of storm water runoff from commercial and residential areas and the pollutant loadings associated with storm water runoff increases as development progresses; and they remain at an elevated level for the lifetime of the development.

Proposed § 122.26(d)(2)(iv)(A) requires municipal storm sewer system applicants to provide in part 2 of the application a description of a proposed management program that will describe priorities for implementing management programs based on a consideration of appropriate controls including:

- A description of maintenance activities and a maintenance schedule for structural controls;

- A description of planning procedures including a comprehensive master plan to control after construction is completed, the discharge of pollutants from municipal separate storm sewers which receive discharges from new development and significant redevelopment after construction is completed (in response to comment this contemplates an engineering policy and procedure strategy with long term planning);

- A description of practices for operating and maintaining public highways and procedures for reducing the impact on receiving waters of such discharges from municipal storm sewer system;

- A description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies; and

- A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides and fertilizer which will include, as appropriate, controls such as educational activities and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.

Water quality problems caused by municipal storm sewer discharges will generally be most acute in heavily developed areas. Prevention measures may be desirable and cost effective. However, structural control measures may also be effective, although opportunities for implementing these measures may be limited in previously developed areas. Commonly used structural technologies include a wide variety of treatment techniques, including first flush diversion systems, detention/infiltration basins, retention basins, extended detention basins, infiltration trenches, porous pavement, oil/grit separators, grass swales, and swirl concentrators. A major problem associated with sound storm water management is the need for operating ***48055** and maintaining the system for its expected life.

  

The unavailability of land in highly developed areas often makes the use of structural controls infeasible for modifying many existing systems. Non-structural practices can play a more important role. Non-structural practices can include erosion control, streambank management techniques, street cleaning operations, vegetation/lawn maintenance controls, debris removal, road salt application management and public awareness programs.

As noted above, the first component of the proposed program to reduce pollutants in storm water from commercial and residential areas which discharge to municipal storm sewer systems is to describe maintenance activities and schedule. The second component of the proposed program to reduce pollutants in storm water from commercial and residential areas which discharge to municipal storm sewer systems provides that applicants describe the planning procedures and a comprehensive master plan that will assure that increases of pollutant loading associated with newly developed areas are, to the maximum extent practicable, limited. These measures should address storm water from commercial and residential areas which discharge to the municipal storm sewer that occur after the construction phase of development is completed. Controls for construction activities are addressed later in today's rule. One commenter noted the feasibility of developing management plans for newly developing areas. EPA agrees with this comment and has retained that portion of the regulation that deals with a description of controls for areas of new development. Similarly, one municipality stressed the importance and achievability of addressing storm water discharges from construction sites.

As urban development occurs, the volume of storm water and its rate of discharge increases. These increases are caused when pavement and structures cover soils and destroy vegetation which otherwise would slow and absorb runoff. Development also accelerates erosion through alteration of the land surface. Areas that are in the process of development offer the greatest potential for utilizing the full range of structural and non-structural best management practices. If these measures are to provide controls to reduce pollutant discharges after the area has been developed, comprehensive planning must be used to incorporate these measures as the area is in the process of developing. These measures offer an important opportunity to limit increases in pollutant loads.

The third component of § 122.26(d)(2)(iv)(A) provides a description of practices for operating and maintaining public roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems. General guidelines recommended for managing highway storm water runoff include litter control, pesticide/herbicide use management, reducing direct discharges, reducing runoff velocity, grassed channels, curb elimination, catchbasin maintenance, appropriate streetcleaning, establishing and maintaining vegetation, development of management controls for salt storage facilities, education and calibration practices for deicing application, infiltration practices, and detention/retention practices.

The fourth component of § 122.26(d)(2)(iv)(A) provides that applicants identify procedures that enable flood management agencies to consider the impact of flood management projects on the water quality of receiving streams. A well-developed storm water management program can reduce the amount of pollutants in storm water discharges as well as benefit flood control objectives. As discussed above, increased development can increase both the quantity of runoff from commercial and residential areas and the pollutant load associated with such discharges. Disturbing the land cover, altering natural drainage patterns, and increasing impervious area all increase the quantity and rate of runoff, thereby increasing both erosion and flooding potential. An integrated planning approach helps planners make the best decisions to benefit both flood control and water quality objectives.

The fifth component of § 122.26(d)(2)(iv)(A) would provide that municipal applicants submit a description of a program to reduce, to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides and fertilizer. Such a program may include controls such as educational activities and other measures for commercial applicators and distributors and controls for application in public rights-of-way and at municipal facilities. Discharges of these materials to municipal storm sewer systems can be controlled by proper application of these materials. Some commenters noted that insecticides used in residential areas are a probable source of pollutants in storm water discharges from residential areas, as well as salting and other de-icing activities. In response to this comment, part of a community management plan may include controls or education programs to limit the impacts of these sources of pollutants.

  

One commenter noted that many communities already have household toxic disposal programs. Where appropriate these can be incorporated into municipal management programs.

Some commenters suggested substituting the management program description for residential and commercial areas with a simple identification of applicable management practices. EPA agrees that identification of appropriate management practices is a critical component of a program description for these areas. In essence, this is what the program description is designed to achieve. However, for the reasons discussed in greater detail above, EPA is convinced that an appropriate program must address all of the components of the management program for residential and commercial areas that are outlined in today's rule. Further, for the purposes of writing a permit with enforceable conditions, the application should identify a schedule to implement management practices. The applicant should be able to estimate the reduction in pollutant loads as a result of the development of certain management practices and programs (§ 122.26(d)(2)(v). A program may also include public education programs, which are not necessarily viewed as traditional BMPs.

b. Measures for illicit discharges and improper disposal. The CWA requires that NPDES permits for discharges from municipal storm sewers "shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers." In today's rule, EPA will begin to implement this statutory mandate by focusing on two types of discharges to large and medium municipal separate storm sewer systems. See § 122.26(d)(1)(iv)(D) and (d)(2)(iv)(B). One type of non-storm water discharges are illicit discharges which are plumbed into the system or that result from leakage of sanitary sewage system. The other class of non-storm water discharges result from the improper disposal of materials such as used oil and other toxic materials.

Illicit discharges. In some municipalities, illicit connections of sanitary, commercial and industrial discharges to storm sewer systems have had a significant impact on the water quality of receiving waters. Although the ***48056** NURP study did not emphasize identifying illicit connections to storm sewers other than to assure that monitoring sites used in the study were free from sanitary sewage contamination, the study concluded that illicit connections can result in high bacterial counts and dangers to public health. The study also noted that removing such discharges presented opportunities for dramatic improvements in the quality of urban storm water discharges.

Other studies have shown that illicit connections to storm sewers can create severe, wide-spread contamination problems. For example, the Huron River Pollution Abatement Program inspected 660 businesses, homes and other buildings located in Washtenaw County, Michigan and identified 14% of the buildings as having improper storm drain connections. Illicit discharges were detected at a higher rate of 60% for automobile related businesses, including service stations, automobile dealerships, car washes, body shops and light industrial facilities. While some of the problems discovered in this study were the result of improper plumbing or illegal connections, a majority were approved connections at the time they were built. Many commenters emphasized the identification and elimination of illicit connections as a priority, including leakage from sanitary sewers. EPA agrees with these comments and intends to retain this portion of the program without modification.

A wide variety of technologies exist for detecting illicit discharges. The effectiveness of these measures largely depends upon the site-specific design of the system. Under today's rule, permit applicants would develop a description of a proposed management program, including priorities for implementing the program and a schedule to implement a program to identify illicit discharges to the municipal storm sewer system. This rulemaking will require the initial priorities for analyzing various portions of the system and the appropriate detection techniques to be used.

Improper disposal. The permit application requirements for municipal storm sewer systems include a requirement that the municipal permit applicant describe a program to assist and facilitate in the proper management of used oil and toxic materials. Improper management of used oil can lead to discharges to municipal storm sewers that in turn may have a significant impact on receiving water bodies. EPA estimates that, annually, 267 million gallons of used oil, including 135 million gallons of used oil from do-it-yourself automobile oil changes, are disposed of improperly. An additional 70 million gallons of used oil, most coming from service stations and repair shops, are used for road oiling. Many commenters emphasized the elimination of discharges composed of improperly disposed of oil and toxic material. One commenter identified motor oil as the major

source of oil contamination and that EPA needs to encourage proper disposal of used oil. Several other commenters emphasized the importance of recycling programs for oil. EPA agrees with these comments and intends to retain this portion of the program without modification. One commenter identified public awareness and timely reporting of illegal dumping as critical components of this portion of the program. EPA agrees with this comment and intends for management programs to deal with this problem.

c. Measures to reduce pollutants in storm water discharges through municipal separate storm sewers from municipal landfills, hazardous waste treatment, disposal and recovery facilities that are subject to section 313 of title III of SARA. As discussed in section VI.C of today's preamble, industrial facilities that discharge storm water through a large or medium municipal separate storm sewer system are required to apply for a permit under § 122.26(c) or seek coverage under a promulgated general permit. Today's rule also requires the municipal storm sewer permittee to describe a program to address industrial dischargers that are covered under the municipal storm sewer permit. Today's rule requires the municipal applicant to identify such discharges (see source identification requirements under § 122.26(d)(2)(ii)), provide a description of a program to monitor pollutants in runoff from certain industrial facilities that discharge to the municipal separate storm sewer system, identify priorities and procedures for inspections, and establish and implement control measures for such discharges. Should a municipality suspect that an individual discharger is discharging pollutants in storm water above acceptable limits, and the owner/operator of the system has no authority over the discharge, the municipality should contact the NPDES permitting authority for appropriate action. Two example of possible action are: if the facility already has an individual permit, the permit may be reopened and further controls imposed; or if the facility is covered by a promulgated general permit, then an individual site-specific permit application may be required.

In the December 7, 1988, proposal, EPA requested comments concerning what storm water discharges from industrial facilities through municipal systems should be monitored. One of the proposed approaches was to require data on portions of the municipal system which receive storm water from facilities which are listed in the proposed regulatory definition at § 122.26(b)(14) of “storm water discharge associated with industrial activity” (with the exception of construction activities and uncontaminated storm water from oil and gas operations) which discharge through the municipal system. However, given the large number of facilities meeting this definition that discharge through municipal systems, a monitoring program that requires the submission of quantitative data regarding portions of the municipal systems receiving storm water from such facilities may not be practicable. Such a requirement could, for some systems, potentially become the most resource intensive requirements in the municipal permit. Therefore, EPA proposed various ways to develop appropriate targeting for monitoring programs.

EPA requested comments on a requirement that, at a minimum, monitoring programs address discharges from municipal separate storm sewer outfalls that contain storm water discharges from municipal landfills, hazardous waste treatment, disposal and recovery facilities, and runoff from industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). Section 313 of title III requires that operators or certain facilities that manufacture, import, process, or otherwise use certain toxic chemicals report annually their releases of those chemicals to any environmental media. Section 313(b) of title III specifies that a facility is covered for the purposes of reporting if it meets all of the following criteria:

- The facility has ten or more full-time employees;

- The facility is in Standard Industrial Classification (SIC) codes 20 through 39;

- The facility manufactured (including quantities imported), processed, or otherwise used a listed chemical in amounts that exceed certain threshold quantities during the calendar year for which reporting is required.

Listed chemicals include 329 toxic chemicals listed at 40 CFR 372.45. After 1989, the threshold quantities of listed chemicals that the facility must manufacture, import or process (in order to trigger the submission of a release ***48057** report) is 25,000

  

pounds per year. The threshold for a use other than manufacturing, importing or processing of listed toxic chemicals is 10,000 pounds per year. EPA promulgated a final regulation clarifying these reporting requirements on February 16, 1988, (53 FR 4500).

EPA received numerous comments regarding limiting the types of facilities that are initially subject to monitoring and municipal management programs. Numerous municipalities agreed that focusing on the above facilities is an appropriate means for setting priorities for the development of control measures to eliminate or reduce pollutants associated with industrial facilities. Commenters agreed that the potential for toxic materials in discharges is high because of the high volume of such materials at these facilities and that information regarding discharges and material management practices will be available through section 313 of SARA. One commenter noted that building on an established program will contribute to establishing an effective storm water program. Accordingly, EPA has specified at § 122.26(d)(2)(ii)(C) that the municipal applicant must describe a program that identifies priorities and procedures for inspections and establishing and implementing control measures for these facilities.

Several commenters suggested that these facilities should not be singled out because the presence of the threshold amounts of SARA 313 chemicals does not indicate that significant quantities of those chemicals are likely to enter the facility's storm water runoff. Instead it was suggested that municipalities should monitor storm sewers as a whole to determine what chemicals are present and therefore what facilities are responsible. EPA disagrees with these comments. The object of these requirements is initially to set priorities for monitoring requirements. Then, if the situation requires, controls can be developed and instituted. If a facility is a member of this class of facilities and does not discharge excessive quantities of SARA 313 chemicals, then it may not be subjected to further monitoring and controls. As noted above, the selection of facilities is only a means of setting priorities for facilities for the development of municipal plans.

EPA agrees, however, that there will be other facilities that are significant sources of pollutants and should be addressed by municipalities as soon as possible under management programs. Accordingly, those industrial facilities that the municipal permit applicant determines to be contributing a substantial pollutant loading to the municipal storm sewer system shall be addressed in this portion of the municipal management program.

EPA also requested comments on monitoring programs for municipal discharges including the submission of quantitative data on the following constituents;

- Any pollutants limited in an effluent guidelines for the industry subcategories, where applicable;

- Any pollutant listed in a discharging facility's NPDES permits for process wastewater, where applicable;

- Oil and grease, pH, BOD5, COD, TSS, total phosphorus, total Kjeldahl nitrogen, and nitrate plus nitrite nitrogen;

- Any information on discharges required under 40 CFR 122.21(g)(7)(iii) and (iv).

These are the same constituents that are to be addressed in individual permit applicants for storm water discharges associated with industrial activity.
Several industries and municipalities submitted comments on this issue. Some commenters agreed that these are appropriate parameters. Some commenters advised that the ability of municipalities to implement this aspect of the program depended on industries submitting this data. Several industries provided comments suggesting that the approach should allow the permittee flexibility in determining which parameters are chosen because of the burdens of monitoring and the complexity of materials and flows in municipal systems.

In light of these comments, EPA has retained § 122.26(d)(2)(iv)(C) as proposed requiring municipalities to describe a monitoring program which utilizes the above parameters. Monitoring for these parameters provides consistency with the individual application requirements for industries, provides uniformity in municipal applications, and will narrow the parameters to conform to the types of industries discharging into the municipal systems. Monitoring programs may consist of programs

  

undertaken by the municipality exclusively or requirements imposed on industry by the municipality, or a combination of approaches. Appropriate procedures are discussed in municipal permit application guidance.

EPA requested comments on appropriate means for municipalities to determine what facilities are contributing pollutants to municipal systems. Many commenters responded with numerous methodologies. Some of these have been addressed in guidance. Municipalities will have options in selecting the most appropriate methodology given their circumstances as described in their permit applications.

EPA initially favors establishing monitoring requirements to be applied to those outfalls that directly discharge to waters of the United States. EPA received one comment from a municipality with regard to this issue which agreed that this was the most logical approach. Monitoring of outfalls close to the point of discharge to waters of the United States is generally preferable when attempting to identify priorities for developing pollutant control programs. However, under certain circumstances, it may be preferable to monitor at the point where the runoff from the industrial facility discharges to the municipal system. For example, if many facilities discharge substantially similar storm water to a municipal system it may be more practicable to monitor discharges from representative facilities in order to characterize pollutants in the discharge.

As noted by numerous industries, if municipal characterization plans reveal problems from certain industrial dischargers, then such facilities may be required to provide further data from their own monitoring. As noted above, EPA envisions that this data could then be used to develop appropriate control practices or techniques and/or require individual permit applications if a general permit covering the facility proves inadequate.

Comments were also solicited as to whether end-of-pipe treatment generally was more appropriate than source controls for storm water from industrial facilities which discharge to municipal systems. Many commenters, including both municipalities and industries, stated that source controls are the only practical and feasible means of controlling pollutants in storm water runoff, and specifically opposed the concept of end-of-pipe treatment or other controls. Some commenters maintained that, from an economic and environmental standpoint, end-of-pipe treatment may be the only effective means. One advised that the prompt cleanup of spills, controlled wash down of process areas, covering of material loading areas, storm water runoff diversion, covered storage areas, detention basins or other such mechanisms would prevent storm water from mixing with pollutants and possibly discharging them into receiving waters. Another noted that in the urban areas, there is little potential for treatment; consequently, it would seem ***48058** that controls and/or retrofitting existing facilities would be necessary when violations are found and that citizens will be better served by source controls appropriate to the individual problem.

EPA agrees with these comments to the extent that source controls and management programs are the general thrust of these regulations. However, in some situations end-of-pipe treatment, such as holding ponds, may be the only reasonable alternative. EPA disagrees with one industrial commenter that the municipalities should be almost entirely responsible for treating municipal discharges at the end of-the-pipe without reliance on source controls by industrial dischargers. Municipal programs may require controls on industrial sources with demonstrated storm water discharge problems. One industrial association noted that its member companies already have incentive to properly handle their materials and facilities because of other environmental programs with spill and erosion controls.

Numerous commenters stated that the program addressing industrial dischargers through municipal systems needs to be clearly defined in order to eliminate, as much as possible, potential conflicts between the system operator and dischargers. EPA has provided a framework for development of management plans to control pollutants from these particular sources. However, because of the differences in municipal systems and hydrology nationwide, EPA is not convinced that program specificity is an appropriate approach. The concept of the management program is to provide flexibility to the permit applicants to develop regional site specific control programs.

One commenter suggested that required controls should be limited to a facility's proportional contribution (based on concentration) of pollutants. EPA disagrees. Most facilities discharging through a municipal separate storm sewer will need to

  

be covered by a general or individual permit. These permits will control the introduction of pollutants from that facility through the municipal storm sewer to the waters of the U.S. Any additional controls placed on the facility by the municipality will be at the discretion of the municipality. EPA is not requiring municipalities to adopt a particular level of controls on industrial facilities as suggested by the commenter.

One commenter questioned how dischargers that discharged both into the waters of the United States and through a municipal system will be addressed and whether there is a potential for inconsistent requirements. Industries that discharge storm water associated with industrial activity into the waters of the United States are required to be covered by individual permits or general permits for such discharges. Dischargers of storm water associated with industrial activity through municipal separate storm sewer systems will be subject to municipal management programs that address such discharges as well as to an individual or general NPDES permit for those discharges. EPA does not believe there is a significant risk of inconsistent requirements, since each industrial facility must meet BAT/BCT-level controls in its NPDES permit. EPA doubts that municipalities will impose much more stringent controls.

Many commenters stated that if cities and municipalities are to be responsible for industrial storm water discharges through their system, then municipalities should have authority to make determinations as to what industries should be regulated, how they are regulated, and when enforcement actions are undertaken. In response, EPA notes that the proposal has been changed and that municipalities will not be solely responsible for industries discharging through their system. Nonetheless, municipalities will be required to meet the terms of their permits related to industrial dischargers. Municipalities may undertake programs that go beyond the threshold requirements of the permit. Some municipal entities stated that municipal permittees should be able to require permit applications from industries in the same manner that EPA does and also require permits. In response, if operators of large and medium municipal separate storm sewer systems wish to employ such a program, then this portion of the management program may incorporate such practices.

d. Measures to reduce pollutants in runoff from construction sites into municipal systems. Section VI.F.8 of today's rule discusses EPA's proposal to define the term “storm water discharge associated with industrial activity” to include runoff from construction sites, including preconstruction activities except operations that result in the disturbance of less than 5 acres total land area which are not part of a larger common plan of development or sale. Under today's rule, facilities that discharge runoff from construction sites that meet this definition will be required to submit permit applications unless they are to be covered by another individual or general NPDES permit. Permit application requirements for such discharges are at 40 CFR 122.26(c)(1)(ii).

Section 122.26(d)(2)(iv)(D) of today's rule requires applicants for a permit for large or medium municipal separate storm sewer systems to submit a description of a proposed management program to control pollutants in construction site runoff that discharges to municipal systems. Under this provision, municipal applicants will submit a description of a program for implementing and maintaining structural and non-structural best management practices for controlling storm water runoff at construction sites. The program will address procedures for site planning, enforceable requirements for nonstructural and structural best management practices, procedures for inspecting sites and enforcing control measures, and educational and training measures. Generally, construction site ordinances are effective when they are implemented. However, in many areas, even though ordinances exist, they have limited effectiveness because they are not adequately implemented. Maintaining best management practices also presents problems. Retention and infiltration basins fill up and silt fences may break or be overtopped. Weak inspection and enforcement point to the need for more emphasis on training and education to complement regulatory programs. Permits issued to municipalities will address these concerns.

**8. Assessment of Controls**

EPA proposed that municipal applicants provide an initial assessment of the effectiveness of the control method for structural or non-structural controls which have been proposed in the management program. Some commenters stated that the assessment of controls should be left to the term of the permit because the effectiveness of controls will be hard to establish. EPA believes that an initial estimate or assessment is needed because the performance of appropriate management controls is highly dependent on site-specific factors. The assessment will be used in conjunction with the development of pollutant loading and concentration

estimates (see VI.H.6.c) and the evaluation of water quality benefits associated with implementing controls. Such assessments do not have to be verified with quantitative data, but can be based on accepted engineering design practices. Further more precise assessments based upon quantitative data can be undertaken during the term of the permit.

***48059** ***I. Annual Reports***

As discussed earlier in today's preamble, EPA has provided for proposed flexible permit application requirements to facilitate the development of site-specific programs to control the discharge of pollutants from large and medium municipal separate storm sewer systems. Many municipalities are in the early stages of the complex task of developing a program suitable for controlling pollutants in discharges under a NPDES permit, while other municipalities have relatively sophisticated programs in place. In order to ensure that such site-specific programs are developed in a timely manner, EPA proposed to require permittees of municipal separate storm sewer systems to submit status reports every year which reflect the development of their control programs.

The reports will be used by the permitting authority to aid in evaluating compliance with permit conditions and where necessary, modify permit conditions to address changed conditions. EPA requested comments on the appropriate content of the annual reports. Based on these comments EPA has added the following in these reports: an analysis of data, including monitoring data, that is accumulated throughout the year; new outfalls or discharges; annual expenditures; identification of water quality improvements or degradation on watershed basis; budget for year following each annual report; and administrative information including enforcement activities, inspections, and public education programs. EPA views this information as important for evaluating the municipal program. Annual monitoring data and identified water quality improvements are important for evaluating the success of management programs in reducing pollutants. If new outfalls come into existence during the term of the permit, these may be sources of pollutants and appropriate permit conditions will be developed. Annual reports should reflect the level of enforcement activity and inspections undertaken to ensure that the legal authority developed by the municipality is properly exercised. Many of the management programs depend upon an ongoing high level of public education. Accordingly, the undertaking of these programs on an annual basis should be documented.

***J. Application Deadlines***

The CWA provided a statutory time frame for implementing the storm water permit application process and issuance and compliance with permits.

The CWA requires EPA to promulgate permit application requirements for storm water discharges associated with industrial activity and for large municipal separate storm sewer systems by “no later than two years” after the date of enactment (i.e. no later than February 4, 1989). In conjunction with this requirement, the Act requires that permit applications for these classes of discharges be submitted within one year after the statutory date by which EPA is to promulgate permit application requirements by providing that such applications “shall be filed no later than three years” after the date of enactment of the WQA (i.e., no later than February 4, 1990).

The CWA also requires EPA to promulgate final regulations governing storm water permit application requirements for discharges from municipal separate storm sewer systems serving a population of 100,000 or more but less than 250,000 by “no later than four years” after enactment (i.e. no later than February 4, 1991). Permit applications for medium municipal separate storm sewer systems “shall be filed no later than five years” after the date of enactment of the CWA (i.e., no later than February 4, 1992). The CWA did not establish the time period between designation and permit application submittal for case-by-case designations under section 402(p)(2)(E).

Comments on earlier rulemakings involving storm water application deadlines have established that applicants need adequate time to obtain “representative” storm water samples. Many commenters have indicated that at least one full year is needed to obtain such samples. This is because many discharges are located in areas where testing during dry seasons or winter would not be feasible. The intermittent and unpredictable nature of storm water discharges can result in difficult and time-consuming

data gathering. Moreover, some operators of municipal separate storm sewer systems have many storm water discharges associated with industrial activity, which can require considerable time to identify, analyze, and submit applications. This creates a tremendous practical problem for the extremely high number of unpermitted storm water discharges. The public's interest in a sound storm water program and the development of a useful storm water data base is best served by establishing an application deadline which will allow sufficient time to gather, analyze, and prepare meaningful applications. Based on a consideration of these factors, EPA proposed that individual permit applications for storm water discharges associated with industrial activity, which currently are not covered by a permit and that are required to obtain a permit, be submitted one year after the final rule is promulgated.

EPA received numerous comments from industries on the one year requirement for submitting applications. Several commenters supported the proposed deadline as realistic, while others believed more time was needed to meet the information and quantitative requirement.

EPA rejects the assertion by some commenters that a year is too short a period of time to obtain the required quantitative data. Today's rule generally requires applications for storm water discharges associated with industrial activity to be submitted on or before November 18, 1991. Operators of storm water discharges associated with industrial activity which discharge through a municipal separate storm sewer are subject to the same application deadline as other storm water discharges associated with industrial activity. Since final regulation at § 122.21(g)(7) provides considerable latitude for selecting rain events for quantitative data, EPA is convinced that in most cases data can be obtained during the one year time frame. If data cannot be collected during the one year time frame because of anomalous weather (e.g. drought conditions), then permitting authorities may grant additional time for submitting that data on a case-by-case basis. See § 122.21(g)(7).

Operators of storm water discharges which are currently covered by a permit will not be required to submit a permit application until their existing permit expires. In recognition of the time required to collect storm water discharge data, EPA will allow facilities which currently have a NPDES permit for a storm water discharge and which must reapply for permit renewal during the first year following promulgation of today's permit application requirements the option of applying in accordance with existing Form 1 and Form 2C requirements (in lieu of applying in accordance with the revised application requirements).

As discussed in section VI.D.4 and section VI.F.6 of today's preamble, EPA has established a two part permit application both for both group applications for sufficiently similar facilities that discharge storm water associated with industrial activity and for operators of large or medium municipal separate storm sewer systems. The deadlines for submitting ***48060** permit applications in today's rule provide adequate time for: (1) Applicants to prepare Part 1 of the application; (2) EPA or an approved State to adequately review applications; and (3) applicants to prepare the contents of the part 2 application.

Part 1 of the group application for storm water discharges associated with industrial activity must be submitted within 120 days from the publication of these final permit application regulations. This time is necessary to form groups and for individual members of the group to prepare the non-quantitative information required in part 1 of the application. Part 1 of the group application will be submitted to EPA Headquarters in Washington, DC and reviewed within 60 days after being received. Part 2 of the application would then be submitted within one year after the part 1 application is approved. It should be noted that many facilities located in States in which general permits can be issued, will be eligible for coverage by a storm water general permit to be promulgated in the near future. Such facilities may either seek coverage under such general permits or participate in the group application.

Several comments were received by EPA that indicated that a period of 120 days was too short a period for groups to be formed. EPA disagrees with these comments. The information that EPA is requiring to be submitted by the group or group representative is information that is generally available such as the location of the facility, its industrial activity, and material management practices. EPA believes that 120 days is sufficient to gather and submit this information along with an identification of 10% of the facilities which will submit quantitative data. To ameliorate any difficulties for applicants, EPA has provided a means for late facilities to “add on” where appropriate, on a case-by-case basis, as discussed in section VI.F.4. above.

  

Several comments were received with regard to the requirement that new dischargers submit an application at least 180 days before the date on which the discharge is to commence. One commenter noted that it will be difficult for a facility to know when a storm water discharge is to commence since precipitation and runoff cannot be predicted to any degree of accuracy. In response, new dischargers must apply for a storm water permit application 180 days before that facility commences manufacturing, processing, or raw material storage operations which may result in the discharge of pollutants from storm water runoff, and 90 days for new construction sites.

For large municipal separate storm sewer systems (systems serving a population of more than 250,000), EPA proposed that part 1 of the permit application be submitted within one year of the date of the final regulations, with approval or disapproval by the permit issuing authority of the provisions of the part 1 permit application within 90 days after receiving part 1 of the application. The Part 2 portion of the application was to be submitted within two years of the date of promulgation.

For medium municipal separate storm sewer systems (systems serving a population of more than 100,000, but less than 250,000), EPA proposed that permit applications would be required nine months after the date of the final rule, with approval or disapproval of the provisions of the part 1 permit application within 90 days after receiving the part 1 application. The part 2 portion of the application would then be submitted no later than one year after the part 1 application has been approved.

Numerous comments were received by EPA from municipalities on these proposed deadlines. Many of these comments reflect the sentiment that the deadlines are too tight and that the required information would not be available for submission within the required time frame. Some commenters suggested deadlines that would add over three years to the permit application process. Other commenters suggested a revamped application process and a shorter deadline of 18 months. Some commenters explained that additional time would be needed to obtain adequate legal authority, while another stated that an inventory of outfalls required more time. One commenter maintained that intergovernmental agreements will require more time to prepare, and others expressed the view that more time was needed for the review of part 1 of the application by permitting authorities. Others felt more time was needed for collecting data, or hiring additional staff to accomplish the work. Most of these commenters did not provide specific details regarding what would be an appropriate amount of time and why.

After reviewing these comments EPA has decided to modify some of the deadlines as proposed. EPA is convinced that to properly achieve the goals of the CWA, the permit application requirements as discussed in previous sections are appropriate; but that the deadlines for medium municipal separate storm sewer systems should be adjusted so that the program's goals can be properly accomplished. After reviewing comments, EPA believes that medium municipalities will have fewer resources and existing institutional arrangements than large cities and therefore more time should be granted to these cities for submitting parts 1 and 2 of the application.

Accordingly EPA will require large municipal systems to submit part 1 of the permit application no later than November 18, 1991. Part 1 will be reviewed and approved or disapproved by the Director within 90 days. Part 2 of the application will then be submitted November 16, 1992. Medium municipal systems will submit part 1 of the application on May 18, 1992. Approval or disapproval by the Director will be accomplished within 90 days. Part 2 of the application will be submitted by May 17, 1993. These deadlines will give large systems two years to complete the application process, and medium systems 2 years and 6 months to submit applications. EPA is convinced that the permit application schedule is warranted and should provide adequate time to prepare the application.

In establishing these regulatory deadlines EPA is fully aware that they are not synchronized with the statutory deadlines as established by Congress. One commenter argued that the deadlines as proposed were contrary to the deadlines established by Congress and that EPA had no authority to extend these deadlines. (For large municipal separate storm sewer systems and storm water discharges associated with industrial activity, Congress established a deadline of February 4, 1990, for submission of permit applications; for medium municipal separate storm sewer systems, the deadline is February 4, 1992.) In response, this regulation provides certain deadlines for meeting the substantive requirements of this rulemaking—requirements which EPA

is convinced are necessary for the development of enforceable and sound storm water permits. EPA believes it is important to give applicants sufficient time to reasonably comply with the permit application requirements set out today. EPA will therefore accept applications for storm water discharge permits up to the dates specified in today's rule. By establishing these regulatory deadlines, however, EPA is not attempting to waive or revoke the statutory deadlines established in Section 402(p) of the CWA and does not assert the authority to do so. The statutory permit application deadlines ***48061** continue to be enforceable requirements.

EPA was not able to promulgate the final application regulations for storm water discharges before the February 4, 1990, deadline for industrial and large municipal dischargers despite its best efforts. Further, as noted above, EPA is not able to waive the statutory deadline. Dischargers concerned with complying with the statutory deadline should submit a permit application as required under this rulemaking as expeditiously as possible.

Operators of storm water discharges that are not specifically required to file a permit application under today's rule may be required to obtain a permit for their discharge on the basis of a case-by-case designation by the Administrator or the NPDES State.

The Administrator or NPDES State may also designate storm water discharges (except agricultural storm water discharges), that contribute to a violation of a water quality standard or that are significant contributors of pollutants to waters of the United States for a permit. Prior to a case-by-case determination that an individual permit is required for a storm water discharge, the Administrator or NPDES State may require the operator of the discharge to submit a permit application. 40 CFR 124.52(c) requires the operator of designated storm water discharges to submit a permit application within 60 days of notice, unless permission for a later date is granted. The 60-day deadline is consistent with the procedures for designating other discharges for a NPDES permit on a case-by-case basis found at 40 CFR 124.52. The 60-day deadline recognizes that case-by-case designations often require an expedited response, however, flexibility exists to allow for case-by-case extensions.

The December 7, 1988, proposal also proposed Part 504 State Storm Water Management Programs. The Agency has not included this component in today's rule. The Agency believes this program element is appropriate for addressing in regulations promulgated under section 402(p)(6) of the CWA.

**VII. Economic Impact**

EPA has prepared an Information Collection Request for the purpose of estimating the information collection burden imposed on Federal, State and local governments and industry for revisions to NPDES permit application requirements for storm water discharges codified in 40 CFR part 122. EPA is promulgating these revisions in response to Section 402(p)(4) of the Clean Water Act, as amended by the Water Quality Act of 1987 (WQA). The revisions would apply to: Storm water discharges associated with industrial activity; discharges from municipal separate storm sewer systems serving a population of 250,000 or more and discharges from municipal separate storm sewer systems serving a population of 100,000 or more, but less than 250,000.

The estimated annual cost of applying for NPDES permits for discharges from municipal separate storm sewer systems is $4.2 million. EPA estimates that an average permit application for a large municipality will cost $76,681 and require 4,534 hours to prepare. The average application for a medium municipality will cost $49,249 (2,912 hours) to prepare. The annual respondent cost for NPDES permit applications, notices of intent, and notifications for facilities with discharges associated with industrial activity is estimated to be $9.5 million (271,248 hours). EPA estimates that the average preparation cost of an individual industrial permit application would be $1,007 (28.6 hours). Average Group application will cost $74.00 per facility (2.1 hours). The average cost of the notification and notice of intent to be covered by general permit is $17.00 (0.5 hours).

The annual cost to the Federal Government and approved States for administration of the program is estimated to be $588,603. The total cost for municipalities, industry, and State and Federal authorities is estimated to be $14.5 million annually.

  

In general, the cost estimates provided in the ICR focus primarily on the costs associated with developing, submitting and reviewing the permit applications associated with today's rule. EPA will continue to evaluate procedures and methods to control storm water discharges to the extent necessary to mitigate impacts on water quality in the studies required under section 402(p)(5) of the CWA. Executive Order 12291 requires EPA and other agencies to perform regulatory analyses of major regulations. Major rules are those which impose a cost on the economy of $100 million or more annually or have certain other economic impacts. Today's proposed amendments would generally make the NPDES permit application regulations more flexible and less burdensome for the regulated community. These regulations do not, satisfy any of the criteria specified in section 1(b) of the Executive Order and, as such, do not constitute a major rule. This regulation was submitted to the Office of Management and Budget (OMB) for review.

**VIII. Paperwork Reduction Act**

The information collection requirements in this rule have been submitted for approval to the Office of Management and Budget (OMB) under provision of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. and have been assigned OMB control number 2040-0086.

Public reporting burden for permit applications for storm water discharges associated with industrial activity (other than from construction facilities) is estimated to average 28.6 hours per individual permit application, 0.5 hours per notice of intent to be covered by general permit, and 2.1 hours per group applicant. The public reporting burden for permit applications for storm water discharges associated with industrial activity from construction activities submitting individual applications is estimated to average 4.5 hours per response. The public reporting burden for facilities which discharge storm water associated with industrial activity to municipal separate storm sewers serving a population over 100,000 to notify the operator of the municipal separate storm sewer system is estimated to average 0.5 hours per response.

The reporting burden for system-wide permit applications for discharges from municipal separate storm sewer systems serving a population of 250,000 or more is estimated to average 4,534 hours per response. The reporting burden for system-wide permit applications for discharges from municipal separate storm sewer systems serving a population of 100,000 or more, but less than 250,000 is estimated to average 2,912 hours per response. Estimates of reporting burden include time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

**IX. Regulatory Flexibility Act**

Under the Regulatory Flexibility Act, 5 U.S.C. 60*l* et seq., EPA is required to prepare a Regulatory Flexibility Analysis to assess the impact of rules on small entities. No Regulatory Flexibility Analysis is required, however, where the head of the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities.

Today's amendments to the regulations would generally make the NPDES permit applications regulations more flexible and less burdensome for permittees. Accordingly, I hereby ***48062** certify, pursuant to 5 U.S.C. 605(b), that these amendments do not, have a significant impact on a substantial number of small entities.

**List of Subjects in 40 CFR Parts 122, 123, and 124**

Administrative practice and procedure, Environmental protection, Reporting and recordkeeping requirements, Water pollution control.

Authority: Clean Water Act, 33 U.S.C. 1251 et seq.

Dated: October 31, 1990.

  

William K. Reilly,

Administrator.

For the reasons stated in the preamble, parts 122, 123, and 124 of title 40 of the Code of Federal Regulations are amended as follows:

**PART 122—EPA ADMINISTERED PERMIT PROGRAMS; THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

**Subpart B—Permit Application and Special NPDES Program Requirements**

1. The authority citation for part 122 continues to read as follows:

Authority: Clean Water Act, 33 U.S.C. 1251 et seq.

2. Section 122.1 is amended by revising paragraph (b)(2)(iv) to read as follows:

**§ 122.1 Purpose and scope.**

* * * * *

(b) * * *

(2) * * *

(iv) Discharges of storm water as set forth in § 122.26; and

* * * * *

3. Section 122.21 is amended by revising paragraph (c)(1), by removing the last sentence of paragraph (f)(7), by removing paragraph (f)(9), by adding two sentences at the end of paragraph (g)(3), by revising paragraph (g)(7) introductory text, by removing and reserving paragraph (g)(10) and by revising the introductory text of paragraph (k) to read as follows:

**§ 122.21 Application for a permit (applicable to State programs, see § 123.25).**

* * * * *

(c) Time to apply. (1) Any person proposing a new discharge, shall submit an application at least 180 days before the date on which the discharge is to commence, unless permission for a later date has been granted by the Director. Facilities proposing a new discharge of storm water associated with industrial activity shall submit an application 180 days before that facility commences industrial activity which may result in a discharge of storm water associated with that industrial activity. Facilities described under § 122.26(b)(14)(x) shall submit applications at least 90 days before the date on which construction is to commence. Different submittal dates may be required under the terms of applicable general permits. Persons proposing a new discharge are encouraged to submit their applications well in advance of the 90 or 180 day requirements to avoid delay. See also paragraph (k) of this section and § 122.26 (c)(1)(i)(G) and (c)(1)(ii).

* * * * *

(g) * * *

(3) * * * The average flow of point sources composed of storm water may be estimated. The basis for the rainfall event and the method of estimation must be indicated.

* * * * *

  

(7) Effluent characteristics. Information on the discharge of pollutants specified in this paragraph (except information on storm water discharges which is to be provided as specified in § 122.26). When "quantitative data" for a pollutant are required, the applicant must collect a sample of effluent and analyze it for the pollutant in accordance with analytical methods approved under 40 CFR part 136. When no analytical method is approved the applicant may use any suitable method but must provide a description of the method. When an applicant has two or more outfalls with substantially identical effluents, the Director may allow the applicant to test only one outfall and report that the quantitative data also apply to the substantially identical outfalls. The requirements in paragraphs (g)(7) (iii) and (iv) of this section that an applicant must provide quantitative data for certain pollutants known or believed to be present do not apply to pollutants present in a discharge solely as the result of their presence in intake water; however, an applicant must report such pollutants as present. Grab samples must be used for pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform and fecal streptococcus. For all other pollutants, 24-hour composite samples must be used. However, a minimum of one grab sample may be taken for effluents from holding ponds or other impoundments with a retention period greater than 24 hours. In addition, for discharges other than storm water discharges, the Director may waive composite sampling for any outfall for which the applicant demonstrates that the use of an automatic sampler is infeasible and that the minimum of four (4) grab samples will be a representative sample of the effluent being discharged. For storm water discharges, all samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inch and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where feasible, the variance in the duration of the event and the total rainfall of the event should not exceed 50 percent from the average or median rainfall event in that area. For all applicants, a flow-weighted composite shall be taken for either the entire discharge or for the first three hours of the discharge. The flow-weighted composite sample for a storm water discharge may be taken with a continuous sampler or as a combination of a minimum of three sample aliquots taken in each hour of discharge for the entire discharge or for the first three hours of the discharge, with each aliquot being separated by a minimum period of fifteen minutes (applicants submitting permit applications for storm water discharges under § 122.26(d) may collect flow weighted composite samples using different protocols with respect to the time duration between the collection of sample aliquots, subject to the approval of the Director). However, a minimum of one grab sample may be taken for storm water discharges from holding ponds or other impoundments with a retention period greater than 24 hours. For a flow-weighted composite sample, only one analysis of the composite of aliquots is required. For storm water discharge samples taken from discharges associated with industrial activities, quantitative data must be reported for the grab sample taken during the first thirty minutes (or as soon thereafter as practicable) of the discharge for all pollutants specified in § 122.26(c)(1). For all storm water permit applicants taking flow-weighted composites, quantitative data must be reported for all pollutants specified in § 122.26 except pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform, and fecal streptococcus. The Director may allow or establish appropriate site-specific sampling procedures or requirements, including sampling locations, the season in which the sampling takes place, the minimum duration between the previous measurable storm event and the storm event sampled, the minimum or maximum level of precipitation required for an appropriate storm event, the form of precipitation sampled (snow melt or rain fall), protocols for collecting samples under 40 CFR part 136, and additional time for submitting data on a ***48063** case-by-case basis. An applicant is expected to "know or have reason to believe" that a pollutant is present in an effluent based on an evaluation of the expected use, production, or storage of the pollutant, or on any previous analyses for the pollutant. (For example, any pesticide manufactured by a facility may be expected to be present in contaminated storm water runoff from the facility.)

* * * * *

(k) Application requirements for new sources and new discharges. New manufacturing, commercial, mining and silvicultural dischargers applying for NPDES permits (except for new discharges of facilities subject to the requirements of paragraph (h) of this section or new discharges of storm water associated with industrial activity which are subject to the requirements of § 122.26(c)(1) and this section (except as provided by § 122.26(c)(1)(ii)) shall provide the following information to the Director, using the application forms provided by the Director:

* * * * *

4. Section 122.22(b) introductory text is revised to read as follows:

**§ 122.22 Signatories to permit applications and reports (applicable to State programs, see § 123.25).**

* * * * *

  

(b) All reports required by permits, and other information requested by the Director shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

* * * * *

5. Section 122.26 is revised to read as follows:

**§ 122.26 Storm water discharges (applicable to State NPDES programs, see § 123.25).**

(a) Permit requirement. (1) Prior to October 1, 1992, discharges composed entirely of storm water shall not be required to obtain a NPDES permit except:

(i) A discharge with respect to which a permit has been issued prior to February 4, 1987;

(ii) A discharge associated with industrial activity (see § 122.26(a)(4));

(iii) A discharge from a large municipal separate storm sewer system;

(iv) A discharge from a medium municipal separate storm sewer system;

(v) A discharge which the Director, or in States with approved NPDES programs, either the Director or the EPA Regional Administrator, determines to contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States. This designation may include a discharge from any conveyance or system of conveyances used for collecting and conveying storm water runoff or a system of discharges from municipal separate storm sewers, except for those discharges from conveyances which do not require a permit under paragraph (a)(2) of this section or agricultural storm water runoff which is exempted from the definition of point source at § 122.2.

The Director may designate discharges from municipal separate storm sewers on a system-wide or jurisdiction-wide basis. In making this determination the Director may consider the following factors:

(A) The location of the discharge with respect to waters of the United States as defined at 40 CFR 122.2.

(B) The size of the discharge;

(C) The quantity and nature of the pollutants discharged to waters of the United States; and

(D) Other relevant factors.

(2) The Director may not require a permit for discharges of storm water runoff from mining operations or oil and gas exploration, production, processing or treatment operations or transmission facilities, composed entirely of flows which are from conveyances or systems of conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying precipitation runoff and which are not contaminated by contact with or that has not come into contact with, any overburden, raw material, intermediate products, finished product, byproduct or waste products located on the site of such operations.

(3) Large and medium municipal separate storm sewer systems. (i) Permits must be obtained for all discharges from large and medium municipal separate storm sewer systems.

(ii) The Director may either issue one system-wide permit covering all discharges from municipal separate storm sewers within a large or medium municipal storm sewer system or issue distinct permits for appropriate categories of discharges within a large or medium municipal separate storm sewer system including, but not limited to: all discharges owned or operated by the

same municipality; located within the same jurisdiction; all discharges within a system that discharge to the same watershed; discharges within a system that are similar in nature; or for individual discharges from municipal separate storm sewers within the system.

(iii) The operator of a discharge from a municipal separate storm sewer which is part of a large or medium municipal separate storm sewer system must either:

(A) Participate in a permit application (to be a permittee or a co-permittee) with one or more other operators of discharges from the large or medium municipal storm sewer system which covers all, or a portion of all, discharges from the municipal separate storm sewer system;

(B) Submit a distinct permit application which only covers discharges from the municipal separate storm sewers for which the operator is responsible; or

(C) A regional authority may be responsible for submitting a permit application under the following guidelines:

(1) The regional authority together with co-applicants shall have authority over a storm water management program that is in existence, or shall be in existence at the time part 1 of the application is due;

(2) The permit applicant or co-applicants shall establish their ability to make a timely submission of part 1 and part 2 of the municipal application;

(3) Each of the operators of municipal separate storm sewers within the systems described in paragraphs (b)(4) (i), (ii), and (iii) or (b)(7) (i), (ii), and (iii) of this section, that are under the purview of the designated regional authority, shall comply with the application requirements of paragraph (d) of this section.

(iv) One permit application may be submitted for all or a portion of all municipal separate storm sewers within adjacent or interconnected large or medium municipal separate storm sewer systems. The Director may issue one system-wide permit covering all, or a portion of all municipal separate storm sewers in adjacent or interconnected large or medium municipal separate storm sewer systems.

(v) Permits for all or a portion of all discharges from large or medium municipal separate storm sewer systems that are issued on a system-wide, jurisdiction-wide, watershed or other basis may specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas which contribute storm water to the system.

(vi) Co-permittees need only comply with permit conditions relating to discharges from the municipal separate storm sewers for which they are operators.

***48064** (4) Discharges through large and medium municipal separate storm sewer systems. In addition to meeting the requirements of paragraph (c) of this section, an operator of a storm water discharge associated with industrial activity which discharges through a large or medium municipal separate storm sewer system shall submit, to the operator of the municipal separate storm sewer system receiving the discharge no later than May 15, 1991, or 180 days prior to commencing such discharge: the name of the facility; a contact person and phone number; the location of the discharge; a description, including Standard Industrial Classification, which best reflects the principal products or services provided by each facility; and any existing NPDES permit number.

  

(5) Other municipal separate storm sewers. The Director may issue permits for municipal separate storm sewers that are designated under paragraph (a)(1)(v) of this section on a system-wide basis, jurisdiction-wide basis, watershed basis or other appropriate basis, or may issue permits for individual discharges.

(6) Non-municipal separate storm sewers. For storm water discharges associated with industrial activity from point sources which discharge through a non-municipal or non-publicly owned separate storm sewer system, the Director, in his discretion, may issue: a single NPDES permit, with each discharger a co-permittee to a permit issued to the operator of the portion of the system that discharges into waters of the United States; or, individual permits to each discharger of storm water associated with industrial activity through the non-municipal conveyance system.

(i) All storm water discharges associated with industrial activity that discharge through a storm water discharge system that is not a municipal separate storm sewer must be covered by an individual permit, or a permit issued to the operator of the portion of the system that discharges to waters of the United States, with each discharger to the non-municipal conveyance a co-permittee to that permit.

(ii) Where there is more than one operator of a single system of such conveyances, all operators of storm water discharges associated with industrial activity must submit applications.

(iii) Any permit covering more than one operator shall identify the effluent limitations, or other permit conditions, if any, that apply to each operator.

(7) Combined sewer systems. Conveyances that discharge storm water runoff combined with municipal sewage are point sources that must obtain NPDES permits in accordance with the procedures of § 122.21 and are not subject to the provisions of this section.

(8) Whether a discharge from a municipal separate storm sewer is or is not subject to regulation under this section shall have no bearing on whether the owner or operator of the discharge is eligible for funding under title II, title III or title VI of the Clean Water Act. See 40 CFR part 35, subpart I, appendix A(b)H.2.j.

(b) Definitions. (1) Co-permittee means a permittee to a NPDES permit that is only responsible for permit conditions relating to the discharge for which it is operator.

(2) Illicit discharge means any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.

(3) Incorporated place means the District of Columbia, or a city, town, township, or village that is incorporated under the laws of the State in which it is located.

(4) Large municipal separate storm sewer system means all municipal separate storm sewers that are either:

(i) Located in an incorporated place with a population of 250,000 or more as determined by the latest Decennial Census by the Bureau of Census (appendix F); or

(ii) Located in the counties listed in appendix H, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or

(iii) Owned or operated by a municipality other than those described in paragraph (b)(4) (i) or (ii) of this section and that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship

  

between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraph (b)(4) (i) or (ii) of this section. In making this determination the Director may consider the following factors:

(A) Physical interconnections between the municipal separate storm sewers;

(B) The location of discharges from the designated municipal separate storm sewer relative to discharges from municipal separate storm sewers described in paragraph (b)(4)(i) of this section;

(C) The quantity and nature of pollutants discharged to waters of the United States;

(D) The nature of the receiving waters; and

(E) Other relevant factors; or

(iv) The Director may, upon petition, designate as a large municipal separate storm sewer system, municipal separate storm sewers located within the boundaries of a region defined by a storm water management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described in paragraph (b)(4) (i), (ii), (iii) of this section.

(5) Major municipal separate storm sewer outfall (or "major outfall") means a municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive storm water from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more).

(6) Major outfall means a major municipal separate storm sewer outfall.

(7) Medium municipal separate storm sewer system means all municipal separate storm sewers that are either:

(i) Located in an incorporated place with a population of 100,000 or more but less than 250,000, as determined by the latest Decennial Census by the Bureau of Census (appendix G); or

(ii) Located in the counties listed in appendix I, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or

(iii) Owned or operated by a municipality other than those described in paragraph (b)(4) (i) or (ii) of this section and that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraph (b)(4) (i) or (ii) of this section. In making this determination the Director may consider the following factors:

***48065** (A) Physical interconnections between the municipal separate storm sewers;

(B) The location of discharges from the designated municipal separate storm sewer relative to discharges from municipal separate storm sewers described in paragraph (b)(7)(i) of this section;

(C) The quantity and nature of pollutants discharged to waters of the United States;

(D) The nature of the receiving waters; or

  

(E) Other relevant factors; or

(iv) The Director may, upon petition, designate as a medium municipal separate storm sewer system, municipal separate storm sewers located within the boundaries of a region defined by a storm water management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described in paragraphs (b)(7)(i), (ii), (iii) of this section.

(8) Municipal separate storm sewer means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

(ii) Designed or used for collecting or conveying storm water;

(iii) Which is not a combined sewer; and

(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

(9) Outfall means a point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

(10) Overburden means any material of any nature, consolidated or unconsolidated, that overlies a mineral deposit, excluding topsoil or similar naturally-occurring surface materials that are not disturbed by mining operations.

(11) Runoff coefficient means the fraction of total rainfall that will appear at a conveyance as runoff.

(12) Significant materials includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the facility is required to report pursuant to section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

(13) Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage.

(14) Storm water discharge associated with industrial activity means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under 40 CFR part 122. For the categories of industries identified in paragraphs (b)(14)(i) through (x) of this section, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at 40 CFR part 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage,

  

or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the categories of industries identified in paragraph (b)(14)(xi) of this section, the term includes only storm water discharges from all the areas (except access roads and rail lines) that are listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water. For the purposes of this paragraph, material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are Federally, State, or municipally owned or operated that meet the description of the facilities listed in this paragraph (b)(14)(i)-(xi) of this section) include those facilities designated under the provisions of paragraph (a)(1)(v) of this section. The following categories of facilities are considered to be engaging in "industrial activity" for purposes of this subsection:

(i) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR subchapter N (except facilities with toxic pollutant effluent standards which are exempted under category (xi) in paragraph (b)(14) of this section);

(ii) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283), 29, 31*l*, 32 (except 323), 33, 344l, 373;

(iii) Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 CFR 434.11(1) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; (inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator; inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined ***48066** materials, nor sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim);

(iv) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under subtitle C of RCRA;

(v) Landfills, land application sites, and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under subtitle D of RCRA;

(vi) Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093;

(vii) Steam electric power generating facilities, including coal handling sites;

(viii) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221-25), 43, 44, 45, and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under paragraphs (b)(14) (i)-(vii) or (ix)-(xi) of this section are associated with industrial activity;

  

(ix) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR part 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with section 405 of the CWA;

(x) Construction activity including clearing, grading and excavation activities except: operations that result in the disturbance of less than five acres of total land area which are not part of a larger common plan of development or sale;

(xi) Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-25, (and which are not otherwise included within categories (ii)-(x));

(c) Application requirements for storm water discharges associated with industrial activity—(1) Individual application. Dischargers of storm water associated with industrial activity are required to apply for an individual permit, apply for a permit through a group application, or seek coverage under a promulgated storm water general permit. Facilities that are required to obtain an individual permit, or any discharge of storm water which the Director is evaluating for designation (see 40 CFR 124.52(c)) under paragraph (a)(1)(v) of this section and is not a municipal separate storm sewer, and which is not part of a group application described under paragraph (c)(2) of this section, shall submit an NPDES application in accordance with the requirements of § 122.21 as modified and supplemented by the provisions of the remainder of this paragraph. Applicants for discharges composed entirely of storm water shall submit Form 1 and Form 2F. Applicants for discharges composed of storm water and non-storm water shall submit Form 1, Form 2C, and Form 2F. Applicants for new sources or new discharges (as defined in § 122.2 of this part) composed of storm water and non-storm water shall submit Form 1, Form 2D, and Form 2F.

(i) Except as provided in § 122.26(c)(1)(ii)-(iv), the operator of a storm water discharge associated with industrial activity subject to this section shall provide:

(A) A site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) of the facility including: each of its drainage and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each past or present area used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied, each of its hazardous waste treatment, storage or disposal facilities (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility;

(B) An estimate of the area of impervious surfaces (including paved areas and building roofs) and the total area drained by each outfall (within a mile radius of the facility) and a narrative description of the following: Significant materials that in the three years prior to the submittal of this application have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage or disposal of such materials; materials management practices employed, in the three years prior to the submittal of this application, to minimize contact by these materials with storm water runoff; materials loading and access areas; the location, manner and frequency in which pesticides, herbicides, soil conditioners and fertilizers are applied; the location and a description of existing structural and non-structural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the ultimate disposal of any solid or fluid wastes other than by discharge;

(C) A certification that all outfalls that should contain storm water discharges associated with industrial activity have been tested or evaluated for the presence of non-storm water discharges which are not covered by a NPDES permit; tests for such non-storm

  

water discharges may include smoke tests, fluorometric dye tests, analysis of accurate schematics, as well as other appropriate tests. The certification shall include a description of the method used, the date of any testing, and the on-site drainage points that were directly observed during a test;

(D) Existing information regarding significant leaks or spills of toxic or hazardous pollutants at the facility that have taken place within the three years prior to the submittal of this application;

(E) Quantitative data based on samples collected during storm events and collected in accordance with § 122.21 of this part from all outfalls containing a storm water discharge associated with industrial activity for the following parameters:

(1) Any pollutant limited in an effluent guideline to which the facility is subject;

(2) Any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit);

(3) Oil and grease, pH, BOD5, COD, TSS, total phosphorus, total Kjeldahl nitrogen, and nitrate plus nitrite nitrogen;

(4) Any information on the discharge required under paragraph § 122.21(g)(7)(iii) and (iv) of this part;

***48067** (5) Flow measurements or estimates of the flow rate, and the total amount of discharge for the storm event(s) sampled, and the method of flow measurement or estimation; and

(6) The date and duration (in hours) of the storm event(s) sampled, rainfall measurements or estimates of the storm event (in inches) which generated the sampled runoff and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event (in hours);

(F) Operators of a discharge which is composed entirely of storm water are exempt from the requirements of § 122.21 (g)(2), (g)(3), (g)(4), (g)(5), (g)(7)(i), (g)(7)(ii), and (g)(7)(v); and

(G) Operators of new sources or new discharges (as defined in § 122.2 of this part) which are composed in part or entirely of storm water must include estimates for the pollutants or parameters listed in paragraph (c)(1)(i)(E) of this section instead of actual sampling data, along with the source of each estimate. Operators of new sources or new discharges composed in part or entirely of storm water must provide quantitative data for the parameters listed in paragraph (c)(1)(i)(E) of this section within two years after commencement of discharge, unless such data has already been reported under the monitoring requirements of the NPDES permit for the discharge. Operators of a new source or new discharge which is composed entirely of storm water are exempt from the requirements of § 122.21 (k)(3)(ii), (k)(3)(iii), and (k)(5).

(ii) The operator of an existing or new storm water discharge that is associated with industrial activity solely under paragraph (b)(14)(x) of this section, is exempt from the requirements of § 122.21(g) and paragraph (c)(1)(i) of this section. Such operator shall provide a narrative description of:

(A) The location (including a map) and the nature of the construction activity;

(B) The total area of the site and the area of the site that is expected to undergo excavation during the life of the permit;

(C) Proposed measures, including best management practices, to control pollutants in storm water discharges during construction, including a brief description of applicable State and local erosion and sediment control requirements;

  

(D) Proposed measures to control pollutants in storm water discharges that will occur after construction operations have been completed, including a brief description of applicable State or local erosion and sediment control requirements;

(E) An estimate of the runoff coefficient of the site and the increase in impervious area after the construction addressed in the permit application is completed, the nature of fill material and existing data describing the soil or the quality of the discharge; and

(F) The name of the receiving water.

(iii) The operator of an existing or new discharge composed entirely of storm water from an oil or gas exploration, production, processing, or treatment operation, or transmission facility is not required to submit a permit application in accordance with paragraph (c)(1)(i) of this section, unless the facility:

(A) Has had a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21 or 40 CFR 302.6 at anytime since November 16, 1987; or

(B) Has had a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6 at any time since November 16, 1987; or

(C) Contributes to a violation of a water quality standard.

(iv) The operator of an existing or new discharge composed entirely of storm water from a mining operation is not required to submit a permit application unless the discharge has come into contact with, any overburden, raw material, intermediate products, finished product, byproduct or waste products located on the site of such operations.

(v) Applicants shall provide such other information the Director may reasonably require under § 122.21(g)(13) of this part to determine whether to issue a permit and may require any facility subject to paragraph (c)(1)(ii) of this section to comply with paragraph (c)(1)(i) of this section.

(2) Group application for discharges associated with industrial activity. In lieu of individual applications or notice of intent to be covered by a general permit for storm water discharges associated with industrial activity, a group application may be filed by an entity representing a group of applicants (except facilities that have existing individual NPDES permits for storm water) that are part of the same subcategory (see 40 CFR subchapter N, part 405 to 471) or, where such grouping is inapplicable, are sufficiently similar as to be appropriate for general permit coverage under § 122.28 of this part. The part 1 application shall be submitted to the Office of Water Enforcement and Permits, U.S. EPA, 401 M Street, SW., Washington, DC 20460 (EN-336) for approval. Once a part 1 application is approved, group applicants are to submit Part 2 of the group application to the Office of Water Enforcement and Permits. A group application shall consist of:

(i) Part 1. Part 1 of a group application shall:

(A) Identify the participants in the group application by name and location. Facilities participating in the group application shall be listed in nine subdivisions, based on the facility location relative to the nine precipitation zones indicated in appendix E to this part.

(B) Include a narrative description summarizing the industrial activities of participants of the group application and explaining why the participants, as a whole, are sufficiently similar to be a covered by a general permit;

(C) Include a list of significant materials stored exposed to precipitation by participants in the group application and materials management practices employed to diminish contact by these materials with precipitation and storm water runoff;

  

(D) Identify ten percent of the dischargers participating in the group application (with a minimum of 10 dischargers, and either a minimum of two dischargers from each precipitation zone indicated in appendix E of this part in which ten or more members of the group are located, or one discharger from each precipitation zone indicated in appendix E of this part in which nine or fewer members of the group are located) from which quantitative data will be submitted in part 2. If more than 1,000 facilities are identified in a group application, no more than 100 dischargers must submit quantitative data in Part 2. Groups of between four and ten dischargers may be formed. However, in groups of between four and ten, at least half the facilities must submit quantitative data, and at least one facility in each precipitation zone in which members of the group are located must submit data. A description of why the facilities selected to perform sampling and analysis are representative of the group as a whole in terms of the information provided in paragraph (c)(1) (i)(B) and (i)(C) of this section, shall accompany this section. Different factors impacting the nature of the storm water discharges, such as processes used and material management, shall be represented, to the extent feasible, in a manner roughly equivalent to their proportion in the group.

(ii) Part 2. Part 2 of a group application shall contain quantitative ***48068** data (NPDES Form 2F), as modified by paragraph (c)(1) of this section, so that when part 1 and part 2 of the group application are taken together, a complete NPDES application (Form 1, Form 2C, and Form 2F) can be evaluated for each discharger identified in paragraph (c)(2)(i)(D) of this section.

(d) Application requirements for large and medium municipal separate storm sewer discharges. The operator of a discharge from a large or medium municipal separate storm sewer or a municipal separate storm sewer that is designated by the Director under paragraph (a)(1)(v) of this section, may submit a jurisdiction-wide or system-wide permit application. Where more than one public entity owns or operates a municipal separate storm sewer within a geographic area (including adjacent or interconnected municipal separate storm sewer systems), such operators may be a coapplicant to the same application. Permit applications for discharges from large and medium municipal storm sewers or municipal storm sewers designated under paragraph (a)(1)(v) of this section shall include;

(1) Part 1. Part 1 of the application shall consist of;

(i) General information. The applicants' name, address, telephone number of contact person, ownership status and status as a State or local government entity.

(ii) Legal authority. A description of existing legal authority to control discharges to the municipal separate storm sewer system. When existing legal authority is not sufficient to meet the criteria provided in paragraph (d)(2)(i) of this section, the description shall list additional authorities as will be necessary to meet the criteria and shall include a schedule and commitment to seek such additional authority that will be needed to meet the criteria.

(iii) Source identification. (A) A description of the historic use of ordinances, guidance or other controls which limited the discharge of non-storm water discharges to any Publicly Owned Treatment Works serving the same area as the municipal separate storm sewer system.

(B) A USGS 7.5 minute topographic map (or equivalent topographic map with a scale between 1:10,000 and 1:24,000 if cost effective) extending one mile beyond the service boundaries of the municipal storm sewer system covered by the permit application. The following information shall be provided:

(1) The location of known municipal storm sewer system outfalls discharging to waters of the United States;

(2) A description of the land use activities (e.g. divisions indicating undeveloped, residential, commercial, agricultural and industrial uses) accompanied with estimates of population densities and projected growth for a ten year period within the drainage area served by the separate storm sewer. For each land use type, an estimate of an average runoff coefficient shall be provided;

  

(3) The location and a description of the activities of the facility of each currently operating or closed municipal landfill or other treatment, storage or disposal facility for municipal waste;

(4) The location and the permit number of any known discharge to the municipal storm sewer that has been issued a NPDES permit;

(5) The location of major structural controls for storm water discharge (retention basins, detention basins, major infiltration devices, etc.); and

(6) The identification of publicly owned parks, recreational areas, and other open lands.

(iv) Discharge characterization. (A) Monthly mean rain and snow fall estimates (or summary of weather bureau data) and the monthly average number of storm events.

(B) Existing quantitative data describing the volume and quality of discharges from the municipal storm sewer, including a description of the outfalls sampled, sampling procedures and analytical methods used.

(C) A list of water bodies that receive discharges from the municipal separate storm sewer system, including downstream segments, lakes and estuaries, where pollutants from the system discharges may accumulate and cause water degradation and a brief description of known water quality impacts. At a minimum, the description of impacts shall include a description of whether the water bodies receiving such discharges have been:

(1) Assessed and reported in section 305(b) reports submitted by the State, the basis for the assessment (evaluated or monitored), a summary of designated use support and attainment of Clean Water Act (CWA) goals (fishable and swimmable waters), and causes of nonsupport of designated uses;

(2) Listed under section 304(l)(1)(A)(i), section 304(l)(1)(A)(ii), or section 304(l)(1)(B) of the CWA that is not expected to meet water quality standards or water quality goals;

(3) Listed in State Nonpoint Source Assessments required by section 319(a) of the CWA that, without additional action to control nonpoint sources of pollution, cannot reasonably be expected to attain or maintain water quality standards due to storm sewers, construction, highway maintenance and runoff from municipal landfills and municipal sludge adding significant pollution (or contributing to a violation of water quality standards);

(4) Identified and classified according to eutrophic condition of publicly owned lakes listed in State reports required under section 314(a) of the CWA (include the following: A description of those publicly owned lakes for which uses are known to be impaired; a description of procedures, processes and methods to control the discharge of pollutants from municipal separate storm sewers into such lakes; and a description of methods and procedures to restore the quality of such lakes);

(5) Areas of concern of the Great Lakes identified by the International Joint Commission;

(6) Designated estuaries under the National Estuary Program under section 320 of the CWA;

(7) Recognized by the applicant as highly valued or sensitive waters;

(8) Defined by the State or U.S. Fish and Wildlife Services's National Wetlands Inventory as wetlands; and

(9) Found to have pollutants in bottom sediments, fish tissue or biosurvey data.

  

(D) Field screening. Results of a field screening analysis for illicit connections and illegal dumping for either selected field screening points or major outfalls covered in the permit application. At a minimum, a screening analysis shall include a narrative description, for either each field screening point or major outfall, of visual observations made during dry weather periods. If any flow is observed, two grab samples shall be collected during a 24 hour period with a minimum period of four hours between samples. For all such samples, a narrative description of the color, odor, turbidity, the presence of an oil sheen or surface scum as well as any other relevant observations regarding the potential presence of non-storm water discharges or illegal dumping shall be provided. In addition, a narrative description of the results of a field analysis using suitable methods to estimate pH, total chlorine, total copper, total phenol, and detergents (or surfactants) shall be provided along with a description of the flow rate. Where the field analysis does not involve analytical methods approved under 40 CFR part 136, the applicant shall provide a description of the method used including the name of the manufacturer of the test method along with the range and accuracy of the test. Field screening points shall be either major outfalls or other outfall points (or ***48069** any other point of access such as manholes) randomly located throughout the storm sewer system by placing a grid over a drainage system map and identifying those cells of the grid which contain a segment of the storm sewer system or major outfall. The field screening points shall be established using the following guidelines and criteria:

(1) A grid system consisting of perpendicular north-south and east-west lines spaced ¼ mile apart shall be overlayed on a map of the municipal storm sewer system, creating a series of cells;

(2) All cells that contain a segment of the storm sewer system shall be identified; one field screening point shall be selected in each cell; major outfalls may be used as field screening points;

(3) Field screening points should be located downstream of any sources of suspected illegal or illicit activity;

(4) Field screening points shall be located to the degree practicable at the farthest manhole or other accessible location downstream in the system, within each cell; however, safety of personnel and accessibility of the location should be considered in making this determination;

(5) Hydrological conditions; total drainage area of the site; population density of the site; traffic density; age of the structures or buildings in the area; history of the area; and land use types;

(6) For medium municipal separate storm sewer systems, no more than 250 cells need to have identified field screening points; in large municipal separate storm sewer systems, no more than 500 cells need to have identified field screening points; cells established by the grid that contain no storm sewer segments will be eliminated from consideration; if fewer than 250 cells in medium municipal sewers are created, and fewer than 500 in large systems are created by the overlay on the municipal sewer map, then all those cells which contain a segment of the sewer system shall be subject to field screening (unless access to the separate storm sewer system is impossible); and

(7) Large or medium municipal separate storm sewer systems which are unable to utilize the procedures described in paragraphs (d)(1)(iv)(D) (1) through (6) of this section, because a sufficiently detailed map of the separate storm sewer systems is unavailable, shall field screen no more than 500 or 250 major outfalls respectively (or all major outfalls in the system, if less); in such circumstances, the applicant shall establish a grid system consisting of north-south and east-west lines spaced ¼ mile apart as an overlay to the boundaries of the municipal storm sewer system, thereby creating a series of cells; the applicant will then select major outfalls in as many cells as possible until at least 500 major outfalls (large municipalities) or 250 major outfalls (medium municipalities) are selected; a field screening analysis shall be undertaken at these major outfalls.

(E) Characterization plan. Information and a proposed program to meet the requirements of paragraph (d)(2)(iii) of this section. Such description shall include: the location of outfalls or field screening points appropriate for representative data collection under paragraph (d)(2)(iii)(A) of this section, a description of why the outfall or field screening point is representative, the seasons during which sampling is intended, a description of the sampling equipment. The proposed location of outfalls or field

  

screening points for such sampling should reflect water quality concerns (see paragraph (d)(1)(iv)(C) of this section) to the extent practicable.

(v) Management programs. (A) A description of the existing management programs to control pollutants from the municipal separate storm sewer system. The description shall provide information on existing structural and source controls, including operation and maintenance measures for structural controls, that are currently being implemented. Such controls may include, but are not limited to: Procedures to control pollution resulting from construction activities; floodplain management controls; wetland protection measures; best management practices for new subdivisions; and emergency spill response programs. The description may address controls established under State law as well as local requirements.

(B) A description of the existing program to identify illicit connections to the municipal storm sewer system. The description should include inspection procedures and methods for detecting and preventing illicit discharges, and describe areas where this program has been implemented.

(vi) Fiscal resources. (A) A description of the financial resources currently available to the municipality to complete part 2 of the permit application. A description of the municipality's budget for existing storm water programs, including an overview of the municipality's financial resources and budget, including overall indebtedness and assets, and sources of funds for storm water programs.

(2) Part 2. Part 2 of the application shall consist of:

(i) Adequate legal authority. A demonstration that the applicant can operate pursuant to legal authority established by statute, ordinance or series of contracts which authorizes or enables the applicant at a minimum to:

(A) Control through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity;

(B) Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer;

(C) Control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water;

(D) Control through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system;

(E) Require compliance with conditions in ordinances, permits, contracts or orders; and

(F) Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer.

(ii) Source identification. The location of any major outfall that discharges to waters of the United States that was not reported under paragraph (d)(1)(iii)(B)(1) of this section. Provide an inventory, organized by watershed of the name and address, and a description (such as SIC codes) which best reflects the principal products or services provided by each facility which may discharge, to the municipal separate storm sewer, storm water associated with industrial activity;

(iii) Characterization data. When “quantitative data” for a pollutant are required under paragraph (d)(a)(iii)(A)(3) of this paragraph, the applicant must collect a sample of effluent in accordance with 40 CFR 122.21(g)(7) and analyze it for the pollutant in accordance with analytical methods approved under 40 CFR part 136. When no analytical method is approved the

  

applicant may use any suitable method but must provide a description of the method. The applicant must provide information characterizing the quality and quantity of discharges covered in the permit application, including:

(A) Quantitative data from representative outfalls designated by the Director (based on information received ***48070** in part 1 of the application, the Director shall designate between five and ten outfalls or field screening points as representative of the commercial, residential and industrial land use activities of the drainage area contributing to the system or, where there are less than five outfalls covered in the application, the Director shall designate all outfalls) developed as follows:

(1) For each outfall or field screening point designated under this subparagraph, samples shall be collected of storm water discharges from three storm events occurring at least one month apart in accordance with the requirements at § 122.21(g)(7) (the Director may allow exemptions to sampling three storm events when climatic conditions create good cause for such exemptions);

(2) A narrative description shall be provided of the date and duration of the storm event(s) sampled, rainfall estimates of the storm event which generated the sampled discharge and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event;

(3) For samples collected and described under paragraphs (d)(2)(iii) (A)(1) and (A)(2) of this section, quantitative data shall be provided for: the organic pollutants listed in Table II; the pollutants listed in Table III (toxic metals, cyanide, and total phenols) of appendix D of 40 CFR part 122, and for the following pollutants:

Total suspended solids (TSS)

Total dissolved solids (TDS)

COD

BOD5

Oil and grease

Fecal coliform

Fecal streptococcus

pH

Total Kjeldahl nitrogen

Nitrate plus nitrite

Dissolved phosphorus

Total ammonia plus organic nitrogen

Total phosphorus

(4) Additional limited quantitative data required by the Director for determining permit conditions (the Director may require that quantitative data shall be provided for additional parameters, and may establish sampling conditions such as the location, season of sample collection, form of precipitation (snow melt, rainfall) and other parameters necessary to insure representativeness);

(B) Estimates of the annual pollutant load of the cumulative discharges to waters of the United States from all identified municipal outfalls and the event mean concentration of the cumulative discharges to waters of the United States from all identified municipal outfalls during a storm event (as described under § 122.21(c)(7)) for BOD5 , COD, TSS, dissolved solids,

  

total nitrogen, total ammonia plus organic nitrogen, total phosphorus, dissolved phosphorus, cadmium, copper, lead, and zinc. Estimates shall be accompanied by a description of the procedures for estimating constituent loads and concentrations, including any modelling, data analysis, and calculation methods;

(C) A proposed schedule to provide estimates for each major outfall identified in either paragraph (d)(2)(ii) or (d)(1)(iii)(B)(1) of this section of the seasonal pollutant load and of the event mean concentration of a representative storm for any constituent detected in any sample required under paragraph (d)(2)(iii)(A) of this section; and

(D) A proposed monitoring program for representative data collection for the term of the permit that describes the location of outfalls or field screening points to be sampled (or the location of instream stations), why the location is representative, the frequency of sampling, parameters to be sampled, and a description of sampling equipment.

(iv) Proposed management program. A proposed management program covers the duration of the permit. It shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program. Separate proposed programs may be submitted by each coapplicant. Proposed programs may impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. Proposed programs will be considered by the Director when developing permit conditions to reduce pollutants in discharges to the maximum extent practicable. Proposed management programs shall describe priorities for implementing controls. Such programs shall be based on:

(A) A description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls. At a minimum, the description shall include:

(1) A description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers;

(2) A description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment. Such plan shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed. (Controls to reduce pollutants in discharges from municipal separate storm sewers containing construction site runoff are addressed in paragraph (d)(2)(iv)(D) of this section;

(3) A description of practices for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of deicing activities;

(4) A description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible;

(5) A description of a program to monitor pollutants in runoff from operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste, which shall identify priorities and procedures for inspections and establishing and implementing control measures for such discharges (this program can be coordinated with the program developed under paragraph (d)(2)(iv)(C) of this section); and

  

(6) A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.

***48071** (B) A description of a program, including a schedule, to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer. The proposed program shall include:

(1) A description of a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal separate storm sewer system; this program description shall address all types of illicit discharges, however the following category of non-storm water discharges or flows shall be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers, uncomtaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water (program descriptions shall address discharges or flows from fire fighting only where such discharges or flows are identified as significant sources of pollutants to waters of the United States);

(2) A description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens;

(3) A description of procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water (such procedures may include: sampling procedures for constituents such as fecal coliform, fecal streptococcus, surfactants (MBAS), residual chlorine, fluorides and potassium; testing with fluorometric dyes; or conducting in storm sewer inspections where safety and other considerations allow. Such description shall include the location of storm sewers that have been identified for such evaluation);

(4) A description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer;

(5) A description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers;

(6) A description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials; and

(7) A description of controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary;

(C) A description of a program to monitor and control pollutants in storm water discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system. The program shall:

(1) Identify priorities and procedures for inspections and establishing and implementing control measures for such discharges;

  

(2) Describe a monitoring program for storm water discharges associated with the industrial facilities identified in paragraph (d)(2)(iv)(C) of this section, to be implemented during the term of the permit, including the submission of quantitative data on the following constituents: any pollutants limited in effluent guidelines subcategories, where applicable; any pollutant listed in an existing NPDES permit for a facility; oil and grease, COD, pH, BOD5 , TSS, total phosphorus, total Kjeldahl nitrogen, nitrate plus nitrite nitrogen, and any information on discharges required under 40 CFR 122.21(g)(7)(iii) and (iv).

(D) A description of a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system, which shall include:

(1) A description of procedures for site planning which incorporate consideration of potential water quality impacts;

(2) A description of requirements for nonstructural and structural best management practices;

(3) A description of procedures for identifying priorities for inspecting sites and enforcing control measures which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality; and

(4) A description of appropriate educational and training measures for construction site operators.

(v) Assessment of controls. Estimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management program. The assessment shall also identify known impacts of storm water controls on ground water.

(vi) Fiscal analysis. For each fiscal year to be covered by the permit, a fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the programs under paragraphs (d)(2) (iii) and (iv) of this section. Such analysis shall include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.

(vii) Where more than one legal entity submits an application, the application shall contain a description of the roles and responsibilities of each legal entity and procedures to ensure effective coordination.

(viii) Where requirements under paragraph (d)(1)(iv)(E), (d)(2)(ii), (d)(2)(iii)(B) and (d)(2)(iv) of this section are not practicable or are not applicable, the Director may exclude any operator of a discharge from a municipal separate storm sewer which is designated under paragraph (a)(1)(v), (b)(4)(ii) or (b)(7)(ii) of this section from such requirements. The Director shall not exclude the operator of a discharge from a municipal separate storm sewer identified in appendix F, G, H or I of part 122, from any of the permit application requirements under this paragraph except where authorized under this section.

(e) Application deadlines. Any operator of a point source required to obtain a permit under paragraph (a)(1) of this section that does not have an effective NPDES permit covering its storm water outfalls shall submit an application in accordance with the following deadlines:

(1) For any storm water discharge associated with industrial activity identified in paragraph (b)(14) (i)-(xi) of this section, that is not part of a group application as described in paragraph (c)(2) of this section or which is not covered under a promulgated storm water general permit, a permit application made pursuant to paragraph (c) of this section shall be submitted to the Director by November 18, 1991;

***48072** (2) For any group application submitted in accordance with paragraph (c)(2) of this section:

(i) Part 1 of the application shall be submitted to the Director, Office of Water Enforcement and Permits by March 18, 1991;

  

(ii) Based on information in the part 1 application, the Director will approve or deny the members in the group application within 60 days after receiving part 1 of the group application.

(iii) Part 2 of the application shall be submitted to the Director, Office of Water Enforcement and Permits no later than 12 months after the date of approval of the part 1 application.

(iv) Facilities that are rejected as members of a group by the permitting authority shall have 12 months to file an individual permit application from the date they receive notification of their rejection.

(v) A facility listed under paragraph (b)(14) (i)-(xi) of this section may add on to a group application submitted in accordance with paragraph (e)(2)(i) of this section at the discretion of the Office of Water Enforcement and Permits, and only upon a showing of good cause by the facility and the group applicant; the request for the addition of the facility shall be made no later than February 18,1992; the addition of the facility shall not cause the percentage of the facilities that are required to submit quantitative data to be less than 10%, unless there are over 100 facilities in the group that are submitting quantitative data; approval to become part of group application must be obtained from the group or the trade association representing the individual facilities.

(3) For any discharge from a large municipal separate storm sewer system;

(i) Part 1 of the application shall be submitted to the Director by November 18, 1991;

(ii) Based on information received in the part 1 application the Director will approve or deny a sampling plan under paragraph (d)(1)(iv)(E) of this section within 90 days after receiving the part 1 application;

(iii) Part 2 of the application shall be submitted to the Director by November 16, 1992.

(4) For any discharge from a medium municipal separate storm sewer system;

(i) Part 1 of the application shall be submitted to the Director by May 18, 1992.

(ii) Based on information received in the part 1 application the Director will approve or deny a sampling plan under paragraph (d)(1)(iv)(E) of this section within 90 days after receiving the part 1 application.

(iii) Part 2 of the application shall be submitted to the Director by May 17, 1993.

(5) A permit application shall be submitted to the Director within 60 days of notice, unless permission for a later date is granted by the Director (see 40 CFR 124.52(c)), for:

(i) A storm water discharge which the Director, or in States with approved NPDES programs, either the Director or the EPA Regional Administrator, determines that the discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States (see paragraph (a)(1)(v) of this section);

(ii) A storm water discharge subject to paragraph (c)(1)(v) of this section.

(6) Facilities with existing NPDES permits for storm water discharges associated with industrial activity shall maintain existing permits. New applications shall be submitted in accordance with the requirements of 40 CFR 122.21 and 40 CFR 122.26(c) 180 days before the expiration of such permits. Facilities with expired permits or permits due to expire before May 18, 1992, shall submit applications in accordance with the deadline set forth under paragraph (e)(1) of this section.

  

(f) Petitions. (1) Any operator of a municipal separate storm sewer system may petition the Director to require a separate NPDES permit (or a permit issued under an approved NPDES State program) for any discharge into the municipal separate storm sewer system.

(2) Any person may petition the Director to require a NPDES permit for a discharge which is composed entirely of storm water which contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

(3) The owner or operator of a municipal separate storm sewer system may petition the Director to reduce the Census estimates of the population served by such separate system to account for storm water discharged to combined sewers as defined by 40 CFR 35.2005(b)(11) that is treated in a publicly owned treatment works. In municipalities in which combined sewers are operated, the Census estimates of population may be reduced proportional to the fraction, based on estimated lengths, of the length of combined sewers over the sum of the length of combined sewers and municipal separate storm sewers where an applicant has submitted the NPDES permit number associated with each discharge point and a map indicating areas served by combined sewers and the location of any combined sewer overflow discharge point.

(4) Any person may petition the Director for the designation of a large or medium municipal separate storm sewer system as defined by paragraphs (b)(4)(iv) or (b)(7)(iv) of this section.

(5) The Director shall make a final determination on any petition received under this section within 90 days after receiving the petition.

6. Section 122.28(b)(2)(i) is revised to read as follows:

**§ 122.28 General permits (applicable to State NPDES programs, see § 123.25).**

* * * * *

(b) * * *

(2) Requiring an individual permit. (i) The Director may require any discharger authorized by a general permit to apply for and obtain an individual NPDES permit. Any interested person may petition the Director to take action under this paragraph. Cases where an individual NPDES permit may be required include the following:

(A) The discharger or “treatment works treating domestic sewage” is not in compliance with the conditions of the general NPDES permit;

(B) A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source or treatment works treating domestic sewage;

(C) Effluent limitation guidelines are promulgated for point sources covered by the general NPDES permit;

(D) A Water Quality Management plan containing requirements applicable to such point sources is approved;

(E) Circumstances have changed since the time of the request to be covered so that the discharger is no longer appropriately controlled under the general permit, or either a temporary or permanent reduction or elimination of the authorized discharge is necessary;

(F) Standards for sewage sludge use or disposal have been promulgated for the sludge use and disposal practice covered by the general NPDES permit; or

  

(G) The discharge(s) is a significant contributor of pollutants. In making this determination, the Director may consider the following factors:

(1) The location of the discharge with respect to waters of the United States;

(2) The size of the discharge;

(3) The quantity and nature of the pollutants discharged to waters of the United States; and

(4) Other relevant factors;

* * * * *

***48073** 7. Section 122.42 is amended by adding paragraph (c) to read as follows:

**§ 122.42 Additional conditions applicable to specified categories of NPDES permits (applicable to State NPDES programs, see § 123.25).**

* * * * *

(c) Municipal separate storm sewer systems. The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under § 122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include:

(1) The status of implementing the components of the storm water management program that are established as permit conditions;

(2) Proposed changes to the storm water management programs that are established as permit condition. Such proposed changes shall be consistent with § 122.26(d)(2)(iii) of this part; and

(3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under § 122.26(d)(2)(iv) and (d)(2)(v) of this part;

(4) A summary of data, including monitoring data, that is accumulated throughout the reporting year;

(5) Annual expenditures and budget for year following each annual report;

(6) A summary describing the number and nature of enforcement actions, inspections, and public education programs;

(7) Identification of water quality improvements or degradation;

7a. Part 122 is amended by adding appendices E through I as follows:

**Appendix E to Part 122—Rainfall Zones of the United States**

insert illustration 416A

Not Shown: Alaska (Zone 7); Hawaii (Zone 7); Northern Mariana Islands (Zone 7); Guam (Zone 7); American Samoa (Zone 7); Trust Territory of the Pacific Islands (Zone 7); Puerto Rico (Zone 3) Virgin Islands (Zone 3).

Source: Methodology for Analysis of Detention Basins for Control of Urban Runoff Quality, prepared for U.S. Environmental Protection Agency, Office of Water, Nonpoint Source Division, Washington, DC, 1986.

  

**Appendix F to Part 122—Incorporated Places With Populations Greater Than 250,000 According to Latest Decennial Census by Bureau of Census.**

| State | Incorporated place |
|---|---|
| Alabama | Birmingham. |
| Arizona | Phoenix. |
| | Tucson. |
| California | Long Beach. |
| | Los Angeles. |
| | Oakland. |
| | Sacramento. |
| | San Diego. |
| | San Francisco. |
| | San Jose. |
| Colorado | Denver. |
| District of Columbia | |
| Florida | Jacksonville. |
| | Miami. |
| | Tampa. |
| Georgia | Atlanta. |
| Illinois | Chicago. |
| Indiana | Indianapolis. |
| Kansas | Wichita. |
| Kentucky | Louisville. |
| Louisiana | New Orleans. |
| Maryland | Baltimore. |
| Massachusetts | Boston. |
| Michigan | Detroit. |
| Minnesota | Minneapolis |
| | St. Paul. |

  

| | |
|---|---|
| Missouri | Kansas City. |
| | St. Louis. |
| Nebraska | Omaha. |
| New Jersey | Newark. |
| New Mexico | Albuquerque. |
| New York | Buffalo. |
| | Bronx Borough. |
| | Brooklyn Borough. |
| | Manhattan Borough. |
| | Queens Borough. |
| | Staten Island Borough. |
| North Carolina | Charlotte. |
| Ohio | Cincinnati. |
| | Cleveland. |
| | Columbus. |
| | Toledo. |
| Oklahoma | Oklahoma City. |
| | Tulsa. |
| Oregon | Portland. |
| Pennsylvania | Philadelphia. |
| | Pittsburgh. |
| Tennessee | Memphis. |
| | Nashville/Davidson. |
| Texas | Austin. |
| | Dallas. |
| | El Paso. |
| | Fort Worth. |
| | Houston. |
| | San Antonio. |

  

| | |
|---|---|
| Virginia | Norfolk. |
| | Virginia Beach. |
| Washington | Seattle. |
| Wisconsin | Milwaukee. |

***48074 Appendix G to Part 122—Incorporated Places With Populations Greater Than 100,000 and Less Than 250,000 According to Latest Decennial Census by Bureau of Census**

| State | Incorporated place |
|---|---|
| Alabama | Huntsville. |
| | Mobile. |
| | Montgomery. |
| Alaska | Anchorage. |
| Arizona | Mesa. |
| | Tempe. |
| Arkansas | Little Rock. |
| California | Anaheim. |
| | Bakersfield. |
| | Berkeley. |
| | Concord. |
| | Fremont. |
| | Fresno. |
| | Fullerton. |
| | Garden Grove. |
| | Glendale. |
| | Huntington Beach. |
| | Modesto. |
| | Oxnard. |
| | Pasadena. |
| | Riverside. |
| | San Bernadino. |

  

| | |
|---|---|
| | Santa Ana. |
| | Stockton. |
| | Sunnyvale. |
| | Torrance. |
| Colorado | Aurora. |
| | Colorado Springs. |
| | Lakewood. |
| | Pueblo. |
| Connecticut | Bridgeport. |
| | Hartford. |
| | New Haven. |
| | Stamford. |
| | Waterbury. |
| Florida | Fort Lauderdale. |
| | Hialeah. |
| | Hollywood. |
| | Orlando. |
| | St. Petersburg. |
| Georgia | Columbus. |
| | Macon. |
| | Savannah. |
| Idaho | Boise City. |
| Illinois | Peoria. |
| | Rockford. |
| Indiana | Evansville. |
| | Fort Wayne. |
| | Gary. |
| | South Bend. |
| Iowa | Cedar Rapids. |

  

| | |
|---|---|
| | Davenport. |
| | Des Moines. |
| Kansas | Kansas City. |
| | Topeka. |
| Kentucky | Lexington-Fayette. |
| Louisiana | Baton Rouge. |
| | Shreveport. |
| Massachusetts | Springfield. |
| | Worcester. |
| Michigan | Ann Arbor. |
| | Flint. |
| | Grand Rapids. |
| | Lansing. |
| | Livonia. |
| | Sterling Heights. |
| | Warren. |
| Mississippi | Jackson. |
| Missouri | Independence. |
| | Springfield. |
| Nebraska | Lincoln. |
| Nevada | Las Vegas. |
| | Reno. |
| New Jersey | Elizabeth. |
| | Jersey City. |
| | Paterson. |
| New York | Albany. |
| | Rochester. |
| | Syracuse. |
| | Yonkers. |

  

| | |
|---|---|
| North Carolina | Durham. |
| | Greensboro. |
| | Raleigh. |
| | Winston-Salem. |
| Ohio | Akron. |
| | Dayton. |
| | Youngstown. |
| Oregon | Eugene. |
| Pennsylvania | Allentown. |
| | Erie. |
| Rhode Island | Providence. |
| South Carolina | Columbia. |
| Tennessee | Chattanooga. |
| | Knoxville. |
| Texas | Amarillo. |
| | Arlington. |
| | Beaumont. |
| | Corpus Christi. |
| | Garland. |
| | Irving. |
| | Lubbock. |
| | Pasadena. |
| | Waco. |
| Utah | Salt Lake City. |
| Virginia | Alexandria. |
| | Chesapeake. |
| | Hampton. |
| | Newport News. |
| | Portsmouth. |

  

| | |
|---|---|
| | Richmond. |
| | Roanoke. |
| Washington | Spokane. |
| | Tacoma. |
| Wisconsin | Madison. |

**Appendix H to Part 122— Counties with Unincorporated Urbanized Areas With a Population of 250,000 or More According to the Latest Decennial Census by the Bureau of Census**

| State | County | Unincorporated urbanized population |
|---|---|---|
| California | Los Angeles | 912,664 |
| | Sacramento | 449,056 |
| | San Diego | 304,758 |
| Delaware | New Castle | 257,184 |
| Florida | Dade | 781,949 |
| Georgia | DeKalb | 386,379 |
| Hawaii | Honolulu | 688,178 |
| Maryland | Anne Arundel | 271,458 |
| | Baltimore | 601,308 |
| | Montgomery | 447,993 |
| | Prince George's | 450,188 |
| Texas | Harris | 409,601 |
| Utah | Salt Lake | 304,632 |
| Virginia | Fairfax | 527,178 |
| Washington | King | 336,800 |

**Appendix I to Part 122—Counties With Unincorporated Urbanized Areas Greater Than 100,000, But Less Than 250,000 According to the Latest Decennial Census by the Bureau of Census**

| State | County | Unincorporated urbanized population |
|---|---|---|
| Alabama | Jefferson | 102,917 |
| Arizona | Pima | 111,479 |
| California | Alameda | 187,474 |

  

| | | |
|---|---|---|
| | Contra Costa | 158,452 |
| | Kern | 117,231 |
| | Orange | 210,693 |
| | Riverside | 115,719 |
| | San Bernardino | 148,644 |
| Florida | Broward | 159,370 |
| | Escambia | 147,892 |
| | Hillsborough | 238,292 |
| | Orange | 245,325 |
| | Palm Beach | 167,089 |
| | Pinellas | 194,389 |
| | Polk | 104,150 |
| | Sarasota | 110,009 |
| Georgia | Clayton | 100,742 |
| | Cobb | 204,121 |
| | Richmond | 118,529 |
| Kentucky | Jefferson | 224,958 |
| Louisiana | Jefferson | 140,836 |
| North Carolina | Cumberland | 142,727 |
| Nevada | Clark | 201,775 |
| Oregon | Multnomah | 141,100 |
| | Washington | 109,348 |
| South Carolina | Greenville | 135,398 |
| | Richland | 124,684 |
| Virginia | Arlington | 152,599 |
| | Henrico | 161,204 |
| | Chesterfield | 108,348 |
| Washington | Snohomish | 103,493 |
| | Pierce | 196,113 |

  

**PART 123—STATE PROGRAM REQUIREMENTS**

8. The authority citation for part 123 continues to read as follows:

***48075** Authority: Clean Water Act, 33 U.S.C. 1251 et seq.

9. Section 123.25 is amended by revising paragraph (a)(9) to read as follows:

**§ 123.25 Requirements for permitting.**

(a) * * *

(9) § 122.26—(Storm water discharges);

* * * * *

**PART 124—PROCEDURES FOR DECISIONMAKING**

10. The authority citation for part 124 continues to read as follows:

Authority: Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seq.; Safe Drinking Water Act, 42 U.S.C. 300f et seq.; Clean Water Act, 33 U.S.C. 1251 et seq.; and Clean Air Act, 42 U.S.C. 1857 et seq.

11. Section 124.52 is revised to read as follows:

**§ 124.52 Permits required on a case-by-case basis.**

(a) Various sections of part 122, subpart B allow the Director to determine, on a case-by-case basis, that certain concentrated animal feeding operations (§ 122.23), concentrated aquatic animal production facilities (§ l22.24), storm water discharges (§ 122.26), and certain other facilities covered by general permits (§ 122.28) that do not generally require an individual permit may be required to obtain an individual permit because of their contributions to water pollution.

(b) Whenever the Regional Administrator decides that an individual permit is required under this section, except as provided in paragraph (c) of this section, the Regional Administrator shall notify the discharger in writing of that decision and the reasons for it, and shall send an application form with the notice. The discharger must apply for a permit under § 122.21 within 60 days of notice, unless permission for a later date is granted by the Regional Administrator. The question whether the designation was proper will remain open for consideration during the public comment period under § 124.11 or § 124.118 and in any subsequent hearing.

(c) Prior to a case-by-case determination that an individual permit is required for a storm water discharge under this section (see 40 CFR 122.26 (a)(1)(v) and (c)(1)(v)), the Regional Administrator may require the discharger to submit a permit application or other information regarding the discharge under section 308 of the CWA. In requiring such information, the Regional Administrator shall notify the discharger in writing and shall send an application form with the notice. The discharger must apply for a permit under § 122.26 within 60 days of notice, unless permission for a later date is granted by the Regional Administrator. The question whether the initial designation was proper will remain open for consideration during the public comment period under § 124.11 or § 124.118 and in any subsequent hearing.

Note: The following form will not appear in the Code of Federal Regulations.

BILLING CODE 6560-50-M

  

[FR Doc. 90-26315 Filed 11-9-90; 12:17 pm]

Footnotes

1 Indeed, the DC Circuit has held, in the storm water context, that EPA may not exempt any point source discharges of pollutants from the requirement to obtain an NPDES permit. NRDC v. Costle, 569 F.2d 1369, 1377 (DC Cir. 1977).

2 It should be noted that EPA did not promulgate the required storm water regulations by February, 1989, as contemplated by section 402(p)(4)(A). As discussed below, today's rule generally requires industrial storm water discharges to file a permit application in one year.

3 EPA notes that the legal issue raised by commenters regarding whether industrial storm water would be controlled to BAT if covered by a municipal permit at the MEP level is primarily a theoretical issue. As explained above, the proposal assumed that cities would establish controls on industry very similar to those established in an NPDES permit using best professional judgment. EPA's key concern, rather, is whether cities can, in fact, establish such controls. Thus, today's final rule should not appreciably change the requirements to be imposed on industrial sources, only how those requirements are enforced.

4 The courts in NRDC v. Train, 396 F.Supp. 1393 (D.D.C. 1975) aff'd, NRDC v. Costle, 568 F.2d 1369 (DC Cir. 1977), have acknowledged the administrative burden placed on the Agency by requiring individual permits for a large number of storm water discharges. These courts have recognized EPA's discretion to use certain administrative devices, such as area permits or general permits to help manage its workload. In addition, the courts have recognized flexibility in the type of permit conditions that are established, including requirements for best management practices.

5 The Bureau of Census defines urbanized areas to provide a description of high-density development. Urbanized areas are comprised of a central city (or cities) with a surrounding closely settled area. The population of the entire urbanized area must be greater than 50,000 persons, and the closely settled area outside of the city, the urban fringe, must generally have a population density greater than 1,000 persons per square mile (just over 1.5 persons per acre) to be included.

64 FR 68722-01, 1999 WL 1111032(F.R.)
RULES and REGULATIONS
ENVIRONMENTAL PROTECTION AGENCY
40 CFR Parts 9, 122 , 123, and 124
[FRL—6470-8]
RIN 2040-AC82

# National Pollutant Discharge Elimination System—Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges

Wednesday, December 8, 1999

***68722** AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Today's regulations (Phase II) expand the existing National Pollutant Discharge Elimination System (NPDES) storm water program (Phase I) to address storm water discharges from small municipal separate storm sewer systems (MS4s) (those serving less than 100,000 persons) and construction sites that disturb one to five acres. Although these sources are automatically designated by today's rule, the rule allows for the exclusion of certain sources from the national program based on a demonstration of the lack of impact on water quality, as well as the inclusion of others based on a higher likelihood of localized adverse impact on water quality. Today's regulations also exclude from the NPDES program storm water discharges from industrial facilities that have “no exposure” of industrial activities or materials to storm water. Finally, today's rule extends from August 7, 2001 until March 10, 2003 the deadline by which certain industrial facilities owned by small MS4s must obtain coverage under an NPDES permit. This rule establishes a cost-effective, flexible approach for reducing environmental harm by storm water discharges from many point sources of storm water that are currently unregulated.

EPA believes that the implementation of the six minimum measures identified for small MS4s should significantly reduce pollutants in urban storm water compared to existing levels in a cost-effective manner. Similarly, EPA believes that implementation of Best Management Practices (BMP) controls at small construction sites will also result in a significant reduction in pollutant discharges and an improvement in surface water quality. EPA believes this rule will result in monetized financial, recreational and health benefits, as well as benefits that EPA has been unable to monetize. Expected benefits include reduced scouring and erosion of streambeds, improved aesthetic quality of waters, reduced eutrophication of aquatic systems, benefit to wildlife and endangered and threatened species, tourism benefits, biodiversity benefits and reduced costs for siting reservoirs. In addition, the costs of industrial storm water controls will decrease due to the exclusion of storm water discharges from facilities where there is “no exposure” of storm water to industrial activities and materials.

DATES: This regulation is effective on February 7, 2000. The incorporation by reference of the rainfall erosivity factor publication listed in the rule is approved by the Director of the Federal Register as of February 7, 2000. For judicial review purposes, this final rule is promulgated as of 1:00 p.m. Eastern Standard Time, on December 22, 1999 as provided in 40 CFR 23.2.

ADDRESSES: The complete administrative record for the final rule and the ICR have been established under docket numbers W-97-12 (rule) and W-97-15 (ICR), and includes supporting documentation as well as printed, paper versions of electronic comments. Copies of information in the record are available upon request. A reasonable fee may be charged for copying. The record is available for inspection and copying from 9 a.m. to 4 p.m., Monday through Friday, excluding legal holidays, at the Water Docket, EPA, East Tower Basement, 401 M Street, SW, Washington, DC. For access to docket materials, please call 202/260-3027 to schedule an appointment.

  

FOR FURTHER INFORMATION CONTACT: George Utting, Office of Wastewater Management, Environmental Protection Agency, Mail Code 4203, 401 M Street, SW, Washington, DC 20460; (202) 260-5816; sw2@epa.gov.

SUPPLEMENTARY INFORMATION: Entities potentially regulated by this action include:

| Category | Examples of regulated entities |
|---|---|
| Federal, State, Tribal, and Local Governments | Operators of small separate storm sewer systems, industrial facilities that discharge storm water associated with industrial activity or construction activity disturbing 1 to 5 acres. |
| Industry | Operators of industrial facilities that discharge storm water associated with industrial activity. |
| Construction Activity | Operators of construction activity disturbing 1 to 5 acres. |

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your facility or company is regulated by this action, you should carefully examine the applicability criteria in §§122.26(b), 122.31, 122.32, and 123.35 of the final rule. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding FOR FURTHER INFORMATION CONTACT section.

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1. Background

2. Today's Rule

  

  

**I. Background**

***A. Proposed Rule and Pre-Proposal Outreach***

On January 9, 1998 (63 FR 1536), EPA proposed to expand the National Pollutant Discharge Elimination System (NPDES) storm water program to include storm water discharges from municipal separate storm sewer systems (MS4s) and construction sites that were smaller than those previously included in the program. The proposal also addressed industrial sources that have "no exposure" of industrial activities and materials to storm water. Today, EPA is promulgating a final rule to implement most of the proposed revisions with minor changes based on public comments received on the proposal. Today's final rule also extends the deadline by which certain industrial facilities operated by municipalities of less than 100,000 population must be covered by a NPDES permit; the deadline is changed from August 7, 2001 until March 10, 2003.

In 1972, Congress amended the Federal Water Pollution Control Act (commonly referred to as the Clean Water Act (CWA)) to prohibit the discharge of any pollutant to waters of the United States from a point source unless the discharge is authorized by an NPDES permit. The NPDES program is a program designed to track point sources and require the implementation of the controls necessary to minimize the discharge of pollutants. Initial efforts to improve water quality under the NPDES program primarily focused on reducing pollutants in industrial process wastewater and municipal sewage. These discharge sources were easily identified as responsible for poor, often drastically degraded, water quality conditions.

As pollution control measures for industrial process wastewater and municipal sewage were implemented and refined, it became increasingly evident that more diffuse sources of water pollution were also significant causes of water quality impairment. Specifically, storm water runoff draining large surface areas, such as agricultural and urban land, was found to be a major cause of water quality impairment, including the nonattainment of designated beneficial uses.

In 1987, Congress amended the CWA to require implementation, in two phases, of a comprehensive national program for addressing storm water discharges. The first phase of the program, commonly referred to as "Phase I," was promulgated on November 16, 1990 (55 FR 47990). Phase I requires NPDES permits for storm water discharge from a large number of priority sources including municipal separate storm sewer systems ("MS4s") generally serving populations of 100,000 or more and several categories of industrial activity, including construction sites that disturb five or more acres of land.

Today's rule, which is the second phase of the storm water program, expands the existing program to include discharges of storm water from smaller municipalities in urbanized areas and from construction sites that disturb between one and five acres of land. Today's rule allows certain sources to be excluded from the national program based on a demonstrable lack of impact on water quality. The rule also allows other sources not automatically regulated on a national basis to be designated for inclusion based on increased likelihood for localized adverse impact on water quality. ***68724** Today's rule also conditionally excludes storm water discharges from industrial facilities that have "no exposure" of industrial activities or materials to storm water. Today's rule and the effort that led to its development are commonly referred to as "Phase II." On August 7, 1995, EPA promulgated a final rule that required facilities to be regulated under Phase II to apply for a NPDES permit by August 7, 2001, unless the

  

NPDES permitting authority designates them as requiring a permit by an earlier date. (60 FR 40230). That rule is referred to as "the Interim Phase II Rule." Today's rule replaces the Interim Phase II rule.

EPA performed extensive outreach and worked with a variety of stakeholders prior to proposing today's rule. On September 9, 1992, EPA published a notice requesting information and public comment on how to prepare regulations under CWA section 402(p)(6) (see 57 FR 41344). The notice identified three sets of issues associated with developing new NPDES storm water regulations: (1) How should EPA identify unregulated sources of storm water to protect water quality, (2) what types of control strategies should EPA develop for these sources, and (3) what are appropriate deadlines for implementing new requirements. The notice recognized that potential sources for coverage under the section 402(p)(6) regulations would fall into two main categories: municipal separate storm sewer systems and individual (commercial and residential) sources. EPA received more than 130 comments on the September 9, 1992, notice. For further discussion of the comments received, see Storm Water Discharges Potentially Addressed by Phase II of the National Pollutant Discharge Elimination System: Report to Congress (EPA, 1995a), pp. 1-21 to 1-22, and Appendix J (which provides a detailed summary of the comments received as they relate to the specific issues raised in the notice).

In early 1993, the Rensselaerville Institute and EPA held public and expert meetings to assist in developing and analyzing options for identifying unregulated sources and possible controls. The report on the 1993 meetings identified two options that were favored by the various groups that participated. One option was a program that allowed States to select sources to be controlled in a manner consistent with criteria developed by EPA. A second option was a tiered approach under which EPA would select high priority sources for control by NPDES permits and States would select other sources for control under a State water quality program other than the NPDES program. For additional details see the "Report on the EPA Storm Water Management Program (Rensselaerville Study)," Appendix I of Storm Water Discharges Potentially Addressed by Phase II of the National Pollutant Discharge Elimination System: Report to Congress (EPA, 1995a).

EPA also conducted outreach with representatives of small entities in conjunction with the convening of a Small Business Advocacy Review Panel under the Small Business Regulatory Enforcement Fairness Act (SBREFA). This process is discussed in section IV.E of today's preamble. For additional background see the discussion in the preamble to the proposal for today's rule.

To assist EPA by providing advice and recommendations regarding the urban municipal wet weather water pollution control program, EPA established the Urban Wet Weather Flows Federal Advisory Committee (hereinafter, "FACA Committee") under the Federal Advisory Committee Act (FACA). The Office of Management and Budget approved the charter for the FACA Committee on March 10, 1995. The FACA Committee provided a forum for identifying and addressing issues associated with water quality impacts from storm water sources.

The FACA Committee established two subcommittees: the Storm Water Phase II FACA Subcommittee and the Sanitary Sewer Overflows (SSOs) FACA Subcommittee. Consistent with the requirements of FACA, the membership of both the FACA Committee and the subcommittees was balanced among EPA's various outside stakeholder interests, including representatives from municipalities, States, Indian Tribes, EPA, industrial and commercial sectors, agriculture, and environmental and public interest groups.

The Storm Water Phase II FACA Subcommittee ("Subcommittee") met fourteen times between September 1995 and June 1998. The 32 Subcommittee members discussed possible regulatory frameworks at these meetings as well as during numerous other meetings and conference calls. Members of the FACA Committee provided views regarding the development of the "no exposure" provision and other provisions in drafts of the Phase II rule. EPA provided Subcommittee members with four successive drafts of the proposed rule and preamble, outlines of the rule, summaries of the written comments received on each draft, and documents identifying the changes made to each draft. In the course of providing input to the Committee, individual Subcommittee members provided significant input and advice that EPA considered in the context of public comments received. Ultimately, the Subcommittee did not provide a written report back to the FACA Committee, and the FACA Committee did

  

not provide written advice and recommendations to EPA. The Agency, therefore, did not rely on group recommendations in developing today's rule, but does consider the process to have resulted in important public outreach.

***B. Water Quality Concerns/Environmental Impact Studies and Assessments***

Storm water runoff from lands modified by human activities can harm surface water resources and, in turn, cause or contribute to an exceedance of water quality standards by changing natural hydrologic patterns, accelerating stream flows, destroying aquatic habitat, and elevating pollutant concentrations and loadings. Such runoff may contain or mobilize high levels of contaminants, such as sediment, suspended solids, nutrients (phosphorous and nitrogen), heavy metals and other toxic pollutants, pathogens, toxins, oxygen-demanding substances (organic material), and floatables (U.S. EPA. 1992. Environmental Impacts of Storm Water Discharges: A National Profile. EPA 841-R-92-001. Office of Water. Washington, DC). After a rain, storm water runoff carries these pollutants into nearby streams, rivers, lakes, estuaries, wetlands, and oceans. The highest concentrations of these contaminants often are contained in "first flush" discharges, which occur during the first major storm after an extended dry period (Schueler, T.R. 1994. "First Flush of Stormwater Pollutants Investigated in Texas." Note 28. Watershed Protection Techniques 1(2)). Individually and combined, these pollutants impair water quality, threatening designated beneficial uses and causing habitat alteration or destruction.

Uncontrolled storm water discharges from areas of urban development and construction activity negatively impact receiving waters by changing the physical, biological, and chemical composition of the water, resulting in an unhealthy environment for aquatic organisms, wildlife, and humans. The following sections discuss the studies and data that address and support this finding.

Although water quality problems also can occur from agricultural storm water discharges and return flows from irrigated agriculture, this area of ***68725** concern is statutorily exempted from regulation as a point source under the Clean Water Act and is not discussed here. (See CWA section 502(14)). Other storm water sources not specifically identified in the regulations may be of concern in certain areas and can be addressed on a case-by-case (or category-by-category) basis through the NPDES designation authority preserved by CWA section 402(p)(2)(6), as well as today's rule.

**1. Urban Development**

Urbanization alters the natural infiltration capability of the land and generates a host of pollutants that are associated with the activities of dense populations, thus causing an increase in storm water runoff volumes and pollutant loadings in storm water discharged to receiving waterbodies (U.S. EPA, 1992). Urban development increases the amount of impervious surface in a watershed as farmland, forests, and meadowlands with natural infiltration characteristics are converted into buildings with rooftops, driveways, sidewalks, roads, and parking lots with virtually no ability to absorb storm water. Storm water and snow-melt runoff wash over these impervious areas, picking up pollutants along the way while gaining speed and volume because of their inability to disperse and filter into the ground. What results are storm water flows that are higher in volume, pollutants, and temperature than the flows in less impervious areas, which have more natural vegetation and soil to filter the runoff (U.S. EPA, 1997. Urbanization and Streams: Studies of Hydrologic Impacts. EPA 841-R-97-009. Office of Water. Washington, DC).

Studies reveal that the level of imperviousness in an area strongly correlates with the quality of the nearby receiving waters. For example, a study in the Puget Sound lowland ecoregion found that when the level of basin development exceeded 5 percent of the total impervious area, the biological integrity and physical habitat conditions that are necessary to support natural biological diversity and complexity declined precipitously (May, C.W., E.B. Welch, R.R. Horner, J.R. Karr, and B.W. May. 1997. Quality Indices for Urbanization Effects in Puget Sound Lowland Streams, Technical Report No. 154. University of Washington Water Resources Series). Research conducted in numerous geographical areas, concentrating on various variables and employing widely different methods, has revealed a similar conclusion: stream degradation occurs at relatively low levels of imperviousness, such as 10 to 20 percent (even as low as 5 to 10 percent according to the findings of the Washington study referenced above) (Schueler, T.R. 1994. "The Importance of Imperviousness." Watershed Protection Techniques 1(3); May, C., R.R. Horner, J.R. Karr, B.W. Mar, and E.B. Welch. 1997. "Effects Of Urbanization On Small Streams In The Puget Sound

  

Lowland Ecoregion." Watershed Protection Techniques 2(4); Yoder, C.O., R.J. Miltner, and D. White. 1999. "Assessing the Status of Aquatic Life Designated Uses in Urban and Suburban Watersheds." In Proceedings: National Conference on Retrofits Opportunities in Urban Environments. EPA 625-R-99-002, Washington, DC; Yoder, C.O and R.J. Miltner. 1999. "Assessing Biological Quality and Limitations to Biological Potential in Urban and Suburban Watersheds in Ohio." In Comprehensive Stormwater & Aquatic Ecosystem Management Conference Papers, Auckland, New Zealand). Furthermore, research has indicated that few, if any, urban streams can support diverse benthic communities at imperviousness levels of 25 percent or more. An area of medium density single family homes can be anywhere from 25 percent to nearly 60 percent impervious, depending on the design of the streets and parking (Schueler, 1994).

In addition to impervious areas, urban development creates new pollution sources as population density increases and brings with it proportionately higher levels of car emissions, car maintenance wastes, pet waste, litter, pesticides, and household hazardous wastes, which may be washed into receiving waters by storm water or dumped directly into storm drains designed to discharge to receiving waters. More people in less space results in a greater concentration of pollutants that can be mobilized by, or disposed into, storm water discharges from municipal separate storm sewer systems. A modeling system developed for the Chesapeake Bay indicated that contamination of the Bay and its tributaries from runoff is comparable to, if not greater than, contamination from industrial and sewage sources (Cohn-Lee, R. and D. Cameron. 1992. "Urban Stormwater Runoff Contamination of the Chesapeake Bay: Sources and Mitigation." The Environmental Professional, Vol. 14).

**a. Large-Scale Studies and Assessments**

In support of today's regulatory designation of MS4s in urbanized areas, the Agency relied on broad-based assessments of urban storm water runoff and related water quality impacts, as well as more site-specific studies. The first national assessment of urban runoff characteristics was completed for the Nationwide Urban Runoff Program (NURP) study (U.S. EPA. 1983. Results of the Nationwide Urban Runoff Program, Volume 1—Final Report. Office of Water. Washington, D.C.). The NURP study is the largest nationwide evaluation of storm water discharges, which includes adverse impacts and sources, undertaken to date.

EPA conducted the NURP study to facilitate understanding of the nature of urban runoff from residential, commercial, and industrial areas. One objective of the study was to characterize the water quality of discharges from separate storm sewer systems that drain residential, commercial, and light industrial (industrial parks) sites. Storm water samples from 81 residential and commercial properties in 22 urban/suburban areas nationwide were collected and analyzed during the 5-year period between 1978 and 1983. The majority of samples collected in the study were analyzed for eight conventional pollutants and three heavy metals.

Data collected under the NURP study indicated that discharges from separate storm sewer systems draining runoff from residential, commercial, and light industrial areas carried more than 10 times the annual loadings of total suspended solids (TSS) than discharges from municipal sewage treatment plants that provide secondary treatment. The NURP study also indicated that runoff from residential and commercial areas carried somewhat higher annual loadings of chemical oxygen demand (COD), total lead, and total copper than effluent from secondary treatment plants. Study findings showed that fecal coliform counts in urban runoff typically range from tens to hundreds of thousands per hundred milliliters of runoff during warm weather conditions, with the median for all sites being around 21,000/100 ml. This is generally consistent with studies that found that fecal coliform mean values range from 1,600 coliform fecal units (CFU)/100 ml to 250,000 cfu/100 ml (Makepeace, D.K., D.W. Smith, and S.J. Stanley. 1995. "Urban Storm Water Quality: Summary of Contaminant Data." Critical Reviews in Environmental Science and Technology 25(2):93-139). Makepeace, et al., summarized ranges of contaminants from storm water, including physical contaminants such as total solids (76—36,200 mg/L) and copper (up to 1.41 mg/L); organic chemicals; organic compounds, such as oil and grease (up to 110 mg/L); and microorganisms. ***68726**

Monitoring data summarized in the NURP study provided important information about urban runoff from residential, commercial, and light industrial areas. The study concluded that the quality of urban runoff can be affected adversely by several sources of pollution that were not directly evaluated in the study, including illicit discharges, construction site runoff, and illegal dumping. Data from the NURP study were analyzed further in the U.S. Geological Survey (USGS) Urban Storm Water Data

Base for 22 Metropolitan Areas Throughout the United States study (Driver, N.E., M.H. Mustard, R.B. Rhinesmith, and R.F. Middleburg. 1985. U.S. Geological Survey Urban Storm Water Data Base for 22 Metropolitan Areas Throughout the United States. Report No. 85-337 USGS. Lakewood, CO). The USGS report summarized additional monitoring data compiled during the mid-1980s, covering 717 storm events at 99 sites in 22 metropolitan areas and documented problems associated with metals and sediment concentrations in urban storm water runoff. More recent reports have confirmed the pollutant concentration data collected in the NURP study (Marsalek, J. 1990. "Evaluation of Pollutant Loads from Urban Nonpoint Sources." Wat. Sci. Tech. 22(10/11):23-30; Makepeace, et al., 1995).

Commenters argued that the NURP study does not support EPA's contention that urban activities significantly jeopardize attainment of water quality standards. One commenter argued that the NURP study and the 1985 USGS study are seriously out of date. Because they were issued 10 years or more before the implementation of the current storm water permit program, the data in those reports do not reflect conditions that exist after implementation of permits issued by authorized States and EPA for storm water from construction sites, large municipalities, and industrial activities.

In response, EPA notes that it is not relying solely on the NURP study to describe current water quality impairment. Rather, EPA is citing NURP as a source of data on typical pollutant concentrations in urban runoff. Recent studies have not found significantly different pollutant concentrations in urban runoff when compared to the original NURP data (see Makepeace, et al., 1995; Marsalek, 1990; and Pitt, et al., 1995).

America's Clean Water—the States' Nonpoint Source Assessment (Association of State and Interstate Water Pollution Control Administrators (ASIWPCA). 1985. America's Clean Water—The States' Nonpoint Source Assessment. Prepared in cooperation with the U.S. EPA, Office of Water, Washington, DC), a comprehensive study of diffuse pollution sources conducted under the sponsorship of the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) and EPA revealed that 38 States reported urban runoff as a major cause of designated beneficial use impairment and 21 States reported storm water runoff from construction sites as a major cause of beneficial use impairment. In addition, the 1996 305(b) Report (U.S. EPA. 1998. The National Water Quality Inventory, 1996 Report to Congress. EPA 841-R-97-008. Office of Water. Washington, DC), provides a national assessment of water quality based on biennial reports submitted by the States as required under CWA section 305(b) of the CWA. In the CWA 305(b) reports, States, Tribes, and Territories assess their individual water quality control programs by examining the attainment or nonattainment of the designated uses assigned to their rivers, lakes, estuaries, wetlands, and ocean shores. A designated use is the legally applicable use specified in a water quality standard for a watershed, waterbody, or segment of a waterbody. The designated use is the desirable use that the water quality should support. Examples of designated uses include drinking water supply, primary contact recreation (swimming), and aquatic life support. Each CWA 305(b) report indicates the assessed fraction of a State's waters that are fully supporting, partially supporting, or not supporting designated beneficial uses.

In their reports, States, Tribes, and Territories first identified and then assigned the sources of water quality impairment for each impaired waterbody using the following categories: industrial, municipal sewage, combined sewer overflows, urban runoff/ storm sewers, agricultural, silvicultural, construction, resource extraction, land disposal, hydrologic modification, and habitat modification. The 1996 Inventory, based on a compilation of 60 individual 305(b) reports submitted by States, Tribes, and Territories, assessed the following percentages of total waters nationwide: 19 percent of river and stream miles; 40 percent of lake, pond, and reservoir acres; 72 percent of estuary square miles; and 6 percent of ocean shoreline waters. The 1996 Inventory indicated that approximately 40 percent of the Nation's assessed rivers, lakes, and estuaries are impaired. Waterbodies deemed as "impaired" are either partially supporting designated uses or not supporting designated uses.

The 1996 Inventory also found urban runoff/discharges from storm sewers to be a major source of water quality impairment nationwide. Urban runoff/storm sewers were found to be a source of pollution in 13 percent of impaired rivers; 21 percent of impaired lakes, ponds, and reservoirs; and 45 percent of impaired estuaries (second only to industrial discharges). In addition, urban runoff was found to be the leading cause of ocean impairment for those ocean miles surveyed.

  

In addition, a recent USGS study of urban watersheds across the United States has revealed a link between urban development and contamination of local waterbodies. The study found the highest levels of organic contaminants, known as polycyclic aromatic hydrocarbons (PAHs) (products of combustion of wood, grass, and fossil fuels), in the reservoirs of urbanized watersheds (U.S. Geological Survey (USGS). 1998. Research Reveals Link Between Development and Contamination in Urban Watersheds. USGS news release. USGS National Water-Quality Assessment Program).

Urban storm water also can contribute significant amounts of toxicants to receiving waters. Pitt, et. al. (1993), found heavy metal concentrations in the majority of samples analyzed. Industrial or commercial areas were likely to be the most significant pollutant source areas (Pitt, R., R. Field, M. Lalor, M. Brown 1993. "Urban stormwater toxic pollutants: assessment, sources, and treatability" Water Environment Research, 67(3):260-75).

**b. Local and Watershed-Based Studies**

In addition to the large-scale nationwide studies and assessments, a number of local and watershed-based studies from across the country have documented the detrimental effects of urban storm water runoff on water quality. A study of urban streams in Milwaukee County, Wisconsin, found local streams to be highly degraded due primarily to urban runoff, while three studies in the Atlanta, Georgia, region were characterized as being "the first documentation in the Southeast of the strong negative relationship between urbanization and stream quality that has been observed in other ecoregions" (Masterson, J. and R. Bannerman. 1994. "Impacts of Storm Water Runoff on Urban Streams in Milwaukee County, Wisconsin." Paper presented at National Symposium on Water Quality: American Water Resources Association; Schueler, T.R. 1997. "Fish Dynamics in Urban Streams Near Atlanta, Georgia." ***68727** Technical Note 94. Watershed Protection Techniques 2(4)). Several other studies, including those performed in Arizona (Maricopa County), California (San Jose's Coyote Creek), Massachusetts (Green River), Virginia (Tuckahoe Creek), and Washington (Puget Sound lowland ecoregion), all had the same finding: runoff from urban areas greatly impair stream ecology and the health of aquatic life; the more heavily developed the area, the more detrimental the effects (Lopes, T. and K. Fossum. 1995. "Selected Chemical Characteristics and Acute Toxicity of Urban Stormwater, Streamflow, and Bed Material, Maricopa County, Arizona." Water Resources Investigations Report 95-4074. USGS; Pitt, R. 1995. "Effects of Urban Runoff on Aquatic Biota." In Handbook of Ecotoxicology; Pratt, J. and R. Coler. 1979. "Ecological Effects of Urban Stormwater Runoff on Benthic Macroinvertebrates Inhabiting the Green River, Massachusetts." Completion Report Project No. A-094. Water Resources Research Center. University of Massachusetts at Amherst.; Schueler, T.R. 1997. "Historical Change in a Warmwater Fish Community in an Urbanizing Watershed." Technical Note 93. Watershed Protection Techniques 2(4); May, C., R. Horner, J. Karr, B. Mar, and E. Welch. 1997. "Effects Of Urbanization On Small Streams In The Puget Sound Lowland Ecoregion." Watershed Protection Techniques 2(4)).

Pitt and others also described the receiving water effects on aquatic organisms associated with urban runoff (Pitt, R.E. 1995. "Biological Effects of Urban Runoff Discharges" In Stormwater Runoff and Receiving Systems: Impact, Monitoring, and Assessment, ed. E.E Herricks, Lewis Publishers; Crunkilton, R., J. Kleist, D. Bierman, J. Ramcheck, and W. DeVita. 1999. "Importance of Toxicity as a Factor Controlling the Distribution of Aquatic Organisms in an Urban Stream." In Comprehensive Stormwater & Aquatic Ecosystem Management Conference Papers. Auckland, New Zealand).

In Wisconsin, runoff samples were collected from streets, parking lots, roofs, driveways, and lawns. Source areas were broken up into residential, commercial, and industrial. Geometric mean concentration data for residential areas included total solids of about 500-800 mg/L from streets and 600 mg/L from lawns. Fecal coliform data from residential areas ranged from 34,000 to 92,000 cfu/100 mL for streets and driveways. Contaminant concentration data from commercial and industrial source areas were lower for total solids and fecal coliform, but higher for total zinc (Bannerman, R.T., D.W. Owens, R.B. Dods, and N.J. Hornewer. 1993. "Sources of Pollutants in Wisconsin Stormwater." Wat. Sci. Tech. 28(3-5):241-59).

Bannerman, et al. also found that streets contribute higher loads of pollutants to urban storm water than any other residential development source. Two small urban residential watersheds were evaluated to determine that lawns and streets are the largest sources of total and dissolved phosphorus in the basins (Waschbusch, R.J., W.R. Selbig, and R.T. Bannerman. 1999. "Sources of Phosphorus in Stormwater and Street Dirt from Two Urban Residential Basins In Madison, Wisconsin, 1994-95."

  

Water Resources Investigations Report 99-4021. U.S. Geological Survey). A number of other studies have indicated that urban roadways often contain significant quantities of metal elements and solids (Sansalone, J.J. and S.G. Buchberger. 1997. "Partitioning and First Flush of Metals in Urban Roadway Storm Water." ASCE Journal of Environmental Engineering 123(2); Sansalone, J.J., J.M. Koran, J.A. Smithson, and S.G. Buchberger. 1998. "Physical Characteristics of Urban Roadway Solids Transported During Rain Events" ASCE Journal of Environmental Engineering 124(5); Klein, L.A., M. Lang, N. Nash, and S.L. Kirschner. 1974. "Sources of Metals in New York City Wastewater" J. Water Pollution Control Federation 46(12):2653-62; Barrett, M.E, R.D. Zuber, E.R. Collins, J.F. Malina, R.J. Charbeneau, and G.H Ward., 1993. "A Review and Evaluation of Literature Pertaining to the Quantity and Control of Pollution from Highway Runoff and Construction." Research Report 1943-1. Center for Transportation Research, University of Texas, Austin).

**c. Beach Closings/Advisories**

Urban wet weather flows have been recognized as the primary sources of estuarine pollution in coastal communities. Urban storm water runoff, sanitary sewer overflows, and combined sewer overflows have become the largest causes of beach closings in the United States in the past three years. Storm water discharges from urban areas not only pose a threat to the ecological environment, they also can substantially affect human health. A survey of coastal and Great Lakes communities reports that in 1998, more than 1,500 beach closings and advisories were associated with storm water runoff (Natural Resources Defense Council. 1999. "A Guide to Water Quality at Vacation Beaches" New York, NY). Other reports also document public health, shellfish bed, and habitat impacts from storm water runoff, including more than 823 beach closings/advisories issued in 1995 and more than 407 beach closing/advisories issued in 1996 due to urban runoff (Natural Resources Defense Council. 1996. Testing the Waters Volume VI: Who Knows What You're Getting Into. New York, NY; NRDC. 1997. Testing the Waters Volume VII: How Does Your Vacation Beach Rate. New York, NY; Morton, T. 1997. Draining to the Ocean: The Effects of Stormwater Pollution on Coastal Waters. American Oceans Campaign, Santa Monica, CA). The Epidemiological Study of Possible Adverse Health Effects of Swimming in Santa Monica Bay (Haile, R.W., et. al. 1996. "An Epidemiological Study of Possible Adverse Health Effects of Swimming in Santa Monica Bay." Final Report prepared for the Santa Monica Bay Restoration Project) concluded that there is a 57 percent higher rate of illness in swimmers who swim adjacent to storm drains than in swimmers who swim more than 400 yards away from storm drains. This and other studies document a relationship between gastrointestinal illness in swimmers and water quality, the latter of which can be heavily compromised by polluted storm water discharges.

**2. Non-Storm Water Discharges Through Municipal Storm Sewers**

Studies have shown that discharges from MS4s often include wastes and wastewater from non-storm water sources. Federal regulations (§122.26(b)(2)) define an illicit discharge as "* * * any discharge to an MS4 that is not composed entirely of storm water * * *," with some exceptions. These discharges are "illicit" because municipal storm sewer systems are not designed to accept, process, or discharge such wastes. Sources of illicit discharges include, but are not limited to: sanitary wastewater; effluent from septic tanks; car wash, laundry, and other industrial wastewaters; improper disposal of auto and household toxics, such as used motor oil and pesticides; and spills from roadway and other accidents.

Illicit discharges enter the system through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the MS4 from cracked sanitary systems, spills collected by drain outlets, and paint or used oil dumped directly into a drain). The result is untreated discharges that contribute high levels of pollutants, ***68728** including heavy metals, toxics, oil and grease, solvents, nutrients, viruses and bacteria into receiving waterbodies. The NURP study, discussed earlier, found that pollutant levels from illicit discharges were high enough to significantly degrade receiving water quality and threaten aquatic, wildlife, and human health. The study noted particular problems with illicit discharges of sanitary wastes, which can be directly linked to high bacterial counts in receiving waters and can be dangerous to public health.

Because illicit discharges to MS4s can create severe widespread contamination and water quality problems, several municipalities and urban counties performed studies to identify and eliminate such discharges. In Michigan, the Ann Arbor and Ypsilanti water quality projects inspected 660 businesses, homes, and other buildings and identified 14 percent of the buildings

  

as having improper storm sewer drain connections. The program assessment revealed that, on average, 60 percent of automobile-related businesses, including service stations, automobile dealerships, car washes, body shops, and light industrial facilities, had illicit connections to storm sewer drains. The program assessment also showed that a majority of the illicit discharges to the storm sewer system resulted from improper plumbing and connections, which had been approved by the municipality when installed (Washtenaw County Statutory Drainage Board. 1987. Huron River Pollution Abatement Program).

In addition, an inspection of urban storm water outfalls draining into Inner Grays, Washington, indicated that 32 percent of these outfalls had dry weather flows. Of these flows, 21 percent were determined to have pollutant levels higher than the pollutant levels expected in typical urban storm water runoff characterized in the NURP study (U.S. EPA. 1993. Investigation of Inappropriate Pollutant Entries Into Storm Drainage Systems—A User's Guide. EPA 600/R-92/238. Office of Research and Development. Washington, DC). That same document reports a study in Toronto, Canada, that found that 59 percent of outfalls from the MS4 had dry-weather flows. Chemical tests revealed that 14 percent of these dry-weather flows were determined to be grossly polluted.

Inflows from aging sanitary sewer collection systems are one of the most serious illicit discharge-related problems. Sanitary sewer systems frequently develop leaks and cracks, resulting in discharges of pollutants to receiving waters through separate storm sewers. These pollutants include sanitary waste and materials from sewer main construction (e.g., asbestos cement, brick, cast iron, vitrified clay). Municipalities have long recognized the reverse problem of storm water infiltration into sanitary sewer collection systems; this type of infiltration often disrupts the operation of the municipal sewage treatment plant.

The improper disposal of materials is another illicit discharge-related problem that can result in contaminated discharges from separate storm sewer systems in two ways. First, materials may be disposed of directly in a catch basin or other storm water conveyance. Second, materials disposed of on the ground may either drain directly to a storm sewer or be washed into a storm sewer during a storm event. Improper disposal of materials to street catch basins and other storm sewer inlets often occurs when people mistakenly believe that disposal to such areas is an environmentally sound practice. Part of the confusion may occur because some areas are served by combined sewer systems, which are part of the sanitary sewer collection system, and people assume that materials discharged to a catch basin will reach a municipal sewage treatment plant. Materials that are commonly disposed of improperly include used motor oil; household toxic materials; radiator fluids; and litter, such as disposable cups, cans, and fast-food packages. EPA believes that there has been increasing success in addressing these problems through initiatives such as storm drain stenciling and recycling programs, including household hazardous waste special collection days.

Programs that reduce illicit discharges to separate storm sewers have improved water quality in several municipalities. For example, Michigan's Huron River Pollution Abatement Program found the elimination of illicit connections caused a measurable improvement in the water quality of the Washtenaw County storm sewers and the Huron River (Washtenaw County Statutory Drainage Board, 1987). In addition, an illicit detection and remediation program in Houston, Texas, has significantly improved the water quality of Buffalo Bayou. Houston estimated that illicit flows from 132 sources had a flow rate as high as 500 gal/min. Sources of the illicit discharges included broken and plugged sanitary sewer lines, illicit connections from sanitary lines to storm sewer lines, and floor drain connections (Glanton, T., M.T. Garrett, and B. Goloby. 1992. The Illicit Connection: Is It the Problem? Wat. Env. Tech. 4(9):63-8).

**3. Construction Site Runoff**

Storm water discharges generated during construction activities can cause an array of physical, chemical, and biological water quality impacts. Specifically, the biological, chemical, and physical integrity of the waters may become severely compromised. Water quality impairment results, in part, because a number of pollutants are preferentially absorbed onto mineral or organic particles found in fine sediment. The interconnected process of erosion (detachment of the soil particles), sediment transport, and delivery is the primary pathway for introducing key pollutants, such as nutrients (particularly phosphorus), metals, and organic compounds into aquatic systems (Novotny, V. and G. Chesters. 1989. “Delivery of Sediment and Pollutants from Nonpoint Sources: A Water Quality Perspective.” Journal of Soil and Water Conservation, 44(6):568-76). Estimates indicate that 80 percent of the phosphorus and 73 percent of the Kjeldahl nitrogen in streams is associated with eroded sediment

  

(U.S. Department of Agriculture. 1989. "The Second RCA Appraisal, Soil, Water and Related Resources on Nonfederal Land in the United States, Analysis of Condition and Trends." Cited in Fennessey, L.A.J., and A.R. Jarrett. 1994. "The Dirt in a Hole: a Review of Sedimentation Basins for Urban Areas and Construction Sites." Journal of Soil and Water Conservation, 49(4):317-23).

In watersheds experiencing intensive construction activity, the localized impacts of water quality may be severe because of high pollutant loads, primarily sediments. Siltation is the largest cause of impaired water quality in rivers and the third largest cause of impaired water quality in lakes (U.S. EPA, 1998). The 1996 305(b) report also found that construction site discharges were a source of pollution in: 6 percent of impaired rivers; 11 percent of impaired lakes, ponds, and reservoirs; and 11 percent of impaired estuaries. Introduction of coarse sediment (coarse sand or larger) or a large amount of fine sediment is also a concern because of the potential of filling lakes and reservoirs (along with the associated remediation costs for dredging), as well as clogging stream channels (e.g., Paterson, R.G., M.I. Luger, E.J. Burby, E.J. Kaiser, H.R. Malcolm, and A.C. Beard. 1993. "Costs and Benefits of Urban Erosion and Sediment Control: North Carolina Experience." Environmental Management 17(2):167-78). Large inputs of coarse sediment into ***68729** stream channels initially will reduce stream depth and minimize habitat complexity by filling in pools (U.S. EPA. 1991. Monitoring Guidelines to Evaluate Effects of Forestry Activities on Streams in the Pacific Northwest and Alaska. EPA 910/9-91-001. Seattle, WA). In addition, studies have shown that stream reaches affected by construction activities often extend well downstream of the construction site. For example, between 4.8 and 5.6 kilometers of stream below construction sites in the Patuxent River watershed were observed to be impacted by sediment inputs (Fox, H.L. 1974. "Effects of Urbanization on the Patuxent River, with Special Emphasis on Sediment Transport, Storage, and Migration." Ph.D. dissertation. Johns Hopkins University, Baltimore, MD. As Cited in Klein, R.D. 1979. "Urbanization and Stream Quality Impairment." Water Resources Bulletin 15(4): 948-63).

A primary concern at most construction sites is the erosion and transport process related to fine sediment because rain splash, rills (i.e., a channel small enough to be removed by normal agricultural practices and typically less than 1-foot deep), and sheetwash encourage the detachment and transport of this material to waterbodies (Storm Water Quality Task Force. 1993. California Storm Water Best Management Practice Handbooks—Construction Activity. Oakland, CA: Blue Print Service). Construction sites also can generate other pollutants associated with onsite wastes, such as sanitary wastes or concrete truck washout.

Although streams and rivers naturally carry sediment loads, erosion from construction sites and runoff from developed areas can elevate these loads to levels well above those in undisturbed watersheds. It is generally acknowledged that erosion rates from construction sites are much greater than from almost any other land use (Novotny, V. and H. Olem. 1994. Water Quality: Prevention, Identification, and Management of Diffuse Pollution. New York: Van Nostrand Reinhold). Results from both field studies and erosion models indicate that erosion rates from construction sites are typically an order of magnitude larger than row crops and several orders of magnitude greater than rates from well-vegetated areas, such as forests or pastures (USDA. 1970. "Controlling Erosion on Construction Sites." Agriculture Information Bulletin, Washington, DC; Meyer, L.D., W.H. Wischmeier, and W.H. Daniel. 1971. "Erosion, Runoff and Revegetation of Denuded Construction Sites." Transactions of the ASAE 14(1):138-41; Owen, O.S. 1975. Natural Resource Conservation. New York: MacMillan. As cited in Paterson, et al., 1993).

A recent review of the efficiency of sediment basins indicated that inflows from 12 construction sites had a mean TSS concentration of about 4,500 mg/L (Brown, W.E. 1997. "The Limits of Settling." Technical Note No. 83. Watershed Protection Techniques 2(3)). In Virginia, suspended sediment concentrations from housing construction sites were measured at 500-3,000 mg/L, or about 40 times larger than the concentrations from already-developed urban areas (Kuo, C.Y. 1976. "Evaluation of Sediment Yields Due to Urban Development." Bulletin No. 98. Virginia Water Resources Research Center, Virginia Polytechnic Institute and State University, Blacksburg, VA).

Similar impacts from storm water runoff have been reported in a number of other studies. For example, Daniel, et al., monitored three residential construction sites in southeastern Wisconsin and determined that annual sediment yields were more than 19 times the yields from agricultural areas (Daniel, T.C., D. McGuire, D. Stoffel, and B. Miller. 1979. "Sediment and Nutrient Yield

  

from Residential Construction Sites" Journal of Environmental Quality 8(3):304-08). Daniel, et al., identified total storm runoff, followed by peak storm runoff, as the most influential factors controlling the sediment loadings from residential construction sites. Daniel, et al., also found that suspended sediment concentrations were 15,000-20,000 mg/L in moderate events and up to 60,000 mg/L in larger events.

Wolman and Schick (Wolman, M.G. and A.P. Schick. 1967. "Effects of Construction on Fluvial Sediment, Urban and Suburban Areas of Maryland." Water Resources Research 3(2): 451-64) studied the impacts of development on fluvial systems in Maryland and determined that sediment yields in areas undergoing construction were 1.5 to 75 times greater than detected in natural or agricultural catchments. The authors summarize the potential impacts of construction on sediment yields by stating that "the equivalent of many decades of natural or even agricultural erosion may take place during a single year from areas cleared for construction" (Wolman and Schick, 1967).

A number of studies have examined the effects of road construction on erosion rates and sediment yields. A highway construction project in West Virginia disturbed only 4.2 percent of a 4.72-square-mile basin, but resulted in a three-fold increase in suspended sediment yields (Downs, S.C. and D.H. Appel. 1986. Progress Report on the Effects of Highway Construction on Suspended-Sediment Discharge in the Coal River and Trace Fork, West Virginia, 1975-81. USGS Water Resources Investigations Report 84-4275. Charlestown, WV). During the largest storm event, it was estimated that 80 percent of the sediment in the stream originated from the construction site. As is often the case, the increase in suspended sediment load could not be detected further downstream, where the drainage area was more than 50 times larger (269 square miles).

Another study evaluated the effect of 290 acres of highway construction on watersheds ranging in size from 5 to 38 square miles. Suspended sediment loads in the smallest watershed increased by 250 percent, and the estimated sediment yield from the construction area was 37 tons/acre during a 2-year period (Hainly, R.A. 1980. The Effects of Highway Construction on Sediment Discharge into Blockhouse Creek and Stream Valley Run, Pennsylvania. USGS Water Resources Investigations Report 80-68. Harrisburg, PA). A more recent study in Hawaii showed that highway construction increased suspended sediment loads by 56 to 76 percent in three small (1 to 4 square mile) basins (Hill, B.R. 1996. Streamflow and Suspended-Sediment Loads Before and During Highway Construction, North Halawa, Haiku, and Kamooalii Drainage Basins, Oahu, Hawaii, 1983-91. USGS Water Resources Investigations Report 96-4259. Honolulu, HI). A 1970 study determined that sediment yields from construction areas can be as much as 500 times the levels detected in rural areas (National Association of Counties Research Foundation. 1970. Urban Soil Erosion and Sediment Control. Water Pollution Control Research Series, Program #15030 DTL. Federal Water Quality Administration, U.S. Department of Interior. Washington, DC)

Yorke and Herb (Yorke, T.H., and W.J. Herb. 1978. Effects of Urbanization on Streamflow and Sediment Transport in the Rock Creek and Anacostia River Basins, Montgomery County, Maryland, 1962-74. USGS Professional Paper 1003, Washington, DC) evaluated nine subbasins in the Maryland portion of the Anacostia watershed for more than a decade in an effort to define the impacts of changing land use/land cover on sediment in runoff. Average annual suspended sediment yields for construction sites ranged from 7 to 100 tons/acre. Storm water discharges from construction sites that occur when the land area is disturbed (and prior to ***68730** surface stabilization) can significantly impact designated uses. Examples of designated uses include public water supply, recreation, and propagation of fish and wildlife. The siltation process described previously can threaten all three designated uses by (1) depositing high concentrations of pollutants in public water supplies; (2) decreasing the depth of a waterbody, which can reduce the volume of a reservoir or result in limited use of a water body by boaters, swimmers, and other recreational enthusiasts; and (3) directly impairing the habitat of fish and other aquatic species, which can limit their ability to reproduce.

Excess sediment can cause a number of other problems for waterbodies. It is associated with increased turbidity and reduced light penetration in the water column, as well as more long-term effects associated with habitat destruction and increased difficulty in filtering drinking water. Numerous studies have examined the effect that excess sediment has on aquatic ecosystems. For example, sediment from road construction activity in Northern Virginia reduced aquatic insect and fish communities by up to 85 percent and 40 percent, respectively (Reed, J.R. 1997. "Stream Community Responses to Road Construction Sediments."

  

Bulletin No. 97. Virginia Water Resources Research Center, Virginia Polytechnic Institute, Blacksburg, VA. As cited in Klein, R.D. 1990. A Survey of Quality of Erosion and Sediment Control and Storm Water Management in the Chesapeake Bay Watershed. Annapolis, MD: Chesapeake Bay Foundation). Other studies have shown that fine sediment (fine sand or smaller) adversely affects aquatic ecosystems by reducing light penetration, impeding sight-feeding, smothering benthic organisms, abrading gills and other sensitive structures, reducing habitat by clogging interstitial spaces within a streambed, and reducing the intergravel dissolved oxygen by reducing the permeability of the bed material (Everest, F.H., J.C. Beschta, K.V. Scrivener, J.R. Koski, J.R. Sedell, and C.J. Cederholm. 1987. "Fine Sediment and Salmonid Production: A Paradox." Streamside Management: Forestry and Fishery Interactions, Contract No. 57, Institute of Forest Resources, University of Washington, Seattle, WA). For example, 4.8 and 5.6 kilometers of stream below construction sites in the Patuxent River watershed in Maryland were found to have fine sediment amounts 15 times greater than normal (Fox, 1974. As cited in Klein, 1979). Benthic organisms in the streambed can be smothered by sediment deposits, causing changes in aquatic flora and fauna, such as fish species composition (Wolman and Schick, 1967). In addition, the primary cause of coral reef degradation in coastal areas is attributed to land disturbances and dredging activities due to urban development (Rogers, C.S. 1990. "Responses of Coral Reefs and Reef Organizations to Sedimentation." Marine Ecology Progress Series, 62:185-202).

EPA believes that the water quality impact from small construction sites is as high as or higher than the impact from larger sites on a per acre basis. The concentration of pollutants in the runoff from smaller sites is similar to the concentrations in the runoff from larger sites. The proportion of sediment that makes it from the construction site to surface waters is likely the same for larger and smaller construction sites in urban areas because the runoff from either site is usually delivered directly to the storm drain network where there is no opportunity for the sediment to be filtered out.

The expected contribution of total sediment yields from small sites depends, in part, on the extent to which erosion and sedimentation controls are being applied. Because current storm water regulations are more likely to require erosion and sedimentation controls on larger sites in urban areas, smaller construction sites that lack such programs are likely to contribute a disproportionate amount of the total sediment from construction activities (MacDonald, L.H. 1997. Technical Justification for Regulating Construction Sites 1-5 Acres in Size. Unpublished report submitted to U.S. EPA, Washington, DC). Smaller construction sites are less likely to have an effective plan to control erosion and sedimentation, are less likely to properly implement and maintain their plans, and are less likely to be inspected (Brown, W. and D. Caraco. 1997. Controlling Storm Water Runoff Discharges from Small Construction Sites: A National Review. Submitted to Office of Wastewater Management, U.S. EPA, Washington, DC., by the Center for Watershed Protection, Silver Spring, MD). The proportion of sediment that makes it from the construction site to surface waters is likely the same for larger and smaller construction sites in urban areas because the runoff from either site is usually delivered directly to the storm drain network, where there is no opportunity for the sediment to be filtered out.

To confirm its belief that sediment yields from small sites are as high as or higher than the 20 to 150 tons/acre/year measured from larger sites, EPA gave a grant to the Dane County, Wisconsin Land Conservation Department, in cooperation with the USGS, to evaluate sediment runoff from two small construction sites. The first was a 0.34 acre residential lot and the second was a 1.72 acre commercial office development. Runoff from the sites was channeled to a single discharge point for monitoring. Each site was monitored before, during, and after construction.

The Dane County study found that total solids concentrations from these small sites are similar to total solids concentrations from larger construction sites. Results show that for both of the study sites, total solids and suspended solids concentrations were significantly higher during construction than either before or after construction. For example, preconstruction total solids concentrations averaged 642 mg/L during the period when ryegrass was established, active construction total solids concentrations averaged 2,788 mg/L, and post-construction total solids concentrations averaged 132 mg/L (on a pollutant load basis, this equaled 7.4 lbs preconstruction, 35 lbs during construction, and 0.6 lbs post-construction for total solids). While this site was not properly stabilized before construction, after construction was complete and the site was stabilized, post-construction concentrations were more than 20 times less than during construction. The results were even more dramatic for the commercial site. The commercial site had one preconstruction event, which resulted in total solids concentrations of 138 mg/

  

L, while active construction averaged more than 15,000 mg/L and post-construction averaged only 200 mg/L (on a pollutant load basis, this equaled 0.3 lbs preconstruction, 490 lbs during construction, and 13.4 lbs post-construction for total solids). The active construction period resulted in more than 75 times more sediment than either before or after construction (Owens, D.W., P. Jopke, D.W. Hall, J. Balousek and A. Roa. 1999. "Soil Erosion from Small Construction Sites." Draft USGS Fact Sheet. USGS and Dane County Land Conservation Department, WI). The total solids concentrations from these small sites in Wisconsin are similar to total solids concentrations from larger construction sites. For example, a study evaluating the effects of highway construction in West Virginia found that a small storm produced a sediment concentration of 7,520 mg/L (Downs and Appel, 1986).

One important aspect of small construction sites is the number of small sites relative to larger construction sites ***68731** and total land area within the watershed. Brown and Caraco surveyed 219 local jurisdictions to assess erosion and sediment control (ESC) programs. Seventy respondents provided data on the number of ESC permits for construction sites smaller than 5 acres. In 27 cases (38 percent of the respondents), more than three-quarters of the permits were for sites smaller than 5 acres; in another 18 cases (26 percent), more than half of the permits were for sites smaller than 5 acres.

In addition, data on the total acreage disturbed by smaller construction sites have been collected recently in two States (MacDonald, 1997). The most recent and complete data set is the listing of the disturbed area for each of the 3,831 construction sites permitted in North Carolina for 1994-1995 and 1995-1996. Nearly 61 percent of the sites that were 1 acre or larger were between 1.0 and 4.9 acres in size. This proportion was consistent between years. Data showed that this range of sites accounted for 18 percent of the total area disturbed by construction. The values showed very little variation between the 2 years of data. The total disturbed area for all sites over this 2-year period was nearly 33,000 acres, or about 0.1 percent of the total area of North Carolina.

EPA estimates that construction sites disturbing greater than 5 acres disturb 2.1-million acres of land (78.1 percent of the total) while sites disturbing between 1 and 5 acres of land disturb 0.5-million acres of land (19.4 percent). The remaining sites on less than 1 acres of land disturb 0.07-million acres of land (only 2.5 percent of the total). Given the high erosion rates associated with most construction sites, small construction sites can be a significant source of water quality impairment, particularly in small watersheds that are undergoing rapid development. Exempting sites under 1 acre will exclude only about 2.5 percent of acreage from program coverage, but will exclude a far higher number of sites, approximately 25 percent.

Several studies have determined that the most effective construction runoff control programs rely on local plan review and field enforcement (Paterson, R. G. 1994. "Construction Practices: the Good, the Bad, and the Ugly." Watershed Protection Techniques 1(3)). In his review, Paterson suggests that, given the critical importance of field implementation of erosion and sediment control programs and the apparent shortcomings that exist, much more focus should be given to plan implementation.

Several commenters disputed the data presented in the proposed rule for storm water discharges from smaller construction sites. One commenter stated that EPA has not adequately explained the basis for permitting construction activity down to 1 disturbed acre. Another commenter stated that EPA did not present sufficient data on water quality impacts from construction sites disturbing less than 5 acres.

EPA believes that the data presented above sufficiently support nationwide designation of storm water discharges from construction activity disturbing more than 1 acre. Based on total disturbed land area within a watershed, the cumulative effects of numerous small construction sites can have impacts similar to those of larger sites in a particular area. In addition, waivers for storm water discharges from smaller construction activity will exclude sites not expected to impair water quality. EPA will continue to collect water quality data on construction site storm water runoff.

***C. Statutory Background***

In 1972, Congress enacted the CWA to prohibit the discharge of any pollutant to waters of the United States from a point source unless the discharge is authorized by an NPDES permit. Congress added CWA section 402(p) in 1987 to require implementation

  

of a comprehensive program for addressing storm water discharges. Section 402(p)(1) required EPA or NPDES-authorized States or Tribes to issue NPDES permits for the following five classes of storm water discharges composed entirely of storm water ("storm water discharges") specifically listed under section 402(p)(2):

(A) a discharge subject to an NPDES permit before February 4, 1987

(B) a discharge associated with industrial activity

(C) a discharge from a municipal separate storm sewer system serving a population of 250,000 or more

(D) a discharge from a municipal separate storm sewer system serving a population of 100,000 or more but less than 250,000

(E) a discharge that an NPDES permitting authority determines to be contributing to a violation of a water quality standard or a significant contributor of pollutants to the waters of the United States.

Section 402(p)(3)(A) requires storm water discharges associated with industrial activity to meet all applicable provisions of section 402 and section 301 of the CWA, including technology-based requirements and any more stringent requirements necessary to meet water quality standards. Section 402(p)(3)(B) establishes NPDES permit standards for discharges from municipal separate storm sewer systems, or MS4s. NPDES permits for discharges from MS4s (1) may be issued on a system or jurisdiction-wide basis, (2) must include a requirement to effectively prohibit non-storm water discharges into the storm sewers, and (3) must require controls to reduce pollutant discharges to the maximum extent practicable, including best management practices, and other provisions as the Administrator or the States determine to be appropriate for the control of such pollutants. At this time, EPA determines that water quality-based controls, implemented through the iterative processes described today are appropriate for the control of such pollutants and will result in reasonable further progress towards attainment of water quality standards. See sections II.L and II.H.3 of the preamble.

In CWA section 402(p)(4), Congress established statutory deadlines for the initial steps in implementing the NPDES program for storm water discharges. This section required development of NPDES permit application regulations, submission of NPDES permit applications, issuance of NPDES permits for sources identified in section 402(p)(2), and compliance with NPDES permit conditions. In addition, this section required industrial facilities and large MS4s to submit NPDES permit applications for storm water discharges by February 4, 1990. Medium MS4s were to submit NPDES permit applications by February 4, 1992. EPA and authorized NPDES States were prohibited from requiring an NPDES permit for any other storm water discharges until October 1, 1994.

Section 402(p)(5) required EPA to conduct certain studies and submit a report to Congress. This requirement is discussed in the following section.

Section 402(p)(6) requires EPA, in consultation with States and local officials, to issue regulations for the designation of additional storm water discharges to be regulated to protect water quality. It also requires EPA to extend the existing storm water program to regulate newly designated sources. At a minimum, the extension must establish (1) priorities, (2) requirements for State storm water management programs, and (3) expeditious deadlines. Section 402(p)(6) specifies that the program may include performance standards, guidelines, guidance, and management practices and treatment requirements, as ***68732** appropriate. Today's rule implements this section.

***D. EPA's Reports to Congress***

Under CWA section 402(p)(5), EPA, in consultation with the States, was required to conduct a study. The study was to identify unregulated sources of storm water discharges, determine the nature and extent of pollutants in such discharges, and establish procedures and methods to mitigate the impacts of such discharges on water quality. Section 402(p)(5) also required EPA to

  

report the results of the first two components of that study to Congress by October 1, 1988, and the final report by October 1, 1989.

In March 1995, EPA submitted to Congress a report that reviewed and analyzed the nature of storm water discharges from municipal and industrialacilities that were not already regulated under the initial NPDES regulations for storm water (U.S. Environmental Protection Agency, Office of Water. 1995. Storm Water Discharges Potentially Addressed by Phase II of the National Pollutant Discharge Elimination System Storm Water Program: Report to Congress. Washington, D.C. EPA 833-K-94-002) ("Report"). The Report also analyzed associated pollutant loadings and water quality impacts from these unregulated sources. Based on identification of unregulated municipal sources and analysis of information on impacts of storm water discharges from municipal sources, the Report recommended that the NPDES program for storm water focus on the 405 "urbanized areas" identified by the Bureau of the Census. The Report further found that a number of discharges from unregulated industrial facilities warranted further investigation to determine the need for regulation. It classified these unregulated industrial discharges in two groups: Group A and Group B. Group A comprised sources that may be considered a high priority for inclusion in the NPDES program for storm water because discharges from these sources are similar or identical to already regulated sources. These "look alike" storm water discharge sources were not covered in the initial NPDES regulations for storm water due to the language used to define "associated with industrial activity." In the initial regulations for storm water, "industrial activity" is identified using Standard Industrial Classification (SIC) codes. The use of SIC codes led to incomplete categorization of industrial activities with discharges that needed to be regulated to protect water quality. Group B consisted of 18 industrial sectors, which included sources that EPA expected to contribute to storm water contamination due to the activities conducted and pollutants anticipated onsite (e.g., vehicle maintenance, machinery and electrical repair, and intensive agricultural activities).

EPA reported on the latter component of the section 402(p)(5) study via President Clinton's Clean Water Initiative, which was released on February 1, 1994 (U.S. Environmental Protection Agency, Office of Water. 1994. President Clinton's Clean Water Initiative. Washington, D.C. EPA 800-R-94-001) ("Initiative"). The Initiative addressed a number of issues associated with NPDES requirements for storm water discharges and proposed (1) establishing a phased compliance with a water quality standards approach for discharges from municipal separate storm sewer systems with priority on controlling discharges from municipal growth and development areas, (2) clarifying that the maximum extent practicable standard should be applied in a site-specific, flexible manner, taking into account cost considerations as well as water quality effects, (3) providing an exemption from the NPDES program for storm water discharges from industrial facilities with no activities or significant materials exposed to storm water, (4) providing extensions to the statutory deadlines to complete implementation of the NPDES program for the storm water program, (5) targeting urbanized areas for the requirements in the NPDES program for storm water, and (6) providing control of discharges from inactive and abandoned mines located on Federal lands in a more targeted, flexible manner. Additionally, prior to promulgation of today's rule, section 431 of the Agency's Appropriation Act for FY 2000 (Departments of Veterans Affairs and Housing and Urban Development and Independent Agencies Appropriations Act of 2000, Public Law 106-74, section 432 (1999)) directed EPA to report on certain matters to be covered in today's rule. That report supplements the study required by CWA Section 402(p)(5). EPA is publishing the availability of that report elsewhere in this issue of the Federal Register.

Several commenters asserted that the Report to Congress is an inadequate basis for the designation and regulation of sources covered under today's final rule, specifically the nationwide designation of small municipal separate storm sewer systems within urbanized areas and construction activities disturbing between one and five acres.

EPA believes that it has developed an adequate record for today's regulation both through the Report to Congress and the Clean Water Initiative and through more recent activities, including the FACA Subcommittee process, regulatory notices and evaluation of comments, and recent research and analysis. EPA does not interpret the congressional reporting requirements of CWA section 402(p)(5) to be the sole basis for determining sources to be regulated under today's final rule.

EPA's decision to designate on a national basis small MS4s in urbanized areas is supported by studies that clearly show a direct correlation between urbanization and adverse water quality impacts from storm water discharges. (Schueler, T. 1987.

  

Controlling Urban Runoff: A Practical Manual for Planning & Designing Urban BMPs. Metropolitan Washington Council of Governments). "Urbanized areas"—within which all small MS4s would be covered—represent the most intensely developed and dense areas of the Nation. They constitute only two percent of the land area but 63 percent of the total population. See section I.B.1, Urban Development, above, for studies and assessments of the link between urban development and storm water impacts on water resources.

Commenters argued that the Report to Congress does not address storm water discharges from construction sites. They further argued that the designation of small construction sites per today's final rule goes beyond the President's 1994 Initiative because the Initiative only recommends requiring municipalities to implement a storm water management program to control unregulated storm water sources, "including discharges from construction of less than 5 acres, which are part of growth, development and significant redevelopment activities." They point out that the Initiative provides that unregulated storm water discharges not addressed through a municipal program would not be covered by the NPDES program. Commenters assert that EPA has not developed a record independent of its section 402(p)(5) studies that demonstrates the necessity of regulating under a separate NPDES permit storm water discharges from smaller construction sites "to protect water quality." EPA disagrees.

EPA evaluated the nature and extent of pollutants from construction site sources in a process that was separate and distinct from the development of the Report to Congress. Today's decision to regulate certain storm water discharges from construction sites disturbing less than 5 acres arose in part ***68733** out of the 9th Circuit remand in NRDC v. EPA, 966 F.2d 1292 (9th Cir. 1992). In that case, the court remanded portions of the Phase I storm water regulations related to discharges from construction sites. Those regulations define "storm water discharges associated with industrial activity" to include only those storm water discharges from construction sites disturbing 5 acres or more of total land area (see 40 CFR 122.26(b)(14)(x)). In its decision, the court concluded that the 5-acre threshold was improper because the Agency had failed to identify information "to support its perception that construction activities on less than 5 acres are non-industrial in nature" (966 F.2d at 1306). The court remanded the below 5 acre exemption to EPA for further proceedings (966 F.2d at 1310).

In a Federal Register notice issued on December 18, 1992, EPA noted that it did not believe that the Court's decision had the effect of automatically subjecting small construction sites to the existing application requirements and deadlines. EPA believed that additional notice and comment were necessary to clarify the status of these sites. The information received during the notice and comment process and additional research, as discussed in section I.B.3 Construction Site Runoff, formed the basis for the designation of construction activity disturbing between one and five acres on a nationwide basis. EPA's objectives in today's proposal include an effort to (1) address the 9th Circuit remand, (2) address water quality concerns associated with construction activities that disturb less than 5 acres of land, and (3) balance conflicting recommendations and concerns of stakeholders.

One commenter noted that EPA's proposal would fail to regulate industrial facilities identified as Group A and Group B in the March 1995 Report to Congress. EPA is relying on the analysis in the Report, which provided that the recommendation for coverage was meant as guidance and was not intended to be an identification of specific categories that must be regulated under Section 402(p)(6). Report to Congress, p. 4-1. The Report recognized the existence of limited data on which to base loadings estimates to support the nationwide designation of individual or categories of sources. Report to Congress, p. 4-44. Furthermore, during FACA Subcommittee discussion, EPA continued to urge stakeholders to provide further data relating to industrial and commercial storm water sources, which EPA did not receive. EPA concluded that, due to insufficient data, these sources were not appropriate for nationwide designation at this time.

***E. Industrial Facilities Owned or Operated by Small Municipalities***

Congress granted extensions to the NPDES permit application process for selected classes of storm water discharges associated with industrial activity. On December 18, 1991, Congress enacted the Intermodal Surface Transportation Efficiency Act (ISTEA), which postponed NPDES permit application deadlines for most storm water discharges associated with industrial activity at facilities that are owned or operated by small municipalities. EPA and States authorized to administer the NPDES program could not require any municipality with a population of less than 100,000 to apply for or obtain an NPDES permit for any storm water discharge associated with industrial activity prior to October 1, 1992, except for storm water discharges from

airports, power plants, or uncontrolled sanitary landfills. See 40 CFR 122.26(e)(1); 57 FR 11524, April 2, 1992 (reservation of NPDES application deadlines for ISTEA facilities).

The facilities exempted by ISTEA discharge storm water in the same manner (and are expected to use identical processes and materials) as the industrial facilities regulated under the 1990 Phase I regulations. Accordingly, these facilities pose similar water quality problems. The extended moratorium for these facilities was necessary to allow municipalities additional time to comply with NPDES requirements. The proposal for today's rule would have maintained the existing deadline for seeking coverage under an NPDES permit (August 7, 2001).

Today's rule changes the permit application deadline for such municipally owned or operated facilities discharging industrial storm water to make it consistent with the application date for small regulated MS4s. Because EPA missed its March 1999 deadline for promulgating today's rule, and the deadline for MS4s to submit permit applications has been extended to three years and 90 days from the date of this notice, the deadline for permitting ISTEA sources has been similarly extended. The permitting of these sources is discussed below in section “II.I.3. ISTEA Sources.”

***F. Related Nonpoint Source Programs***

Today's rule addresses point source discharges of storm water runoff and non-storm water discharges into MS4s. Many of these sources have been addressed by nonpoint source control programs, which are described briefly below.

In 1987, section 319 was added to the CWA to provide a framework for funding State and local efforts to address pollutants from nonpoint sources not addressed by the NPDES program. To obtain funding, States are required to submit Nonpoint Source Assessment Reports identifying State waters that, without additional control of nonpoint sources of pollution, could not reasonably be expected to attain or maintain applicable water quality standards or other goals and requirements of the CWA. States are also required to prepare and submit for EPA approval a statewide Nonpoint Source Management Program for controlling nonpoint source water pollution to navigable waters within the State and improving the quality of such waters. State program submittals must identify specific best management practices (BMPs) and measures that the State proposes to implement in the first four years after program submission to reduce pollutant loadings from identified nonpoint sources to levels required to achieve the stated water quality objectives.

State nonpoint source programs funded under section 319 can include both regulatory and nonregulatory State and local approaches. Section 319(b)(2)(B) specifies that a combination of “nonregulatory or regulatory programs for enforcement, technical assistance, financial assistance, education, training, technology transfer, and demonstration projects' may be used, as necessary, to achieve implementation of the BMPs or measures identified in the section 319 submittals.

Section 6217 of the Coastal Zone Act Reauthorization Amendments (CZARA) of 1990 provides that States with approved coastal zone management programs must develop coastal nonpoint pollution control programs and submit them to EPA and the National Oceanic and Atmospheric Administration (NOAA) for approval. Failure to submit an approvable program will result in a reduction of Federal grants under both the Coastal Zone Management Act and section 319 of the CWA.

State coastal nonpoint pollution control programs under CZARA must include enforceable policies and mechanisms that ensure implementation of the management measures throughout the coastal management area. EPA issued Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters under section 6217(g) in ***68734** January 1993. The guidance identifies management measures for five major categories of nonpoint source pollution. The management measures reflect the greatest degree of pollutant reduction that is economically achievable for each of the listed sources. These management measures provide reference standards for the States to use in developing or refining their coastal nonpoint programs. A few management measures, however, contain quantitative standards that specify pollutant loading reductions. For example, the New Development Management Measure, which is applicable to construction in urban areas, requires (1) that by design or performance the average annual total suspended solid loadings be reduced by 80 percent and (2) to the extent practicable, that the pre-development peak runoff rate and average volume be maintained.

  

EPA and NOAA published Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance (1993). The document clarifies that States generally must implement management measures for each source category identified in the EPA guidance developed under section 6217(g). Coastal Nonpoint Pollution Control Programs are not required to address sources that are clearly regulated under the NPDES program as point source discharges. Specifically, such programs would not need to address small MS4s and construction sites covered under NPDES storm water permits (both general and individual).

## II. Description of Program

### *A. Overview*

#### 1. Objectives EPA Seeks To Achieve in Today's Rule

EPA seeks to achieve several objectives in today's final rule. First, EPA is implementing the requirement under CWA section 402(p)(6) to provide a comprehensive storm water program that designates and controls additional sources of storm water discharges to protect water quality. Second, EPA is addressing storm water discharges from the activities exempted under the 1990 storm water permit application regulations that were remanded by the Ninth Circuit Court of Appeals in NRDC v. EPA, 966 F.2d 1292 (9th Circuit, 1992). These are construction activities disturbing less than 5 acres and so-called "light" industrial activities not exposed to storm water (see discussion of "no exposure" below). Third, EPA is providing coverage for the so-called "donut holes" created by the existing NPDES storm water program. Donut holes are geographic gaps in the NPDES storm water program's regulatory scheme. They are MS4s located within areas covered by the existing NPDES storm water program, but not currently addressed by the storm water program because it is based on political jurisdictions. Finally, EPA also is trying to promote watershed planning as a framework for implementing water quality programs where possible.

Although EPA had options for different approaches (see alternatives discussed in the January 9, 1998, proposed regulation), EPA believes it can best achieve its objectives through flexible innovations within the framework of the NPDES program. Unlike the interim section 402(p)(6) storm water regulations EPA promulgated in 1995, EPA no longer designates all of the unregulated storm water discharges for nationwide coverage under the NPDES program for storm water. The framework for today's final rule is one that balances automatic designation on a nationwide basis and locally-based designation and waivers. Nationwide designation applies to those classes or categories of storm water discharges that EPA believes present a high likelihood of having adverse water quality impacts, regardless of location. Specifically, today's rule designates discharges from small MS4s located in urbanized areas and storm water discharges from construction activities that result in land disturbance equal to or greater than one and less than five acres. As noted under Section I.B., Water Quality Concerns/Environmental Impact Studies and Assessments, these two categories of storm water sources, when unregulated, tend to cause significant adverse water quality impacts. Additional sources are not covered on a nationwide basis either because EPA currently lacks information indicating a consistent potential for adverse water quality impact or because EPA believes that the likelihood of adverse impacts on water quality is low, with some localized exceptions. Additional individual sources or categories of storm water discharges could, however, be covered under the program through a local designation process. A permitting authority may designate additional small MS4s after developing designation criteria and applying those criteria to small MS4s located outside of an urbanized area, in particular those with a population of 10,000 or more and a population density of at least 1,000. Exhibit 1 illustrates the designation framework for today's final rule.

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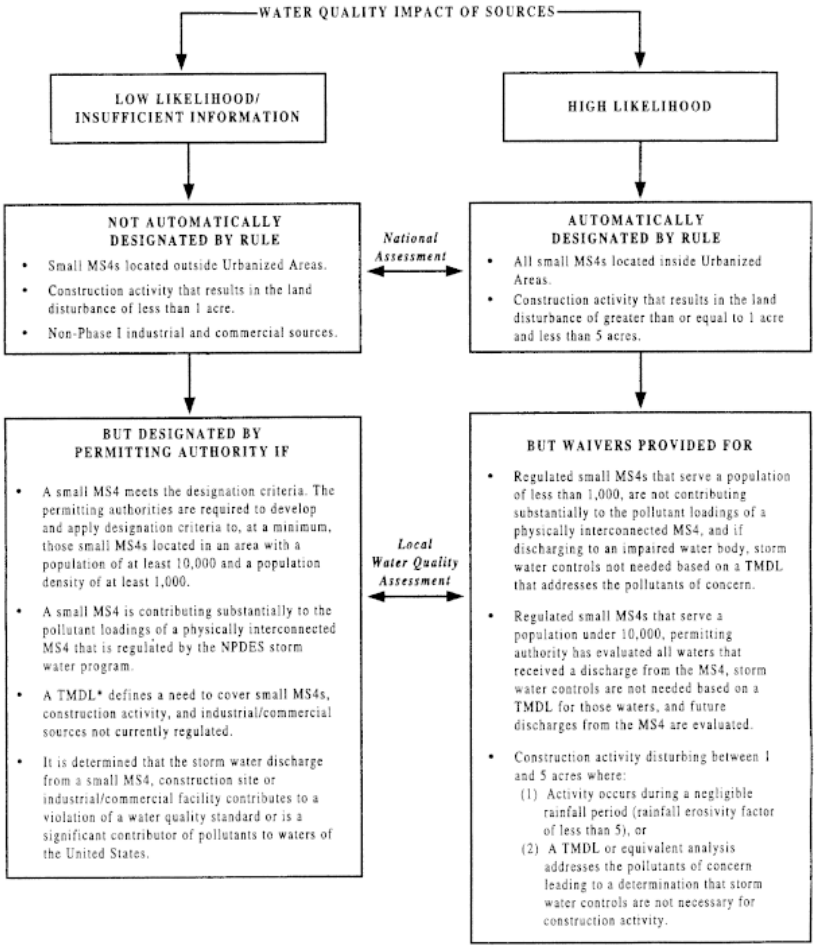
EXHIBIT 1.—PHASE II SOURCE DECISIONS




*EPA will continue to require States to comply with their Total Maximum Daily Load (TMDL) implementation schedules.

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***68736** The designation framework for today's final rule provides a significant degree of flexibility. The proposed provisions for nationwide designation of storm water discharges from construction and from small MS4s in urbanized areas allowed for a waiver of applicable requirements based on appropriate water quality conditions. Today's final rule expands and simplifies those waivers.

The permitting authority may waive the requirement for a permit for any small MS4 serving a jurisdiction with a population of less than 1,000 unless storm water controls are needed because the MS4 is contributing to a water quality impairment. The permitting authority may also waive permit coverage for MS4s serving a jurisdiction with a population of less than 10,000 if all waters that receive a discharge from the MS4 have been evaluated and discharges from the MS4 do not significantly contribute to a water quality impairment or have the potential to cause an impairment. Today's rule also allows States with a watershed permitting approach to phase in coverage for MS4s in jurisdictions with populations under 10,000.

Water quality conditions are also the basis for a waiver of requirements for storm water discharges from construction activities disturbing between one and five acres. For these small construction sources, the rule provides significant flexibility for waiving otherwise applicable regulatory requirements where a permitting authority determines, based on water quality and watershed considerations, that storm water discharge controls are not needed.

  

Coverage can be extended to municipal and construction sources outside the nationwide designated classes or categories based on watershed and case-by-case assessments. For the municipal storm water program, today's rule provides broad discretion to NPDES permitting authorities to develop and implement criteria for designating storm water discharges from small MS4s outside of urbanized areas. Other storm water discharges from unregulated industrial, commercial, and residential sources will not be subject to the NPDES permit requirements unless a permitting authority determines on a case-by-case basis (or on a categorical basis within identified geographic areas such as a State or watershed) that regulatory controls are needed to protect water quality. EPA believes that the flexibility provided in today's rule facilitates watershed planning.

**2. General Requirements for Regulated Entities Under Today's Rule**

As previously noted, today's final rule defines additional classes and categories of storm water discharges for coverage under the NPDES program. These designated dischargers are required to seek coverage under an NPDES permit. Furthermore, all NPDES-authorized States and Tribes are required to implement these provisions and make any necessary amendments to current State and Tribal NPDES regulations to ensure consistency with today's final rule. EPA remains the NPDES permitting authority for jurisdictions without NPDES authorization.

Today's final rule includes some new requirements for NPDES permitting authorities implementing the CWA section 402(p)(6) program. EPA has made a significant effort to build flexibility into the program while attempting to maintain an appropriate level of national consistency. Permitting authorities must ensure that NPDES permits issued to MS4s include the minimum control measures established under the program. Permitting authorities also have the ability to make numerous decisions including who is regulated under the program, i.e., case-by-case designations and waivers, and how responsibilities should be allocated between regulated entities.

Today's final rule extends the NPDES program to include discharges from the following: small MS4s within urbanized areas (with the exception of systems waived from the requirements by the NPDES permitting authority); other small MS4s meeting designation criteria to be established by the permitting authority; and any remaining MS4 that contributes substantially to the storm water pollutant loadings of a physically interconnected MS4 already subject to regulation under the NPDES program. Small MS4s include urban storm sewer systems owned by Tribes, States, political subdivisions of States, as well as the United States, and other systems located within an urbanized area that fall within the definition of an MS4. These include, for example, State departments of transportation (DOTs), public universities, and federal military bases.

Today's final rule requires all regulated small MS4s to develop and implement a storm water management program. Program components include, at a minimum, 6 minimum measures to address: public education and outreach; public involvement; illicit discharge detection and elimination; construction site runoff control; post-construction storm water management in new development and redevelopment; and pollution prevention and good housekeeping of municipal operations. These program components will be implemented through NPDES permits. A regulated small MS4 is required to submit to the NPDES permitting authority, either in its notice of intent (NOI) or individual permit application, the BMPs to be implemented and the measurable goals for each of the minimum control measures listed above.

The rule addresses all storm water discharges from construction site activities involving clearing, grading and excavating land equal to or greater than 1 acre and less than 5 acres, unless requirements are otherwise waived by the NPDES permitting authority. Discharges from such sites, as well as construction sites disturbing less than 1 acre of land that are designated by the permitting authority, are required to implement requirements set forth in the NPDES permit, which may reference the requirements of a qualifying local program issued to cover such discharges.

The rule also addresses certain other sources regulated under the existing NPDES program for storm water. For municipally-owned industrial sources required to be regulated under the existing NPDES storm water program but exempted from immediate compliance by the Intermodal Surface Transportation Act of 1991 (ISTEA), the rule revises the existing deadline for seeking coverage under an NPDES permit (August 7, 2001) to make it consistent with the application date for small regulated MS4s.

  

(See section I.3. below.) The rule also provides relief from NPDES storm water permitting requirements for industrial sources with no exposure of industrial materials and activities to storm water.

**3. Integration of Today's Rule With the Existing Storm Water Program**

In developing an approach for today's final rule, numerous early interested stakeholders encouraged EPA to seek opportunities to integrate, where possible, the proposed Phase II requirements with existing Phase I requirements, thus facilitating a unified storm water discharge control program. EPA believes that this objective is met by using the NPDES framework. This framework is already applied to regulated storm water discharge sources and is extended to those sources designated under today's rule. This approach facilitates program consistency, public access to information, and program oversight. ***68737**

EPA believes that today's final rule provides consistency in terms of program coverage and requirements for existing and newly designated sources. For example, the rule includes most of the municipal donut holes, those MS4s located in incorporated places, townships or towns with a population under 100,000 that are within Phase I counties. These MS4s are not addressed by the existing NPDES storm water program while MS4s in the surrounding county are currently addressed. In addition, the minimum control measures required in today's rule for regulated small MS4s are very similar to a number of the permit requirements for medium and large MS4s under the existing storm water program. Following today's rule, permit requirements for all regulated MS4s (both those under the existing program and those under today's rule) will require implementation of BMPs. Furthermore, with regard to the development of NPDES permits to protect water quality, EPA intends to apply the August 1, 1996, Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits (hereinafter, "Interim Permitting Approach") (see Section II.L.1. for further description) to all MS4s covered by the NPDES program.

EPA is applying NPDES permit requirements to construction sites below 5 acres that are similar to the existing requirements for those above 5 acres and above. In addition, today's rule allows compliance with qualifying local, Tribal, or State erosion and sediment controls to meet the erosion and sediment control requirements of the general permits for storm water discharges associated with construction, both above and below 5 acres.

**4. General Permits**

EPA recommends using general permits for all newly regulated storm water sources under today's rule. The use of general permits, instead of individual permits, reduces the administrative burden on permitting authorities, while also limiting the paperwork burden on regulated parties seeking permit authorization. Permitting authorities may, of course, require individual permits in some cases to address specific concerns, including permit non-compliance.

EPA recommends that general permits for MS4s, in particular, be issued on a watershed basis, but recognizes that each permitting authority must decide how to develop its general permit(s). Permit conditions developed to address concerns and conditions of a specific watershed could reflect a watershed plan; such permit conditions must provide for attainment of applicable water quality standards (including designated uses), allocations of pollutant loads established by a TMDL, and timing requirements for implementation of a TMDL. If the permitting authority issues a State-wide general permit, the permitting authority may include separate conditions tailored to individual watersheds or urbanized areas. Of course, for a newly regulated MS4, modification of an existing individual MS4 permit to include the newly regulated MS4 as a "limited co-permittee" also remains an option.

**5. Tool Box**

During the FACA process, many Storm Water Phase II FACA Subcommittee representatives expressed an interest, which was endorsed by the full Committee, in having EPA develop a "tool box" to assist States, Tribes, municipalities, and other parties involved in the Phase II program. EPA made a commitment to work with Storm Water Phase II FACA Subcommittee representatives in developing such a tool box, with the expectation that a tool box would facilitate implementation of the storm water program in an effective and cost-efficient manner. EPA has developed a preliminary working tool box (available on EPA's web page at www.epa.gov/owm/sw/toolbox). EPA intends to have the tool box fully developed by the time of the first

  

general permits. EPA also intends to update the tool box as resources and data become available. The tool box will include the following eight main components: fact sheets; guidances; a menu of BMPs for the six MS4 minimum measures; an information clearinghouse; training and outreach efforts; technical research; support for demonstration projects; and compliance monitoring/ assistance tools. EPA intends to issue the menu of BMPs, both structural and non-structural, by October 2000. In addition, EPA will issue by October 2000 a "model" permit and will issue by October 2001 guidance materials on the development of measurable goals for municipal programs.

In an attempt to avoid duplication, the Agency has undertaken an effort to identify and coordinate sources of information that relate to the storm water discharge control program from both inside and outside the Agency. Such information includes research and demonstration projects, grants, storm water management-related programs, and compendiums of available documents, including guidances, related directly or indirectly to the comprehensive NPDES storm water program. Based on this effort, EPA is developing a tool box containing fact sheets and guidance documents pertaining to the overall program and rule requirements (e.g., guidance on municipal and construction programs, and permitting authority guidance on designation and waiver criteria); models of current programs aimed at assisting States, Tribes, municipalities, and others in establishing programs; a comprehensive list of reference documents organized according to subject area (e.g., illicit discharges, watersheds, water quality standards attainment, funding sources, and similar types of references); educational materials; technical research data; and demonstration project results. The information collected by EPA will not only provide the background for tool box materials, but will also be made available through an information clearinghouse on the world wide web.

With assistance from EPA, the American Public Works Association (APWA) developed a workbook and series of workshops on the proposed Phase II rule. Ten workshops were held from September 1998 through May 1999. Depending on available funding, these workshops may continue after publication of today's final rule. EPA also intends to provide training to enable regional offices to educate States, Tribes, and municipalities about the storm water program and the availability of the tool box materials.

The CWA currently provides funding mechanisms to support activities related to storm water. These mechanisms will be described in the tool box. Activities funded under grant and loan programs, which could be used to assist in storm water program development, include programs in the nonpoint source area, storm water demonstration projects, source water protection and wastewater construction projects. EPA has already provided funding for numerous research efforts in these areas, including a database of BMP effectiveness studies (described below), an assessment of technologies for storm water management, a study of the effectiveness of storm water BMPs for controlling the impacts of watershed imperviousness, protocols for wet weather monitoring, development of a dynamic model for wet weather flows, and numerous outreach projects.

EPA has entered into a cooperative agreement with the Urban Water Resources Research Council of the American Society of Civil Engineers (ASCE) to develop a scientifically-based management tool for the information ***68738** needed to evaluate the effectiveness of urban storm water runoff BMPs nationwide. The long-term goal of the National Stormwater BMP Database project is to promote technical design improvements for BMPs and to better match their selection and design to the local storm water problems being addressed. The project team has collected and evaluated hundreds of existing published BMP performance studies and created a database covering about 75 test sites. The database includes detailed information on the design of each BMP and its watershed characteristics, as well as its performance. Eventually the database will include the nationwide collection of information on the characteristics of structural and non-structural BMPs, data collection efforts (e.g., sampling and flow gaging equipment), climatological characteristics, watershed characteristics, hydrologic data, and constituent data. The database will continue to grow as new BMP data become available. The initial release of the database, which includes data entry and retrieval software, is available on CD-ROM and operates on Windows (R) -compatible personal computers. The ASCE project team envisions that periodic updates to the database will be distributed through the Internet. The team is currently developing a system for Internet retrieval of selected database records, and this system is expected to be available in early 2000.

EPA and ASCE invite BMP designers, owners and operators to participate in the continuing database development effort. To make this effort successful, a large database is essential. Interested persons are encouraged to submit their BMP performance evaluation data and associated BMP watershed characteristics for potential entry into the database. The software included in

  

the CD-ROM allows data providers to enter their BMP data locally, retain and edit the data as needed, and submit them to the ASCE Database Clearinghouse when ready.

To obtain a copy of the database, please contact Jane Clary, Database Clearinghouse Manager, Wright Water Engineers, Inc., 2490 W. 26th Ave., Suite 100A, Denver, CO 80211; Phone 303-480-1700; E-mail clary@wrightwater.com.

In addition, EPA requests that researchers planning to conduct BMP performance evaluations compile and collect BMP reporting information according to the standard format developed by ASCE. The format is provided with the database software and is also available on the ASCE website at www.asce.org/peta/tech/nsbd01.html.

**6. Deadlines Established in Today's Action**

Exhibit 2 outlines the various deadlines established under today's final rule. EPA believes that the dates allow sufficient time for completion of both the NPDES permitting authority's and the permittee's program responsibilities.

**Exhibit 2-Storm Water Phase II Actions Deadlines**

| Activity | Deadline date |
|---|---|
| NPDES-authorized States modify NPDES program if no statutory change is required | 1 year from date of publication of today's rule in the Federal Register. |
| NPDES-authorized States modify NPDES program if statutory change is required | 2 years from date of publication of today's rule in the Federal Register. |
| EPA issues a menu of BMPs for regulated small MS4s | October 27, 2000 |
| ISTEA sources submit permit application | 3 years and 90 days from date of publication of today's rule in the Federal Register. |
| Permitting authority issues general permit(s) (if this type of permit coverage is selected) | 3 years from date of publication of today's rule in the Federal Register. |
| Regulated small MS4s submit permit application: | |
| a. If designated under §122.32(a)(1) unless the permitting authority has established a phasing schedule under §123.35(d)(3) | a. 3 years and 90 days from date of publication of today's rule in the Federal Register. |
| b. If designated under §122.32(a)(2) or §§122.26(a)(9)(i)(C) or (D) | b. Within 180 days of notice. |
| Storm water discharges associated with small construction activity submit permit application: | |
| a. If designated under §122.26(b)(15)(i) | a. 3 years and 90 days from date of publication of today's rule in the Federal Register |
| b. If designated under §122.26(b)(15)(ii) | b. Within 180 days of notice. |
| Permitting authority designates small MS4s under §123.35(b)(2) | 3 years from date of publication of today's rule in the Federal Register or 5 years from date of publication of today's rule in the Federal Register if a watershed plan is in place |

  

| | |
|---|---|
| Regulated small MS4s' program fully developed and implemented | Up to 5 years from date of permit issuance. |
| Reevaluation of the municipal storm water rules by EPA | 13 years from date of publication of today's rule in the Federal Register |
| Permitting authority determination on a petition | Within 180 days of receipt. |
| Non-municipal sources designated under §122.26(a)(9)(i)(C) or (D) submit permit application | Within 180 days of notice. |
| Submission of No Exposure Certification | Every 5 years. |

***B. Readable Regulations***

Today, EPA is finalizing new regulations in a "readable regulation" format. This reader-friendly, plain language approach is a departure from traditional regulatory language and should enhance the rule's readability. These plain language regulations use questions and answers, "you" to identify the person who must comply, and terms like "must" rather than "shall" to identify a mandate. This new format, which minimizes layers of subparagraphs, should also allow the reader to easily locate specific provisions of the regulation.

Some sections of today's final rule are presented in the traditional language and format because these sections amend existing regulations. The readable regulation format was not used in these existing provisions in an attempt to avoid confusion or disruption ***68739** of the readability of the existing regulations.

Most commenters supported EPA's use of plain language and agreed with EPA that the question and answer format makes the rule easier to understand. Three commenters thought that EPA should retain the traditional rule format. The June 1, 1998, Presidential memorandum directs all government agencies to write documents in plain language. Based on the majority of the comments, EPA has retained the plain language format used in the January 9, 1998, proposal in today's final rule.

The proposal to today's final rule included guidance as well as legal requirements. The word "must" indicates a requirement. Words like "should," "could," or "encourage" indicate a recommendation or guidance. In addition, the guidance was set off in parentheses to distinguish it from requirements.

EPA received numerous comments supporting the inclusion of guidance in the text of the Code of Federal Regulations (CFR), as well as comments opposing inclusion of guidance. Supporters stated that preambles and guidance documents are often not accessible when rules are implemented. Any language not included in the CFR is therefore not available when it may be most needed. Commenters that opposed including guidance in the CFR expressed the concern that any language in the rule might be interpreted as a requirement, in spite of any clarifying language. They suggested that guidance be presented in the preamble and additional guidance documents.

The majority of commenters on this issue thought that the guidance should be retained but the distinction between requirements and guidance should be better clarified. Suggestions included clarifying text, symbols, and a change from use of the word "should" to "EPA recommends" or "EPA suggests". EPA believes that it is important to include the guidance in the rule and agrees that the distinction between requirements and EPA recommendations must be very clear. In today's final rule, EPA has put the guidance in paragraphs entitled "Guidance" and replaced the word "should" with "EPA recommends." This is intended to clarify that the recommendations contained in the guidance paragraphs are not legally binding.

***C. Program Framework: NPDES Approach***

  

Today's rule regulates Phase II sources using the NPDES permit program. EPA interprets Clean Water Act section 402(p)(6) as authorizing the Agency to develop a storm water program for Phase II sources either as part of the existing NPDES permit program or as a stand alone non-NPDES program such as a self-implementing rule. Under either approach, EPA interprets section 402(p)(6) as directing EPA to publish regulations that "regulate" the remaining unregulated sources, specifically to establish requirements that are federally enforceable under the CWA. Although EPA believes that it has the discretion to not require sources regulated under CWA section 402(p)(6) to be covered by NPDES permits, the Agency has determined, for the reasons discussed below, that it is most appropriate to use NPDES permits in implementing the program to address the sources designated for regulation in today's rule.

As discussed in Section II.A, Overview, EPA sought to achieve certain goals in today's final rule. EPA believes that the NPDES program best achieves EPA's goals for today's final rule for the reasons discussed below.

Requiring Phase II sources to be covered by NPDES permits helps address the consistency problems currently caused by municipal "donut holes." Donut holes are gaps in program coverage where a small unregulated MS4 is located next to or within a regulated larger MS4 that is subject to an NPDES permit under the Phase I NPDES storm water program. The existence of such "donut holes" creates an equity problem because similar discharges may remain unregulated even though they cause or contribute to the same adverse water quality impacts. Using NPDES permits to regulate the unregulated discharges in these areas is intended to facilitate the development of a seamless regulatory program for the mitigation and control of contaminated storm water discharges in an urbanized area. For example, today's rule allows a newly regulated MS4 to join as a "limited" co-permittee with a regulated MS4 by referencing a common storm water management program. Such cooperation should be further encouraged by the fact that the minimum control measures required in today's rule for regulated small MS4s are very similar to a number of the permit requirements for medium and large MS4s under the Phase I storm water program. The minimum control measures applicable to discharges from smaller MS4s are described with slightly more generality than under the Phase I permit application regulations for larger MS4s, thus enabling maximum flexibility for operators of smaller MS4s to optimize efforts to protect water quality.

Today's rule also applies NPDES permit requirements to construction sites below 5 acres that are similar to the existing requirements for those 5 acres and above. In addition, the rule would allow compliance with qualifying local, Tribal, or State erosion and sediment controls to meet the erosion and sediment control requirements of the general permits for storm water discharges associated with construction, both above and below 5 acres.

Incorporating the CWA section 402(p)(6) program into the NPDES program capitalizes upon the existing governmental infrastructure for administration of the NPDES program. Moreover, much of the regulated community already understands the NPDES program and the way it works.

Another goal of the NPDES program approach is to provide flexibility in order to facilitate and promote watershed planning and sensitivity to local conditions. NPDES permits promote those goals in several ways. NPDES general permits may be used to cover a category of regulated sources on a watershed basis or within political boundaries. The NPDES permitting process provides a mechanism for storm water controls tailored on a case-by-case basis, where necessary. In addition, the NPDES permit requirements of a permittee may be satisfied by another cooperating entity. Finally, NPDES permits may incorporate the requirements of existing State, Tribal and local programs, thereby accommodating State and Tribes seeking to coordinate the storm water program with other programs, including those that focus on watershed-based nonpoint source regulation.

In promoting the watershed approach to program administration, EPA believes NPDES general permits can cover a category of dischargers within a defined geographic area. Areas can be defined very broadly to include political boundaries (e.g., county), watershed boundaries, or State or Tribal land.

NPDES permits generally require an application or a notice of intent(NOI) to trigger coverage. This information exchange assures communication between the permitting authority and the regulated community. This communication is critical in

  

ensuring that the regulated community is aware of the requirements and the permitting authority is aware of the potential for adverse impacts to water quality from identifiable locations. The NPDES permitting process includes the public as a valuable stakeholder and ensures ***68740** that the public is included and information is made publicly available.

Another concern for EPA and several stakeholders was that the program ensure citizen participation. The NPDES approach ensures opportunities for citizen participation throughout the permit issuance process, as well as in enforcement actions. NPDES permits are also federally enforceable under the CWA.

EPA believes that the use of NPDES permits makes a significant difference in the degree of compliance with regulations in the storm water program. The NPDES program provides for public participation in the development, enforcement and revision of storm water management programs. Citizen suit enforcement has assisted in focusing attention on adverse water quality impacts on a localized, public priority basis. Citizens frequently rely on the NPDES permitting process and the availability of NOIs to track program implementation and help them enforce regulatory requirements.

NPDES permits are also advantageous to the permittee. The NPDES permit informs the permittee about the scope of what it is expected do to be in compliance with the Clean Water Act. As explained more fully in EPA's April 1995 guidance, Policy Statement on Scope of Discharge Authorization and Shield Associated with NPDES Permits, compliance with an NPDES permit constitutes compliance with the Clean Water Act (see CWA section 402(k)). In addition, NPDES permittees are excluded from duplicative regulatory regimes under the Resource Conservation and Recovery Act and the Comprehensive Emergency Response, Compensation and Liability Act under RCRA's exclusions to the definition of “solid waste” and CERCLA's exemption for “federally permitted releases.”

EPA considered suggestions that the Agency authorize today's rule to be implemented as a self-implementing rule. This would be a regulation promulgated at the Federal, State, or Tribal level to control some or all of the storm water dischargers regulated under today's rule. Under this approach, a rule would spell out the specific requirements for dischargers and impose the restrictions and conditions that would otherwise be contained in an NPDES permit. It would be effective until modified by EPA, a State, or a Tribe, unlike an NPDES permit which cannot exceed a duration of five years. Some stakeholders believed that this approach would reduce the burden on the regulated community (e.g., by not requiring permit applications), and considerably reduce the amount of additional paperwork, staff time and accounting required to administer the proposed permit requirements.

EPA is sensitive to the interest of some stakeholders in having a streamlined program that minimizes the burden associated with permit administration and maximizes opportunities for field time spent by regulatory authorities. Key provisions in today's rule address some of these concerns by promoting a streamlined approach to permit issuance by, for example, using general permits and allowing the incorporation of existing programs. By adopting the NPDES approach rather than a self-implementing rule, today's rule also allows for consistent regulation between larger MS4s and construction sites regulated under the existing storm water management rule and smaller sources regulated under today's rule.

EPA believes that it is most appropriate to use NPDES permits to implement a program to address the sources regulated by today's rule. In addition to the reasons discussed above, NPDES permits provide a better mechanism than would a self-implementing rule for tailoring storm water controls on a case-by-case basis, where necessary. One commenter reasoned this concern could be addressed by including provisions in the regulation that allow site-specific BMPs (i.e., case-by-case permits), suggesting storm water discharges that might require site-specific BMPs can be identified during the designation process of the regulatory authority. EPA believes that, in addition to its complexity, the commenter's approach lacks the other advantages of the NPDES permitting process.

A self-implementing rule would not ensure the degree of public participation that the NPDES permit process provides for the development, enforcement and revision of the storm water management program. A self-implementing rule also might not have provided the regulated community the “permit shield” under CWA section 402(k) that is provided by an NPDES permit. Based on all these considerations, EPA declined to adopt a self-implementing rule approach and adopted the NPDES approach.

  

Some State representatives sought alternative approaches for State implementation of the storm water program for Phase II sources. These State representatives asserted that a non-NPDES alternative approach best facilitated watershed management and avoided duplication and overlapping regulations. These representatives believed the NPDES approach would undercut State programs that had developed storm water controls tailored to local watershed concerns. Finally, a number of commenters expressed the view that States implement a variety of programs not based on the CWA that are effective in controlling storm water, and that EPA should provide incentives for their implementation and improvement in performance.

Throughout the development of the rule, State representatives sought alternatives to the NPDES approach for State implementation of the storm water program for Phase II sources. Discussions focused on an approach whereby States could develop an alternative program that EPA would approve or disapprove based on identified criteria, including that the alternative non-NPDES program would result in "equivalent or better protection of water quality." The State representatives, however, were unable to propose or recommend criteria for gauging whether a program would provide equivalent protection. EPA also did not receive any suggestions for objective, workable criteria in response to the Agency's explicit request for specific criteria (by which EPA could objectively judge such programs) in the preamble to the proposed rule.

EPA evaluated several existing State initiatives to address storm water and found many cases where standards under State programs may be coordinated with the Federal storm water program. Where the NPDES permit is developed in coordination with State standards, there are opportunities to avoid duplication and overlapping requirements. Under today's rule, an NPDES permitting authority may include conditions in the NPDES permit that direct an MS4 to follow the requirements imposed under State standards, rather than the requirements of §122.34(b). This is allowed as long as the State program at a minimum imposes the relevant requirements of §122.34(b). Additional opportunities follow from other provisions in today's rule.

Seeking to further explore the feasibility of a non-NPDES approach, the Agency, after the proposal, had extensive discussions with representatives of a number of States. Discussions related specifically to possible alternatives for regulations of urban storm water discharges and MS4s specifically. The Agency also sought input on these issues from other stakeholders.

As a result of these discussions, many of the commenters provided input on issues such as: whether or not the Agency should require NPDES permits; whether location of MS4s in urbanized ***68741** areas should be the basis for designation or whether designation should be based on other determinations relating to water quality; whether States should be allowed to satisfy the conditions of the rule through the use of existing State programs; and issues concerning timing and resources for program implementation.

In response, today's rule still follows the regulatory scheme of the proposed rule, but incorporates additional flexibility to address some of the concerns raised by commenters.

In order to facilitate implementation by States that utilize a watershed permitting approach or similar approach (i.e., based on a State's unified watershed assessments), today's rule allows States to phase in coverage for MS4s in jurisdictions with a population less than 10,000. Under such an approach, States could focus their resources on a rolling basis to assist smaller MS4s in developing storm water programs.

In addition, in response to concerns that the rule should not require permit coverage for MS4s that do not significantly contribute to water quality impairments, today's rule provides options for two waivers for small MS4s. The rule allows permitting authorities to exempt from the requirement for a permit any MS4 serving a jurisdiction with a population less than 1,000, unless the State determines that the MS4 must implement storm water controls because it is significantly contributing to a water quality impairment. A second waiver option applies to MS4s serving a jurisdiction with a population less than 10,000. For those MS4s, the State must determine that discharges from the MS4 do not significantly contribute to a water quality impairment, or have the potential for such an impairment, in order to provide the exemption. The State must review this waiver on a periodic basis no less frequently than once every five years.

  

Throughout the development of today's rule, commenters questioned whether the Clean Water Act authorized the use of the NPDES permit program, pointing out that the text of CWA 402(p)(6) does not use the word “permit.” Based on the absence of the word “permit” and the express mention of State storm water management programs, the commenters asserted that Congress did not intend for Phase II sources to be regulated using NPDES permits.

EPA disagrees with the commenters' interpretation of section 402(p)(6). Section 402(p)(6) does not preclude use of permits as part of the “comprehensive program” to regulate designated sources. The language provides EPA with broad discretion in the establishment of the “comprehensive program.” Absence of the word “permit” (a term that the statute does not otherwise define) does not preclude use of a permit, which is a familiar and reasonably well understood regulatory implementation vehicle. First, section 402(p)(6) says that EPA must establish a comprehensive program that “shall, at a minimum, establish priorities, establish requirements for State stormwater management programs, and establish expeditious deadlines.” The “at a minimum” language suggests that the Agency may, and perhaps should, develop a comprehensive program that does more than merely attend to these minimum criteria. Use of the term “at a minimum” preserves for the Agency broad discretion to establish a comprehensive program that includes use of NPDES permits.

Further, in the final sentence of the section, Congress included additional language to affirm the Agency's discretion. The final sentence clarifies that the Phase II program “may include performance standards, guidelines, guidance, and management practices and treatment requirements, as appropriate.” Under existing CWA programs, performance standards, (effluent limitations) guidelines, management practices, and treatment requirements are typically implemented through NPDES or dredge and fill permits.

Although EPA believes that it had the discretion to not require permits, the Agency has determined that it is reasonable to interpret section 402(p)(6) to authorize permits. Moreover, for the reasons discussed above, the Agency believes that it is appropriate to use NPDES permits in implementing today's rule.

***D. Federal Role***

Today's final rule describes EPA's approach to expand the existing storm water program under CWA section 402(p)(6). As in all other Federal programs, the Federal government plays an integral role in complying with, developing, implementing, overseeing, and enforcing the program. This section describes EPA's role in the revised storm water program.

**1. Develop Overall Framework of the Program**

The storm water discharge control program under CWA section 402(p)(6) consists of the rule, tool box, and permits. EPA's primary role is to ensure timely development and implementation of all components. Today's rule is a refinement of the first step in developing the program. EPA is fully committed to continuing to work with involved stakeholders on developing the tool box and issuing permits. As noted in today's rule, EPA will assess the municipal storm water program based on (1) evaluations of data from the NPDES municipal storm water program, (2) research concerning water quality impacts on receiving waters from storm water, and (3) research on BMP effectiveness. (Section II.H, Municipal Role, provides a more detailed discussion of this provision.)

EPA is planning to standardize minimum requirements for construction and post-construction BMPs in a new rulemaking under Title III of the CWA. While larger construction sites are already subject to NPDES permits (and smaller sites will be subject to permits pursuant to today's rule), the permits generally do not contain specific requirements for BMP design or performance. The permits require the preparation of storm water pollution prevention plans, but actual BMP selection and design is at the discretion of permittees, in conformance with applicable State and local requirements. Where there are existing State and local requirements specific to BMPs, they vary widely, and many jurisdictions do not have such requirements.

  

In developing these regulations, EPA intends to evaluate the inclusion of design and maintenance criteria as minimum requirements for a variety of BMPs used for erosion and sediment control at construction sites, as well as for permanent BMPs used to manage post-construction storm water discharges. The Agency plans to consider the merits and performance of all appropriate management practices (both structural and non-structural) that can be used to reduce adverse water quality impacts. EPA does not intend to require the use of particular BMPs at specific sites, but plans to assist builders and developers in BMP selection by publishing data on the performance to be expected by various BMP types. EPA would like to build upon the successes of some of the effective State and local storm water programs currently in place around the country, and to establish nation-wide criteria to support builders and local jurisdictions in appropriate BMP selection.

**2. Encourage Consideration of Smart Growth Approaches**

In the proposal, EPA invited comment on possible approaches for providing ***68742** incentives for local decision making that would limit the adverse impacts of growth and development on water quality. EPA asked for comments on this "smart growth" approach.

EPA received comments on all sides of this issue. A number of commenters supported the idea of "smart growth" incentives but did not present concrete ideas. Several commenters suggested "smart growth" criteria. States that have adopted "smart growth" laws were worried that EPA's focus on urbanized areas for municipal requirements could encourage development outside of designated growth areas. Today's final rule clearly allows States to expand coverage of their municipal storm water program outside of urbanized areas. In addition, the flexibility of the six municipal minimum measures should avoid encouragement of development into rural rather than urban areas. For example, as part of the post-construction minimum measure, EPA recommends that municipalities consider policies and ordinances that encourage infill development in higher density urban areas, and areas with existing infrastructure, in order to meet the measure's intent.

EPA also received several comments expressing concern that incorporating "smart growth" incentives threatened the autonomy of local governments. One commenter was worried that "incentives" could become more onerous than the minimum measures. EPA is very aware of municipal concerns about possible federal interference with local land use planning. EPA is also cognizant of the difficulty surrounding incentives for "smart growth" activities due to these concerns. However, the Agency believes it has addressed these concerns by proposing a flexible approach and will continue to support the concept of "smart growth" by encouraging policies that limit the adverse impacts of growth and development on water quality.

**3. Provide Financial Assistance**

Although Congress has not established a fund to fully finance implementation of the proposed extension of the existing NPDES storm water program under CWA section 402(p)(6), numerous federal financing programs (administered by EPA and other federal agencies) can provide some financial assistance. The primary funding mechanism is the Clean Water State Revolving Fund (SRF) program, which provides sources of low-cost financing for a range of water quality infrastructure projects, including storm water. In addition to the SRF, federal financial assistance programs include the Water Quality Cooperative Agreements under CWA section 104(b)(3), Water Pollution Control Program grants to States under CWA section 106, and the Transportation Equity Act for the 21st Century (TEA-21) among others. In addition, Section 319 funds may be used to fund any urban storm water activities that are not specifically required by a draft or final NPDES permit. EPA will develop a list of potential funding sources as part of the tool box implementation effort. EPA anticipates that some of these programs will provide funds to help develop and, in limited circumstances, implement the CWA section 402(p)(6) storm water discharge control program.

EPA received numerous comments that requested additional funding. Congress provided one substantial new source of potential funding for transportation related storm water projects—TEA-21. The Department of Transportation has included a number of water-related provisions in its TEA-21 planning. These include Transportation Enhancements, Environmental Restoration and Pollution Abatement, and Environmental Streamlining. More information on TEA-21 is available at the following internet sites: www.fhwa.dot.gov/tea21/outreach.htm and www.tea21.org.

  

**4. Implement the Program in Jurisdictions Not Authorized To Administer the NPDES Program**

Because today's final rule uses the NPDES framework, EPA will be the NPDES permitting authority in several States, Tribal jurisdictions, and Territories. As such, EPA will have the same responsibilities as any other NPDES permitting authority—issuing permits, designating additional sources, and taking appropriate enforcement actions—and will seek to tailor the storm water discharge control program to the specific needs in that State, Tribal jurisdiction, or Territory. EPA also plans to provide support and oversight, including outreach, training, and technical assistance to the regulated communities. Section II.G. of today's preamble provides a separate discussion related to the NPDES permitting authority's responsibilities for today's final rule.

**5. Oversee State and Tribal Programs**

Under the NPDES program, EPA plays an oversight role for NPDES-approved States and Tribes. In this role, EPA and the State or Tribe work together to implement, enforce, and improve the NPDES program. Part of this oversight role includes working with States and Tribes to modify their programs where programmatic or implementation concerns impede program effectiveness. This role will be vitally important when States and Tribes make adjustments to develop, implement, and enforce today's extension of the existing NPDES storm water discharge control program. In addition, States maintain a continuing planning process (CPP) under CWA section 303(e), which EPA periodically reviews to assess the program's achievements.

In its oversight role, EPA takes action to address States and Tribes who have obtained NPDES authorization but are not fulfilling their obligations under the NPDES program. If an NPDES-authorized State or Tribe fails to implement an adequate NPDES storm water program, for example, EPA typically enters into extensive discussions to resolve outstanding issues. EPA has the authority to withdraw the entire NPDES program when resolution cannot be reached. Partial program withdrawal is not provided for under the CWA except for partial approvals.

EPA is also working with the States and Tribes to improve nonpoint source management programs and assessments to incorporate key program elements. Key nonpoint source program elements include setting short and long term goals and objectives; establishing public and private partnerships; using a balanced approach incorporating Statewide and watershed-wide abatement of existing impairments; preventing future impairments; developing processes to address both impaired and threatened waters; reviewing and upgrading all program components, including program revisions on a 5-year cycle; addressing federal land management and activities inconsistent with State programs; and managing State nonpoint source management programs effectively.

In particular, EPA works with the States and Tribes to strengthen their nonpoint source pollution programs to address all significant nonpoint sources, including agricultural sources, through the CWA section 319 program. EPA is working with other government agencies, as well as with community groups, to effect voluntary changes regarding watershed protection and reduced nonpoint source pollution.

In addition, EPA and NOAA have published programmatic and technical guidance to address coastal nonpoint source pollution. Under Section 6217 of the CZARA, States are developing and implementing coastal nonpoint pollution control programs approved by EPA and NOAA. ***68743**

**6. Comply With Applicable Requirements as a Discharger**

Today's final rule covers federally operated facilities in a variety of ways. These facilities are generally areas where people reside, such as a federal prison, hospital, or military base. It also includes federal parkways and road systems with separate storm sewer systems. Today's rule requires federal MS4s to comply with the same application deadlines that apply to regulated small MS4s generally. EPA believes that all federal MS4s serve populations of less than 100,000.

EPA received several comments that asked if individual buildings like post offices are considered to be small MS4s and thereby regulated in today's rule if they are in an urbanized area. Most of these buildings have at most a parking lot with runoff or a

storm sewer that connects with a municipality's MS4. EPA does not intend that individual federal buildings be considered to be small MS4s. This is discussed in section II.H.2.b. of today's preamble.

Federal facilities can also be included under requirements addressing storm water discharges associated with small construction activities. In any case, discharges from these facilities will need to comply with all applicable NPDES requirements and any additional water quality-related requirements imposed by a State, Tribal, or local government. Failure to comply can result in enforcement actions. Federal facilities can act as models for municipal and private sector facilities and implement or test state-of-the-art management practices and control measures.

***E. State Role***

Today's final rule sets forth an NPDES approach for implementing the extension of the existing storm water discharge control program under CWA section 402(p)(6). State assumption of the NPDES program is voluntary, consistent with the principles of federalism. Because most States are approved to implement the NPDES program, they will tailor their storm water discharge control programs to address their water quality needs and objectives. While today's rule establishes the basic framework for the section 402(p)(6) program, States as well as Tribes (see discussion in section II.F) have an important role in fine-tuning the program to address the water quality issues within their jurisdictions. The basic framework allows for adjustments based on factors that vary geographically, including climate patterns and terrain.

Where States do not have NPDES authority, they are not required to implement the storm water discharge control program, but they may still participate in water quality protection through participation in the CWA section 401 certification process (for any permits) and through development of water quality standards and TMDLs.

**1. Develop the Program**

In expanding the existing NPDES program for storm water discharges, States must evaluate whether revisions to their NPDES programs are necessary. If so, modifications must be made in accordance with §123.62. Under §123.62, States must revise their NPDES programs within 1 year, or within 2 years if statutory changes are necessary.

Some States and departments of transportation (DOTs) commented that this timeframe is too short, anticipating that the State legislative process and the modification of regulations combined would take beyond 2 years. The deadline language in §123.62 is not new language for the storm water discharge control program; it applies to all NPDES programs. EPA believes the vast majority of States will meet the deadline and will work with States in those cases where there may be difficulty meeting this deadline due to the timing of legislative sessions and the regulatory development process.

An authorized State NPDES program must meet the requirements of CWA section 402(b) and conform to the guidelines issued under CWA section 304(i)(2). Today's final rule under §123.25 adds specific cross references to the storm water discharge control program components to ensure that States adequately address these requirements.

**2. Comply With Applicable Requirements as a Discharger**

Today's final rule covers State operated separate storm sewer systems in a variety of ways. These systems generally drain areas where people reside, such as a prison, hospital, or other populated facility. These systems are included under the definition of a regulated small MS4, which specifically identifies systems operated by State departments of transportation. Alternatively, storm water discharges from State activities may be regulated under the section addressing storm water discharges associated with small construction activities. In any case, discharges from these facilities must comply with all applicable NPDES requirements. Failure to comply can result in enforcement actions. State facilities can act as models for municipal and private sector facilities and implement or test state-of-the-art management practices and control measures.

**3. Communicate With EPA**

Under approved NPDES programs, States have an ongoing obligation to share information with EPA. This dialogue is particularly important in the CWA section 402(p)(6) storm water program where these governments continue to develop a great deal of the guidance and outreach related to water quality.

***F. Tribal Role***

The proposal to today's final rule provides background information on EPA's 1984 Indian Policy and the criteria for treatment of an Indian Tribe in the same manner as a State. Today's final rule extends the existing NPDES program for storm water discharges to two types of dischargers located in Indian country. First, the final rule designates storm water discharges from any regulated small MS4, including Tribal systems. Second, the final rule regulates discharges associated with construction activity disturbing between one and five acres of land, including sites located in Indian country. Operators in each of these categories of regulated activity must apply for coverage under an NPDES permit by 3 years and 90 days from the date of publication of today's final rule. Under existing regulations, however, EPA or an authorized NPDES Tribe may require a specified storm water discharger to apply for NPDES permit coverage before this deadline based on a determination that the discharge is contributing to a violation of a water quality standard (including designated uses) or is a significant contributor of pollutants.

Under today's rule, a Tribal governmental entity may regulate storm water discharges on its reservation in two ways—as either an NPDES-authorized Tribe or as a regulated MS4. If a Tribe is authorized to operate the NPDES program, the Tribe must implement today's final rule for the NPDES program for storm water for covered dischargers located within the EPA recognized boundaries. Otherwise, EPA is generally the permitting/program authority within Indian country. Discussions about the State Role in the preceding section also apply to NPDES authorized Tribes. For additional information on the role and responsibilities of the permitting authority in the NPDES storm water program, see §123.35 (and Section II.G. of today's preamble) and § 123.25(a). ***68744**

Under today's final rule, if the Indian reservation is located entirely or partially within an "urbanized area," as defined in §122.32(a)(1), the Tribe must obtain an NPDES permit if it operates a small MS4 within the urbanized area portion. Tribal MS4s located outside an urbanized area are not automatically covered, but may be designated by EPA pursuant to §122.32(a)(2) of today's rule or may request designation as a regulated small MS4 from EPA. A Tribe that is a regulated MS4 for NPDES program purposes is required to implement the six minimum control measures to the extent allowable under Federal law.

The Tribal representative on the Storm Water Phase II FACA Subcommittee asked EPA to provide a list of the Tribes located in urbanized areas that would fall within the NPDES storm water program under today's final rule. In December 1996, EPA developed a list of federally recognized American Indian Areas located wholly or partially in Bureau of the Census-designated urbanized areas (see Appendix 1). Appendix 1 not only provides a listing of reservations and individual Tribes, but also the name of the particular urbanized area in which the reservation is located and an indication of whether the urbanized area contains a medium or large MS4 that is already covered by the existing Phase I regulations.

Some of the Tribes listed in Appendix 1 are only partially located in an urbanized area. If the Tribe's MS4 serves less than 1,000 people within an urbanized area, the permitting authority may waive the Tribe's MS4 storm water requirements if it meets the conditions of §122.32(c). EPA does not have information on the Tribal populations within the urbanized areas, so it can not identify the Tribes that are eligible for a waiver. Therefore, a Tribe that believes it qualifies for a waiver should contact its permitting authority.

***G. NPDES Permitting Authority's Role for the NPDES Storm Water Small MS4 Program***

As noted previously, the NPDES permitting authority can be EPA or an authorized State or an authorized Tribe. The following discussion describes the role of the NPDES permitting authority under today's final rule.

  

**1. Comply With Implementation Requirements**

NPDES permitting authorities must perform certain duties to implement the NPDES storm water municipal program.Section 123.35(a) of today's final rule emphasizes that permitting authorities have existing obligations under the NPDES program. Section 123.35 focuses on specific issues related to the role of the NPDES authority to support administration and implementation of the municipal storm water program under CWA section 402(p)(6).

**2. Designate Sources**

Section 123.35(b) of today's final rule addresses the requirements for the NPDES permitting authority to designate sources of storm water discharges to be regulated under §§122.32 through 122.36. NPDES permitting authorities must develop a process, as well as criteria, to designate small MS4s. They must also have the authority to designate a small MS4 if and when circumstances that support a waiver under §122.32(c) change. EPA may make designations if an NPDES-approved State or Tribe fails to do so.

NPDES permitting authorities must examine geographic jurisdictions that they believe should be included in the storm water discharge control program but are not located in an "urbanized area". Small MS4s in these areas are not designated automatically. Discharges from such areas should be brought into the program if found to have actual or potential exceedances of water quality standards, including impairment of designated uses, or other adverse impacts on water quality, as determined by local conditions or watershed and TMDL assessments. EPA's aim is to address discharges to impaired waters and to protect waters with the potential for problems. EPA encourages NPDES permitting authorities, local governments, and the interested public to work together in the context of a watershed plan to address water quality issues, including those associated with municipal storm water runoff.

EPA received comments stating that the process of developing criteria and applying it to all MS4s outside an urbanized area serving a population of 10,000 or greater and with a density of 1,000 people per square mile is too time-consuming and resource-intensive. These commenters believe that the permitting authority should decide which MS4s must be brought into the storm water discharge control program and that population and density should not be an overriding criteria. One suggested way of doing so was to only designate MS4s with demonstrated contributions to the impairment of water quality uses as shown by a TMDL. EPA disagrees with this suggestion. The TMDL process is time-consuming. MS4s outside of urbanized areas may cause water quality problems long before a TMDL is completed.

EPA believes that permitting authorities should consider the potential water quality impacts of storm water from all jurisdictions with a population of 10,000 or greater and a density of 1,000 people per square mile. EPA is using data summarized in the NURP study and in the CWA section 305(b) reports to support this approach for targeted designation outside of urbanized areas. EPA is not mandating which criteria are to be used, but has provided examples of criteria that may be useful in evaluating potential water quality impacts. EPA believes that the flexibility provided in this section of today's final rule allows the permitting authority to develop criteria and a designation process that is easy to use and protects water quality. Therefore, the provisions of § 123.35(b) remain as proposed.

**a. Develop Designation Criteria**

Under §123.35(b), the NPDES permitting authority must establish designation criteria to evaluate whether a storm water discharge results in or has the potential to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including adverse habitat and biological impacts.

EPA recommends that NPDES permitting authorities consider, in a balanced manner, certain locally-focused criteria for designating any MS4 located outside of an urbanized area on the basis of significant water quality impacts. EPA recommends consideration of criteria such as discharge to sensitive waters, high growth or growth potential, high population density, contiguity to an urbanized area, significant contribution of pollutants to waters of the United States, and ineffective control of water quality concerns by other programs. These suggested designation criteria are intended to help encourage the permitting

authority to use an objective method for identifying and designating, on a local basis, sources that adversely impact water quality. More information about these criteria and the reasons why they are suggested by EPA is included in the January 9, 1998, proposal (63 FR 1561) for today's final rule.

The suggested criteria are meant to be taken in the aggregate, with a great deal of flexibility as to how each should be weighed in order to best account for watershed and other local conditions and to allow for a more tailored case-by-case analysis. The application of criteria is meant to be geographically specific. Furthermore, each criterion does not have to be met in order for a small MS4 ***68745** to qualify for designation, nor should an MS4 necessarily be designated on the basis of one or two criteria alone.

EPA believes that the application of the recommended designation criteria provides an objective indicator of real and potential water quality impacts from urban runoff on both the local and watershed levels. EPA encourages the application of the recommended criteria in a watershed context, thereby allowing for the evaluation of the water quality impacts of the portions of a watershed outside of an urbanized area. For example, situations exist where the urbanized area represents a small portion of a degraded watershed, and the adjacent nonurbanized areas of the watershed have significant cumulative effects on the quality of the receiving waters.

EPA received numerous suggestions of additional criteria that should be added and reasons why some of the criteria in the proposal to today's final rule were not appropriate. EPA developed its suggested designation criteria based on findings of the NURP study and other studies that indicate pollutants of concern, including total suspended solids, chemical oxygen demand, and temperature. These criteria were the subject of considerable discussion by the Storm Water Phase II FACA Subcommittee. EPA developed them in response to recommendations from the subcommittee during development of the proposed rule. The listed criteria are only suggestions. Permitting authorities are required to develop their own criteria. EPA has not found any reason to change its suggested list of criteria and the suggestions remain as proposed.

**b. Apply Designation Criteria**

After customizing the designation criteria for local conditions, the permitting authority must apply such criteria, at a minimum, to any MS4 located outside of an urbanized area serving a jurisdiction with a population of at least 10,000 and a population density of 1,000 people per square mile or greater (see §123.35(b)(2)). If the NPDES permitting authority determines that an MS4 meets the criteria, the permitting authority must designate it as a regulated small MS4. This designation must occur within 3 years of publication of today's final rule. Alternatively, the NPDES authority can designate within 5 years from the date of final regulation if the designation criteria are applied on a watershed basis where a comprehensive watershed plan exists (a comprehensive watershed plan is one that includes the equivalents of TMDLs) (see §123.35(b)(3)). The extended 5 year deadline is intended to provide incentives for watershed-based designations. If an NPDES-authorized State or Tribe does not develop and apply designation criteria within this timeframe, then EPA has the opportunity to do so in lieu of the authorized State or Tribe.

NPDES permitting authorities can designate any small MS4, including one below 10,000 in population and 1,000 in density. EPA established the 10,000/1,000 threshold based on the likelihood of adverse water quality impacts at these population and density levels. In addition, the 1,000 persons per square mile threshold is consistent with both the Bureau of the Census definition of an “urbanized area” (see Section II.H.2. below) and stakeholder discussions concerning the definition of a regulated small MS4.

One commenter requested that EPA develop interim deadlines for development of designation criteria. EPA believes that the designation deadline identified in today's final rule at §123.35(b)(3) provides States and Tribes with a flexibility that allows them to develop and apply the criteria locally in a timely fashion, while at the same time establishing an expeditious deadline.

**c. Designate Physically Interconnected Small MS4s**

In addition to applying criteria on a local basis for potential designation, the NPDES permitting authority must designate any MS4 that contributes substantially to the pollutant loadings of a physically interconnected municipal separate storm sewer that

is regulated by the NPDES program for storm water discharges (see §123.35(b)(4)). To be "physically interconnected," the MS4 of one entity, including roads with drainage systems and municipal streets, is physically connected directly to the municipal separate storm sewer of another entity. This provision applies to all MS4s located outside of an urbanized area. EPA added this section in recognition of the concerns of local government stakeholders that a local government should not have to shoulder total responsibility for a storm water program when storm water discharges from another MS4 are also contributing pollutants or adversely affecting water quality. This provision also helps to provide some consistency among MS4 programs and to facilitate watershed planning in the implementation of the NPDES storm water program. EPA recommended physical interconnectedness in the existing NPDES storm water regulations as a factor for consideration in the designation of additional sources.

Today's final rule does not include interim deadlines for identifying physically interconnected MS4s. However, consistent with the deadlines identified in §123.35(b)(3) of today's final rule, EPA encourages the permitting authority to make these determinations within 3 years from the date of publication of the final rule or within 5 years if the permitting authority is implementing a comprehensive watershed plan. Alternatively, the affected jurisdiction could use the petition process under 40 CFR 122.26(f) in seeking to have the permitting authority designate the contributing jurisdiction.

Several commenters expressed concerns about who could be designated under this provision (§123.35(b)(4)). One commenter requested that the word "substantially" be deleted from the rule because they believe any MS4 that contributes at all to a physically interconnected municipal separate storm sewer should be regulated. EPA believes that the word "substantially" provides necessary flexibility to the permitting authorities. The permitting authority can decide if an MS4 is contributing discharges to another municipal separate storm sewer in a manner that requires regulation. If the operator of a regulated municipal separate storm sewer believes that some of its pollutant loadings are coming from an unregulated MS4, it can petition the permitting authority to designate the unregulated MS4 for regulation.

**d. Respond to Public Petitions for Designation**

Today's final rule reiterates the existing opportunity for the public to petition the permitting authority for designation of a point source to be regulated to protect water quality. The petition opportunity also appears in existing NPDES regulations at 40 CFR 122.26(f). Any person may petition the permitting authority to require an NPDES permit for a discharge composed entirely of storm water that contributes to a violation of a water quality standard or is a significant contributor of pollutants to the waters of the United States (see §123.32(b)). The NPDES permitting authority must make a final determination on any petition within 180 days after receiving the petition (see §123.35(c)). EPA believes that a 180 day limit balances the public's need for a timely final determination with the NPDES permitting authority's need to prioritize its workload. If an NPDES-approved State or Tribe fails to act ***68746** within the 180-day timeframe, EPA may make a determination on the petition. EPA believes that public involvement is an important component of the NPDES program for storm water and feels that this provision encourages public participation. Section II.K, Public Involvement/Public Role, further discusses this topic.

**3. Provide Waivers**

Today's rule provides two opportunities for the NPDES permitting authority to exempt certain small MS4s from the need for a permit based on water quality considerations. See §§122.32(d) and (e). The two waiver opportunities have different size thresholds and take different approaches to considering the water quality impacts of discharges from the MS4.

In the proposal, EPA requested comment on the option of waiving coverage for all MS4s with less than 1,000 people unless the permitting authority determined that the small MS4 should be regulated based on significant adverse water quality impacts. A number of commenters supported this option. They expressed concern that compliance with the rule requirements and certification of one of the waiver provisions were both costly for very small communities. They stated that the permitting authority should identify a water quality problem before requiring compliance. Today's rule essentially adopts this alternative approach for MS4s serving a population under 1,000.

  

The final rule has expanded the waiver provision that EPA proposed for small MS4s with a population less than 1,000. The proposed rule would have required a small MS4 operator to certify that storm water controls are not needed based on either wasteload allocations that are part of TMDLs that address the pollutants of concern, or a comprehensive watershed plan implemented for the waterbody that includes the equivalents of TMDLs and addresses the pollutant(s) of concern. Commenters noted that the proposed waivers would be unattainable if a TMDL or equivalent analysis was required for every pollutant that could possibly be present in any amount in discharges from an MS4 regardless of whether the pollutant is causing water quality impairment. Commenters asked that EPA identify what constitutes the "pollutant(s) of concern" for which a TMDL or its equivalent must be developed. For example, §122.30(c) indicates that the MS4 program is intended to control "sediment, suspended solids, nutrients, heavy metals, pathogens, toxins, oxygen-demanding substances, and floatables." Commenters asked whether TMDLs or equivalent analyses have to address all of these.

EPA has revised the proposed waiver in response to these concerns. Under today's rule, NPDES permitting authorities may waive the requirements of today's rule for any small MS4 with a population less than 1,000 that does not contribute substantially to the pollutant loadings of a physically interconnected MS4, unless the small MS4 discharges pollutants that have been identified as a cause of impairment of the waters to which the small MS4 discharges. If the small MS4 does discharge pollutants that have been identified as impairing the water body into which the small MS4 discharges, the NPDES permitting authority may grant a waiver only if it determines that storm water controls are not needed based on an EPA approved or established TMDL that addresses the pollutant(s) of concern.

Unlike the proposed rule, §122.32(d) does not allow the waiver for MS4s serving a population under 1,000 to be based on "the equivalent of a TMDL." Because §122.32(d) requires a pollutant specific analysis only for a pollutant that has been identified as a cause of impairment, a TMDL is required for such pollutant before the waiver may be granted. Once a pollutant has been identified as the cause of impairment of a water body, the State should develop a TMDL for that pollutant for that water body. Thus, §122.32(d) takes a different approach than that taken for the waiver in §122.32(e) for MS4s serving a population under 10,000, which can be based upon an analysis that is "the equivalent of a TMDL." This is because §122.32(d) requires an analysis to support the waiver for MS4s under 1,000 only if a waterbody to which the MS4 discharges has been identified as impaired. The §122.32(e) waiver, on the other hand, would be available for larger MS4s but only after the State affirmatively establishes lack of impairment based upon a comprehensive analysis of smaller urban waters that might not otherwise be evaluated for the purposes of CWA section 303. Since §122.32(e) requires the analysis of waters that have not been identified as impaired, an actual TMDL is not required and an analysis that is the equivalent of a TMDL can suffice to support the waiver.

Where a State is the NPDES permitting authority, the permitting authority is responsible for the development of the TMDLs as well as the assessment of the extent to which a small MS4's discharge contributes pollutants to a neighboring regulated system. In States where EPA is the permitting authority, EPA will use a State's TMDLs to determine whether storm water controls are required for the small MS4s.

The proposed rule would have required the operator of the small MS4 serving a population under 1,000 to certify that its discharge was covered under a TMDL that indicated that discharges from its particular system were not having an adverse impact on water quality (i.e., it was either not assigned wasteload allocations under TMDLs or its discharge is within an assigned allocation). Many commenters expressed concerns that MS4 operators serving less than 1,000 persons may lack the technical capacity to certify that their discharges are not contributing to adverse water quality impacts. These commenters thought that the permitting authority should make such a certification. Today's rule provides flexibility as to how the waiver is administered. Permitting authorities are ultimately responsible for granting the waiver, but are free to determine whether or not to require small MS4 operators that are seeking waivers to submit information or a written certification.

Under §122.32(e) a State may grant a waiver to an MS4 serving a population between 1,000 and 10,000 only if the State has made a comprehensive effort to ensure that the MS4 will not cause or contribute to water quality impairment. To grant a §122.32(e) waiver, the NPDES permitting authority must evaluate all waters of the U.S. that receive a discharge from the MS4 and determine that storm water controls are not needed. The permitting authority's evaluation must be based on wasteload allocations that are

  

part of an EPA approved or established TMDL or, if a TMDL has not been developed or approved, an equivalent analysis that determines sources and allocations for the pollutant(s) of concern. The pollutants of concern that the permitting authority must evaluate include biochemical oxygen demand (BOD), sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation), pathogens, oil and grease, and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the MS4. Finally, the permitting authority must have determined that future discharges from the MS4 do not have the potential to result in exceedances of water quality standards, including impairment of designated uses, or other significant ***68747** water quality impacts, including habitat and biological impacts.

Although EPA did not propose this specific approach, the Agency did request comment on whether to increase the proposed 1,000 population threshold for a waiver. The §122.32(e) waiver was developed in response to comments, including States' concerns that they needed greater flexibility to focus their efforts on MS4s that were causing water quality impairment. Several commenters thought that the threshold should be increased from 1,000 to 5,000 or 10,000. Others suggested additional ways of qualifying for a waiver for MS4s that discharge to waters that are not covered by a TMDL or watershed plan. EPA carefully considered all the options for expanding the waiver provisions and has decided to expand the waiver only in the very narrow circumstances described above where a comprehensive analysis has been undertaken to demonstrate that the MS4 is not causing water quality impairment.

The NPDES permitting authority can, at any time, mandate compliance with program requirements from a previously waived small MS4 if circumstances change. For example, a waiver can be withdrawn in circumstances where the permitting authority later determines that a waived small MS4's storm water discharge to a small stream will cause adverse impacts to water quality or significantly interfere with attainment of water quality standards. A “change in circumstances” could involve receipt of new information. Changed circumstances can also allow a regulated small MS4 operator to request a waiver at any time.

Some commenters expressed concerns about allowing any small MS4 waivers. One commenter stated that storm water pollution prevention plans are necessary to control storm water pollution and should be required from all regulated small MS4s. For the reasons stated in the Background section above, EPA agrees that the discharges from most MS4s in urbanized areas should be addressed by a storm water management program outlined in today's rule. For MS4s serving very small areas, however, the TMDL development process provides an opportunity to determine whether an MS4 serving a population less than 1,000 is having a negative impact on any receiving water that is impaired by a pollutant that the MS4 discharges. MS4s serving populations up to 10,000 may receive a waiver only if a comprehensive analysis of its impact on receiving water has been performed.

Other commenters said that waivers should not be allowed for small MS4s that discharge into another regulated MS4. These commenters stated that the word “substantially” should be removed from §122.32(d)(i) so that a waiver would not be allowed for any system “contributing to the storm water pollutant loadings of a physically interconnected regulated MS4.” As previously mentioned under the designation discussion of section II.G.2.c, EPA believes that the word “substantially” provides needed flexibility to the permitting authorities. It is important to note that this is only one aspect that the permitting authority must consider when deciding on the appropriateness of a waiver.

**4. Issue Permits**

NPDES permitting authorities have a number of responsibilities regarding the permit process. Sections 123.35(d) through (g) ensure a certain level of consistency for permits, yet provide numerous opportunities for flexibility. NPDES permitting authorities must issue NPDES permits to cover municipal sources to be regulated under §122.32, unless waived under §122.32(c). EPA encourages permitting authorities to use general permits as the vehicle for permitting and regulating small MS4s. The Agency notes, however, that some operators may wish to take advantage of the option to join as a co-permittee with an MS4 regulated under the existing NPDES storm water program.

Today's final rule includes a provision, §123.35(f), that requires NPDES permitting authorities to either include the requirements in §122.34 for NPDES permits issued for regulated small MS4s or to develop permit limits based on a permit application

submitted by a small MS4. See Section II.H.3.a, Minimum Control Measures, for more details on the actual §122.34 requirements. See Section II.H.3.c for alternative and joint permitting options.

In an attempt to avoid duplication of effort, §122.34(c) allows NPDES permitting authorities to include permit conditions that direct an MS4 to meet the requirements of a qualifying local, Tribal, or State municipal storm water management program. For a local, Tribal, or State program to "qualify," it must impose, at a minimum, the relevant requirements of §122.34(b). A regulated small MS4 must still follow the procedural requirements for an NPDES permit (i.e., submit an application, either an individual application or an NOI under a general permit) but will instead follow the substantive pollutant control requirements of the qualifying local, Tribal, or State program.

Under §122.35(b), NPDES permitting authorities may also recognize existing responsibilities among governmental entities for the minimum control measures in an NPDES small MS4 storm water permit. For example, the permit might acknowledge the existence of a State administered program that addresses construction site runoff and require that the municipalities only develop substantive controls for the remaining minimum control measures. By acknowledging existing programs, this provision is meant to reduce the duplication of efforts and to increase the flexibility of the NPDES storm water program.

Section 123.35(e) of today's final rule requires permitting authorities to specify a time period of up to 5 years from the issuance date of an NPDES permit for regulated small MS4 operators to fully develop and implement their storm water programs. As discussed more fully below, permitting authorities should be providing extensive support to the local governments to assist them in developing and implementing their programs.

In the proposed rule, EPA stated that the permitting authority would develop the menu of BMPs and if they failed to do so, EPA would develop the menu. Commenters felt that EPA should develop a menu of BMPs, rather than just providing guidance. In the settlement agreement for seeking an extension to the deadline for issuing today's rule, EPA committed to developing a menu of BMPs by October 27, 2000. Permitting authorities can adopt EPA's menu or develop their own. The menu itself is not intended to replace more comprehensive BMP guidance materials. As part of the tool box efforts, EPA will provide separate guidance documents that discuss the results from EPA-sponsored nationwide studies on the design, operation and maintenance of BMPs. Additionally, EPA expects that the new rulemaking on construction BMPs may provide more specific design, operation and maintenance criteria.

**5. Support and Oversee the Local Programs**

NPDES permitting authorities are responsible for supporting and overseeing the local municipal programs. Section 123.35(h) of today's final rule highlights issues associated with these responsibilities.

To the extent possible, NPDES permitting authorities should provide financial assistance to MS4s, which ***68748** often have limited resources, for the development and implementation of local programs. EPA recognizes that funding for programs at the State and Tribal levels may also be limited, but strongly encourages States and Tribes to provide whatever assistance is possible. In lieu of actual dollars, NPDES permitting authorities can provide cost-cutting assistance in a number of ways. For example, NPDES permitting authorities can develop outreach materials for MS4s to distribute or the NPDES permitting authority can actually distribute the materials. Another option is to implement an erosion and sediment control program across an entire State (or Tribal land), thus alleviating the need for the MS4 to implement its own program. The NPDES permitting authority must balance the need for site-specific controls, which are best handled by a local MS4, with its ability to offer financial assistance. EPA, States, Tribes, and MS4s should work as a team in making these kinds of decisions.

NPDES permitting authorities are responsible for overseeing the local programs. Permitting authorities should work with the regulated community and other stakeholders to assist in local program development and implementation. This might include sharing information, analyzing reports, and taking enforcement actions, as necessary. NPDES permitting authorities play a vital role in supporting local programs by providing technical and programmatic assistance, conducting research projects, and

monitoring watersheds. The NPDES permitting authority can also assist the MS4 permittee in obtaining adequate legal authority at the local level in order to implement the local component of the CWA section 402(p)(6) program.

NPDES permitting authorities are encouraged to coordinate and utilize the data collected under several programs. States and Tribes address point and nonpoint source storm water discharges through a variety of programs. In developing programs to carry out CWA section 402(p)(6), EPA recommends that States and Tribes coordinate all of their water pollution evaluation and control programs, including the continuing planning process under CWA section 303(e), the existing NPDES program, the CZARA program, and nonpoint source pollution control programs.

In addition, NPDES permitting authorities are encouraged to provide a brief (e.g., two-page) reporting format to facilitate compilation and analysis of data from reports submitted under §122.34(g)(3). EPA intends to develop a model form for this purpose.

### *H. Municipal Role*

#### 1. Scope of Today's Rule

Today's final rule attempts to establish an equitable and comprehensive four-pronged approach for the designation of municipal sources. First, the approach defines for automatic coverage the municipal systems believed to be of highest threat to water quality. Second, the approach designates municipal systems that meet a set of objective criteria used to measure the potential for water quality impacts. Third, the approach designates on a case-by-case basis municipal systems that "contribute substantially to the pollutant loadings of a physically-interconnected [regulated] MS4." Finally, the approach designates on a case-by-case basis, upon petition, municipal systems that "contribute to a violation of a water quality standard or are a significant contributor of pollutants."

Today's final rule automatically designates for regulation small MS4s located in urbanized areas, and requires that NPDES permitting authorities examine for potential designation, at a minimum, a particular subset of small MS4s located outside of urbanized areas. Today's rule also includes provisions that allow for waivers from the otherwise applicable requirements for the smallest MS4s that are not causing impairment of a receiving water body. Qualifications for the waivers vary depending on whether the MS4 serves a population under 1,000 or a population under 10,000. See §§122.32(d) and (e). These waivers are discussed further in section II.G.3. Any small MS4 automatically designated by the final rule or designated by the permitting authority under today's final rule is defined as a "regulated" small MS4 unless it receives a waiver.

In today's final rule, all regulated small MS4s must establish a storm water discharge control program that meets the requirements of six minimum control measures. These minimum control measures are public education and outreach on storm water impacts, public involvement participation, illicit discharge detection and elimination, construction site storm water runoff control, post-construction storm water management in new development and redevelopment, and pollution prevention/good housekeeping for municipal operations.

Today's rule allows for a great deal of flexibility in how an operator of a regulated small MS4 is authorized to discharge under an NPDES permit, by providing various options for obtaining permit coverage and satisfying the required minimum control measures. For example, the NPDES permitting authority can incorporate by reference qualifying State, Tribal, or local programs in an NPDES general permit and can recognize existing responsibilities among different governmental entities for the implementation of minimum control measures. In addition, a regulated small MS4 can participate in the storm water management program of an adjoining regulated MS4 and can arrange to have another governmental entity implement a minimum control measure on their behalf.

#### 2. Municipal Definitions

**a. Municipal Separate Storm Sewer Systems (MS4s)**

The CWA does not define the term "municipal separate storm sewer." EPA defined municipal separate storm sewer in the existing storm water permit application regulations to mean, in part, a conveyance or system of conveyances (including roads with drainage systems and municipal streets) that is "owned or operated by a State, city, town borough, county, parish, district, association, or other public body * * * designed or used for collecting or conveying storm water which is not a combined sewer and which is not part of a Publicly Owned Treatment Works as defined at 40 CFR 122.2" (see §122.26(b)(8)(i)). Section 122.26 contains definitions of medium and large municipal separate storm sewer systems but no definition of a municipal separate storm sewer system, even though the term MS4 is commonly used. In today's rule, EPA is adding a definition of municipal separate storm sewer system and small municipal separate storm sewer system along with the abbreviations MS4 and small MS4.

The existing municipal permit application regulations define "medium" and "large" MS4s as those located in an incorporated place or county with a population of at least 100,000 (medium) or 250,000 (large) as determined by the latest Decennial Census (see §§122.26(b)(4) and 122.26(b)(7)). In today's final rule, these regulations have been revised to define all medium and large MS4s as those meeting the above population thresholds according to the 1990 Decennial Census.

Today's rule also corrects the titles and contents of Appendices F, G, H,& I to Part 122. EPA is adding those incorporated places and counties whose 1990 population caused them to be defined as a "medium" or "large" MS4. All of these MS4s have applied for ***68749** permit coverage so the effect of this change to the appendices is simply to make them more accurate. They will not need to be revised again because today's rule "freezes" the definition of "medium" and "large" MS4s at those that qualify based on the 1990 census.

EPA received several comments supporting and opposing the proposal to "freeze" the definitions based on the 1990 census. Commenters who disagreed with EPA's position cited the unfairness of municipalities that reach the medium or large threshold at a later date having fewer permitting requirements compared to those that were already at the population thresholds when the existing storm water regulations took effect. EPA recognizes this disparity but does not believe it is unfair, as explained in the proposed rule. The decision was based on the fact that the deadlines from the existing regulations have lapsed, and because the permitting authority can always require more from operators of MS4s serving "newly over 100,000" populations.

**b. Small Municipal Separate Storm Sewer Systems**

The proposal to today's final rule added "the United States" as a potential owner or operator of a municipal separate storm sewer. This addition was intended to address an omission from existing regulations and to clarify that federal facilities are, in fact, covered by the NPDES program for municipal storm water discharges when the federal facility is like other regulated MS4s. EPA received a comment that this change would cause federal facilities located in Phase 1 areas to be considered Phase 1 dischargers due to the definition of medium and large MS4s. All MS4s located in Phase 1 cities or counties are defined as Phase 1 medium or large MS4s. EPA believes that all federal facilities serve a population of under 100,000 and should be regulated as small MS4s. Therefore, in §122.26(a)(16) of today's final rule, EPA is adding federal facilities to the NPDES storm water discharge control program by changing the proposed definition of small municipal separate storm sewer system. Paragraph (i) of this section restates the definition of municipal separate storm sewer with the addition of "the United States" as a owner or operator of a small municipal separate storm sewer. Paragraph (ii) repeats the proposed language that states that a small MS4 is a municipal separate storm sewer that is not medium or large.

Most commenters agreed that federal facilities should be covered in the same way as other similar MS4s. However, EPA received several comments asking whether individual federal buildings such as post offices or urban offices of the U.S. Park Service must apply for coverage as regulated small MS4s. Most of these buildings have, at most, a parking lot with runoff or a storm sewer that connects with a municipality's MS4. In §122.26(a)(16)(iii), EPA clarifies that the definition of small MS4 does not include individual buildings. These buildings may have a municipal separate storm sewer but they do not have a "system" of conveyances. The minimum measures for small MS4s were written to apply to storm sewer "systems" providing storm water

drainage service to human populations and not to individual buildings. This is true of municipal separate storm sewers from State buildings as well as from federal buildings.

There will likely be situations where the permitting authority must decide if a federal or State complex should be regulated as a small MS4. A federal complex of two or three buildings could be treated as a single building and not be required to apply for coverage. In these situations, permitting authorities will have to use their best judgment as to the nature of the complex and its storm water conveyance system. Permitting authorities should also consider whether the federal or State complex cooperates with its municipality's efforts to implement their storm water management program.

Along with the questions about individual buildings, EPA received many questions about how various provisions of the rule should be interpreted for federal and State facilities. EPA acknowledges that federal and State facilities are different from municipalities. EPA believes, however, that the minimum measures are flexible enough that they can be implemented by these facilities. As an example, DOD commenters asked about how to interpret the term “public” for military installations when implementing the public education measure. EPA agrees with the suggested interpretation of “public” for DOD facilities as “the resident and employee population within the fence line of the facility.”

EPA also received many comments from State departments of transportation (DOTs) that suggested the ways in which they are different from municipalities and should therefore be regulated differently. Storm water discharges from State DOTs in Phase 1 areas should already be regulated under Phase I. The preamble to Phase 1 clearly states that “all systems within a geographical area including highways and flood control districts will be covered.” Many permitting authorities regulated State DOTs as co-permittees with the Phase 1 municipality in which the highway is located. State DOTs that are already regulated under Phase I are not required to comply with Phase II. State DOTs that are not already regulated have various options for meeting the requirements of today's rule. These options are discussed in Section II.H.3.c.iv below. Several DOTs commented that some of the minimum measures are outside the scope of their mission or that they do not have the legal authority required for implementation. EPA believes that the flexibility of the minimum measures allows them to be implemented by most MS4s, including DOTs. When a DOT does not have the necessary legal authority, EPA encourages the DOT to coordinate their storm water management efforts with the surrounding municipalities and other State agencies. Under today's rule, DOTs can use any of the options of §122.35 to share their storm water management responsibilities. DOTs may also want to work with their permitting authority to develop a State-wide DOT storm water permit.

There are many storm water discharges from State DOTs and other State MS4s located in Phase 1 areas that were not regulated under Phase 1. Today's rule adds many more State facilities as well as all federal facilities located in urbanized areas. All of these State and federal facilities that fit the definition of a small MS4 must be covered by a storm water management program. The individual permitting authorities must decide what type of permit is most applicable.

The existing NPDES storm water program already regulates storm water from federally or State-operated industrial sources. Federal or State facilities that are currently regulated due to their industrial discharges may already be implementing some of today's rule requirements.

EPA received comments that questioned the apparent inconsistency between regulating a federal facility such as a hospital and not regulating a similar private facility. Normally, this type of private facility is regulated by the MS4. EPA believes that federal facilities are subject to local water quality regulations, including storm water requirements, by virtue of the waiver of sovereign immunity in CWA section 313. However, there are special problems faced by MS4s in their efforts to regulate federal facilities that have not been encountered in regulating ***68750** similar private facilities. To ensure comprehensive coverage, today's rule merely clarifies the need for permit coverage for these federal facilities.

i. Combined Sewer Systems (CSS). The definition of small MS4s does not include combined sewer systems. A combined sewer system is a wastewater collection system that conveys sanitary wastewater and storm water through a single set of pipes to a publicly-owned treatment works (POTW) for treatment before discharging to a receiving waterbody. During wet

  

weather events when the capacity of the combined sewer system is exceeded, the system is designed to discharge prior to the POTW treatment plant directly into a receiving waterbody. Such an overflow is a combined sewer overflow or CSO. Combined sewer systems are not subject to existing regulations for municipal storm water discharges, nor will they be subject to today's regulations. EPA addresses combined sewer systems and CSOs in the National Combined Sewer Overflow (CSO) Control Policy issued on April 19, 1994 (59 FR 18688). The CSO Control Policy contains provisions for developing appropriate, site-specific NPDES permit requirements for combined sewer systems. CSO discharges are subject to limitations based on the best available technology economically achievable for toxic pollutants and based on the best conventional pollutant control technology for conventional pollutants. MS4s are subject to a different technology standard for all pollutants, specifically to reduce pollutants to the maximum extent practicable.

Some municipalities are served by both separate storm sewer systems and combined sewer systems. If such a municipality is located within an urbanized area, only the separate storm sewer systems within that municipality is included in the NPDES storm water program and subject to today's final rule. If the municipality is not located in an urbanized area, then the NPDES permitting authority has discretion as to whether the discharges from the separate storm sewer system is subject to today's final rule. The NPDES permitting authority will use the same process to designate discharges from portions of an MS4 for permit coverage where the municipality is also served by a combined sewer system.

EPA recognizes that municipalities that have both combined and separate storm sewer systems may wish to find ways to develop a unified program to meet all wet weather water pollution control requirements more efficiently. In the proposal to today's final rule, EPA sought comment on ways to achieve such a unified program. Many municipalities that are served by CSSs and MS4s commented that it is inequitable to force them to comply with Phase II at this time because implementation of the CSO Control Policy through their NPDES permits already imposes a significant financial burden. They requested an extension of the implementation time frame. They did not provide ideas on how to unify the two programs. EPA encourages permitting authorities to work with these municipalities as they develop and begin implementation of their CSO and storm water management programs. If both sets of requirements are carefully coordinated early, a cost-effective wet weather program can be developed that will address both CSO and storm water requirements.

ii. Owners/Operators. Several commenters mentioned the difference between the existing storm water application requirement for municipal operators and the proposed municipal requirement for owners or operators to apply. They felt that this inconsistency is confusing. The preamble to the existing regulations makes numerous references to owner/operator so there was no intent to make a clear distinction between Phase I and Phase II. Section 122.21(b) states that when the owner and operator are different, the operator must obtain the permit. MS4s often have several operators. The owner may be responsible for one part of the system and a regional authority may be responsible for other aspects. EPA proposed the “owner or operator” language to convey this dual responsibility. However, when the owner is responsible for some part of a storm water management plan, it is also an operator.

EPA has revised the regulation language to clarify that “an operator” must apply for a permit. When responsibilities for the MS4 are shared, all operators must apply.

**c. Regulated Small MS4s**

In today's final rule, all small MS4s located in an urbanized area are automatically designated as “regulated” small MS4s provided that they were not previously designated into the existing storm water program. Unlike medium and large MS4s under the existing storm water regulations, not all small MS4s are designated under today's final rule. Therefore, today's rule distinguishes between “small” MS4s and “regulated small” MS4s.

EPA's definition of “regulated small MS4s” in the proposal to today's rule included mention of incorporated places and counties. Along with the definition, EPA included Appendices 6 and 7 to assist in the identification of areas that would probably require coverage as “automatically designated” (Appendix 6) or “potentially designated” (Appendix 7). The definition and the appendices raised many questions about exactly who was required to comply with the proposed requirements. Commenters

  

raised issues about the definition of "incorporated place" and the status of towns, townships, and other places that are not considered incorporated by the Census Bureau. They also asked about special districts, regional authorities, MS4s already regulated, and other questions in order to clarify the rule's coverage.

EPA has revised §122.32(a) to clarify that discharges are regulated under today's rule if they are from a small MS4 that is in an urbanized area and has not received a waiver or they are designated by the permitting authority. Today's rule does not regulate the county, city, or town. Today's rule regulates the MS4. Therefore, even though a county may be listed in Appendix 6, if that county does not own or operate the municipal storm sewer systems, the county does not have to submit an application or develop a storm water management program. If another entity does own or operate an MS4 within the county, for example, a regional utility district, that other entity needs to submit the application and develop the program.

Some commenters suggested that EPA should change the rule language to specifically allow regional authorities to be the permitted entity and to allow small MS4s to apply as co-permittees. EPA believes that the best way to clarify that regional authorities can be the primary permitted entity is the change to §122.32(a) and the explanation above. Because EPA assumes that today's regulation will be implemented through general permits, MS4s will not be co-permittees under a general permit in the same manner as under individual permits. EPA has added §122.33(a)(4) and made a minor change to §122.35(a) to clarify that small MS4s can work together to share the responsibilities of a storm water management program. This is discussed further in Section II.H.3.c.iv below.

The proposed rule stated that when a county or Federal Indian reservation is only partially included in an urbanized area, only MS4s in the urbanized portion of the county or Federal Indian reservation would be regulated. In the rare cases when an incorporated place is only partially included in the urbanized area, the entire incorporated place would be regulated. EPA received comments asking about towns and ***68751** townships, because they were not considered to be incorporated areas according to the Census Bureau's definition. Would the whole town/township be covered or only the part of the town/township in the urbanized area? States use many different types of systems in their geographical divisions. Some towns are similar to incorporated cities and others are large areas that are more similar to counties. Some commenters thought that the urbanized area boundary was arbitrary, and if part of a town or county was covered, it all should be covered. Other commenters noted that some townships and counties encompass very large areas of which only a small portion is urbanized. Due to the great variety of situations, EPA has decided that for all geographical entities, only MS4s in the urbanized area are automatically designated. The population densities associated with the Census Bureau's designation of urbanized areas provide the basis for designation of these areas to protect water quality. This focused designation provides for consistency and allows for flexibility on the part of the MS4 and the permitting authority. In those situations where an incorporated place or a town is not all in an "urbanized area", there is a good possibility that it is served by more than one MS4. In those cases where the area is served by the same MS4, it makes sense to develop a storm water program for the whole area. Permitting authorities may also decide to designate all MS4s within a county or township, if they believe it is necessary to protect water quality.

Most operators of MS4s will not need to independently determine the status of coverage under today's rule. EPA has revised the proposed Appendices 6 and 7 to include towns and townships. Therefore, these appendices will alert most MS4s as to whether they are likely to be covered under today's rule. However, each permitting authority must make the decision as to who requires coverage. Most likely, an illustrative list of the regulated areas will be published with the general permit. If not, the operator can contact its permitting authority or the Bureau of the Census to find out if their separate storm sewer systems are within an urbanized area.

i. Urbanized Area Description. Under the Bureau of the Census definition of "urbanized area," adopted by EPA for the purposes of today's final rule, "an urbanized area (UA) comprises a place and the adjacent densely settled surrounding territory that together have a minimum population of 50,000 people." The proposal to today's rule provided the full definition and case studies to help explain the census category of "urbanized area." Appendix 2 is a simplified urbanized area illustration to help demonstrate the concept of urbanized areas in relation to today's final rule. The "urbanized area" is the shaded area that includes within its boundaries incorporated places, a portion of a Federal Indian reservation, portions of two counties, an entire town,

and portions of another town. All small MS4s located in the shaded area are covered by the rule, unless and until waived by the permitting authority. Any small MS4s located outside of the shaded area are subject to potential designation by the permitting authority.

There are 405 urbanized areas in the United States that cover 2 percent of total U.S. land area and contain approximately 63 percent of the nation's population (see Appendix 3 for a listing of urbanized areas of the United States and Puerto Rico). These numbers include U.S. Territories, although Puerto Rico is the only territory to have Census-designated urbanized areas. Urbanized areas constitute the largest and most dense areas of settlement. The purpose of determining an "urbanized area" is to delineate the boundaries of development and map the actual built-up urban area. The Bureau of the Census geographers liken it to flying over an urban area and drawing a line around the boundary of the built-up area as seen from the air.

Using data from the latest decennial census, the Census Bureau applies the urbanized area definition nationwide (including U.S. Tribes and Territories) and determines which places and counties are included within each urbanized area. For each urbanized area, the Bureau provides full listings of who is included, as well as detailed maps and special CD-ROM files for use with computerized mapping systems (such as GIS). Each State's data center receives a copy of the list, and some maps, automatically. The States also have the CD-ROM files and a variety of publications available to them for reference from the Bureau of the Census. In addition, local or regional planning agencies may have urbanized area files already. New listings for urbanized areas based on the 2000 Census will be available by July/August 2001, but the more comprehensive computer files will not be available until late 2001/early 2002.

Additional designations based on subsequent census years will be governed by the Bureau of the Census' definition of an urbanized area in effect for that year. Based on historical trends, EPA expects that any area determined by the Bureau of the Census to be included within an urbanized area as of the 1990 Census will not later be excluded from the urbanized area as of the 2000 Census. However, it is important to note that even if this situation were to occur, for example, due to a possible change in the Bureau of the Census' urbanized area definition, a small MS4 that is automatically designated into the NPDES program for storm water under an urbanized area calculation for any given Census year will remain regulated regardless of the results of subsequent urbanized area calculations.

ii. Rationale for Using Urbanized Areas. EPA is using urbanized areas to automatically designate regulated small MS4s on a nationwide basis for several reasons: (1) studies and data show a high correlation between degree of development/ urbanization and adverse impacts on receiving waters due to storm water (U.S. EPA, 1983; Driver et al., 1985; Pitt, R.E. 1991. "Biological Effects of Urban Runoff Discharges." Presented at the Engineering Foundation Conference: Urban Runoff and Receiving Systems; An Interdisciplinary Analysis of Impact, Monitoring and Management, August 1991. Mt. Crested Butte, CO. American Society of Civil Engineers, New York. 1992.; Pitt, R.E. 1995. "Biological Effects of Urban Runoff Discharges," in Storm water Runoff and Receiving Systems: Impact, Monitoring, and Assessment. Lewis Publishers, New York.; Galli, J. 1990. Thermal Impacts Associated with Urbanization and Storm water Management Best Management Practices. Prepared for the Sediment and Storm water Administration of the Maryland Department of the Environment.; Klein, 1979), (2) the blanket coverage within the urbanized area encourages the watershed approach and addresses the problem of "donut-holes," where unregulated areas are surrounded by areas currently regulated (storm water discharges from donut hole areas present a problem due to their contributing uncontrolled adverse impacts on local waters, as well as by frustrating the attainment of water quality goals of neighboring regulated communities), (3) this approach targets present and future growth areas as a preventative measure to help ensure water quality protection, and (4) the determination of urbanized areas by the Bureau of the Census allows operators of small MS4s to quickly determine whether they are included in the NPDES storm water program as a regulated small MS4.

Urbanized areas have experienced significant growth over the past 50 years. According to EPA calculations ***68752** based on Census data from 1980 to 1990, the national average rate of growth in the United States during that 10-year period was more than 4 percent. For the same period, the average growth within urbanized areas was 15.7 percent and the average for outside of urbanized areas was just more than 1 percent. The new development occurring in these growing areas can provide some of the best opportunities for implementing cost-effective storm water management controls.

  

EPA received many comments on the proposal to designate discharges based on location within urbanized areas. EPA considered numerous other approaches, several of which are discussed in the proposal to today's final rule. Several commenters wanted designation to be based on proven water quality problems rather than inclusion in an urbanized area. One commenter proposed an approach based on the CWA 303(d) listing of impaired waters and the wasteload allocation conducted under the TMDL process. (See section II.L. on the section 303(d) and TMDL process). The commenter's proposal would designate small MS4s on a case-by-case basis, covering only those discharges where receiving streams are shown to have water quality problems, particularly a failure to meet water quality standards, including designated uses. The commenter further described a non-NPDES approach where a State would require cost-effective measures based on a proportionate share under a waste load allocation, equitably allocated among all pollutant contributors. These waste load allocations would be developed with input from all stakeholders, and remedial measures would be implemented in a phased manner based on the probability of results and/or economic feasibility. The States would then periodically reassess the receiving streams to determine whether the remedial measures are working, and if not, require additional control measures using the same procedure used to establish the initial measures. What the commenter describes is almost a TMDL.

EPA considered a remedial approach based on water quality impairment and rejected it for failure to prevent almost certain degradation caused by urban storm water. EPA's main concern in opting not to take a case-by-case approach to designation was that this approach would not provide controls for storm water discharges in receiving streams until after a site-specific demonstration of adverse water quality impact. The commenter's suggestion would do nothing to prevent pollution in waters that may be meeting water quality standards, including supporting designated uses. The approach would also rely on identifying storm water management programs following comprehensive watershed plans and TMDL development. In most States, water quality assessments have traditionally been conducted for principal mainstream rivers and their major tributaries, not all surface waters. The establishment of TMDLs nationwide will take many years, and many States will conduct additional monitoring to determine water quality conditions prior to establishing TMDLs. In addition, a case-by-case approach would not address the problem of “donut holes” within urbanized areas and a lack of consistency among similarly situated municipal systems would remain commonplace. After careful consideration of all comments, EPA still believes that the approach in today's rule is the most appropriate to protect water quality. Protection includes prevention as well as remediation.

**d. Municipal Designation by the Permitting Authority**

Today's final rule also allows NPDES permitting authorities to designate MS4s that should be included in the storm water program as regulated small MS4s but are not located within urbanized areas. The final rule requires, at a minimum, that a set of designation criteria be applied to all small MS4s within a jurisdiction that serves a population of at least 10,000 and has a population density of at least 1,000. Appendix 7 to this preamble provides an illustrative list of places that the Agency anticipates meet this criteria. In addition, any small MS4 may be the subject of a petition to the NPDES permitting authority for designation. See Section II.G, NPDES Permitting Authority's Role for more details on the designation and petition processes. EPA believes that the approach of combining nationwide and local designation to determine municipal coverage balances the potential for significant adverse impacts on water quality with local watershed protection and planning efforts.

**e. Waiving the Requirements for Small MS4s**

Today's final rule includes some flexibility in the nationwide coverage of all small MS4s located in urbanized areas by providing the NPDES permitting authority with the discretion to waive the otherwise applicable requirements of the smallest MS4s that are not causing the impairment of a receiving water body. Qualifications for the waiver vary depending on whether the MS4 serves a population under 1,000 or a population between 1,000 and 10,000. Note that even if a small MS4 has requirements waived, it can subsequently be brought back into the program if circumstances change. See Section II.G, NPDES Permitting Authority's Role, for more details on this process.

**3. Municipal Permit Requirements**

  

**a. Overview**

i. Summary of Permitting Options. Today's rule outlines six minimum control measures that constitute the framework for a storm water discharge control program for regulated small MS4s that, when properly implemented, will reduce pollutants to the maximum extent practicable (MEP). These six minimum control measures are specified in §122.34(b) and are discussed below in section "II.H.3.b, Program Requirements-Minimum Control Measures." All operators of regulated small MS4s are required to obtain coverage under an NPDES permit, unless the requirement is waived by the permitting authority in accordance with today's rule. Implementation of §122.34(b) may be required either through an individual permit or, if the State or EPA makes one available to the facility, through a general permit. The process for issuing and obtaining these permits is discussed below in section "II.H.3.c, Application Requirements."

As an alternative to implementing a program that complies with the requirements of §122.34, today's rule provides operators of regulated small MS4s with the option of applying for an individual permit under §122.26(d). The permit application requirements in §122.26 were originally drafted to apply to medium and large MS4s. Although EPA believes that the requirements of § 122.34 provide a regulatory option that is appropriate for most small MS4s, the operators of some small MS4s may prefer more individualized requirements. This alternative permitting option for regulated small MS4s that wish to develop their own program is discussed below in section "II.H.3.c.iii. Alternative Permit Option." The second alternative permitting option for regulated small MS4s is to become co-permittees with a medium or large MS4 regulated under § 122.26(d), as discussed below in section "II.H.3.c.v. Joint Permit Programs."

ii. Water Quality-Based Requirements. Any NPDES permit issued under today's rule must, at a minimum, require the operator to develop, implement, and ***68753** enforce a storm water management program designed to reduce the discharge of pollutants from a regulated system to the MEP, to protect water quality, and satisfy the appropriate water quality requirements of the Clean Water Act (see MEP discussion in the following section). Absent evidence to the contrary, EPA presumes that a small MS4 program that implements the six minimum measures in today's rule does not require more stringent limitations to meet water quality standards. Proper implementation of the measures will significantly improve water quality. As discussed further below, however, small MS4 permittees should modify their programs if and when available information indicates that water quality considerations warrant greater attention or prescriptiveness in specific components of the municipal program. If the program is inadequate to protect water quality, including water quality standards, then the permit will need to be modified to include any more stringent limitations necessary to protect water quality.

Regardless of the basis for the development of the effluent limitations (whether designed to implement the six minimum measures or more stringent or prescriptive limitations to protect water quality), EPA considers narrative effluent limitations requiring implementation of BMPs to be the most appropriate form of effluent limitations for MS4s. CWA section 402(p)(3)(b)(iii) expresses a preference for narrative rather than numeric effluent limits, for example, by reference to "management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." 33 U.S.C. 1342(p)(3)(B)(iii). EPA determines that pollutants from wet weather discharges are most appropriately controlled through management measures rather than end-of-pipe numeric effluent limitations. As explained in the Interim Permitting Policy for Water Quality-Based Effluent Limitations in Storm Water Permits, issued on August 1, 1996 [61 FR 43761 (November 26, 1996), EPA believes that the currently available methodology for derivation of numeric water quality-based effluent limitations is significantly complicated when applied to wet weather discharges from MS4s (compared to continuous or periodic batch discharges from most other types of discharge). Wet weather discharges from MS4s introduce a high degree of variability in the inputs to the models currently available for derivation of water quality based effluent limitations, including assumptions about instream and discharge flow rates, as well as effluent characterization. In addition, EPA anticipates that determining compliance with any such numeric limitations may be confounded by practical limitations in sample collection.

In the first two to three rounds of permit issuance, EPA envisions that a BMP-based storm water management program that implements the six minimum measures will be the extent of the NPDES permit requirements for the large majority of regulated small MS4s. Because the six measures represent a significant level of control if properly implemented, EPA anticipates that a

permit for a regulated small MS4 operator implementing BMPs to satisfy the six minimum control measures will be sufficiently stringent to protect water quality, including water quality standards, so that additional, more stringent and/or more prescriptive water quality based effluent limitations will be unnecessary.

If a small MS4 operator implements the six minimum control measures in § 122.34(b) and the discharges are determined to cause or contribute to non-attainment of an applicable water quality standard, the operator needs to expand or better tailor its BMPs within the scope of the six minimum control measures. EPA envisions that this process will occur during the first two to three permit terms. After that period, EPA will revisit today's regulations for the municipal separate storm sewer program.

If the permitting authority (rather than the regulated small MS4 operator) needs to impose additional or more specific measures to protect water quality, then that action will most likely be the result of an assessment based on a TMDL or equivalent analysis that determines sources and allocations of pollutant(s) of concern. EPA believes that the small MS4's additional requirements, if any, should be guided by its equitable share based on a variety of considerations, such as cost effectiveness, proportionate contribution of pollutants, and ability to reasonably achieve wasteload reductions. Narrative effluent limitations in the form of BMPs may still be the best means of achieving those reductions.

See Section II.L, Water Quality Issues, for further discussion of this approach to permitting, consistent with EPA's interim permitting guidance. Pursuant to CWA section 510, States implementing their own NPDES programs may develop more stringent or more prescriptive requirements than those in today's rule.

EPA's interpretation of CWA section 402(p)(3)(B)(iii) was recently reviewed by the Ninth Circuit in Defenders of Wildlife, et al v. Browner, No. 98-71080 (September 15, 1999). The Court upheld the Agency's action in issuing five MS4 permits that included water quality-based effluent limitations. The Court did, however, disagree with EPA's interpretation of the relationship between CWA sections 301 and 402(p). The Court reasoned that MS4s are not compelled by section 301(b)(1)(C) to meet all State water quality standards, but rather that the Administrator or the State may rely on section 402(p)(3)(B)(iii) to require such controls. Accordingly, the Defenders of Wildlife decision is consistent with the Agency's 1996 “Interim Permitting Policy for Water Quality-Based Effluent Limitations in Storm Water Permits.”

As noted, the 1996 Policy describes how permits would implement an iterative process using BMPs, assessment, and refocused BMPs, leading toward attainment of water quality standards. The ultimate goal of the iteration would be for water bodies to support their designated uses. EPA believes this iterative approach is consistent with and implements section 301(b)(1)(C), notwithstanding the Ninth Circuit's interpretation. As an alternative to basing these water quality-based requirements on section 301(b)(1)(C), however, EPA also believes the iterative approach toward attainment of water quality standards represents a reasonable interpretation of CWA section 402(p)(3)(B)(iii). For this reason, today's rule specifies that the “compliance target” for the design and implementation of municipal storm water control programs is “to reduce pollutants to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the CWA.” The first component, reductions to the MEP, would be realized through implementation of the six minimum measures. The second component, to protect water quality, reflects the overall design objective for municipal programs based on CWA section 402(p)(6). The third component, to implement other applicable water quality requirements of the CWA, recognizes the Agency's specific determination under CWA section 402(p)(3)(B)(iii) of the need to achieve reasonable further progress toward attainment of water quality standards according to the iterative BMP process, as well as the determination that State or EPA officials who establish TMDLs could allocate waste loads to ***68754** MS4s, as they would to other point sources.

EPA does not presume that water quality will be protected if a small MS4 elects not to implement all of the six minimum measures and instead applies for alternative permit limits under §122.26(d). Operators of such small MS4s that apply for alternative permit limits under §122.26(d) must supply additional information through individual permit applications so that the permit writer can determine whether the proposed program reduces pollutants to the MEP and whether any other provisions are appropriate to protect water quality and satisfy the appropriate water quality requirements of the Clean Water Act.

  

iii. Maximum Extent Practicable. Maximum extent practicable (MEP) is the statutory standard that establishes the level of pollutant reductions that operators of regulated MS4s must achieve. The CWA requires that NPDES permits for discharges from MS4s "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods." CWA Section 402(p)(3)(B)(iii). This section also calls for "such other provisions as the [EPA] Administrator or the State determines appropriate for the control of such pollutants." EPA interprets this standard to apply to all MS4s, including both existing regulated (large and medium) MS4s, as well as the small MS4s regulated under today's rule.

For regulated small MS4s under today's rule, authorization to discharge may be under either a general permit or individual permit, but EPA anticipates and expects that general permits will be the most common permit mechanism. The general permit will explain the steps necessary to obtain permit authorization. Compliance with the conditions of the general permit and the series of steps associated with identification and implementation of the minimum control measures will satisfy the MEP standard. Implementation of the MEP standard under today's rule will typically require the permittee to develop and implement appropriate BMPs to satisfy each of the required six minimum control measures.

In issuing the general permit, the NPDES permitting authority will establish requirements for each of the minimum control measures. Permits typically will require small MS4 permittees to identify in their NOI the BMPs to be performed and to develop the measurable goals by which implementation of the BMPs can be assessed. Upon receipt of the NOI from a small MS4 operator, the NPDES permitting authority will have the opportunity to review the NOI to verify that the identified BMPs and measurable goals are consistent with the requirement to reduce pollutants under the MEP standard, to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act. If necessary, the NPDES permitting authority may ask the permittee to revise their mix of BMPs, for example, to better reflect the MEP pollution reduction requirement. Where the NPDES permit is not written to implement the minimum control measures specified under §122.34(b), for example in the case of an individual permit under §122.33(b)(2)(ii), the MEP standard will be applied based on the best professional judgment of the permit writer.

Commenters argued that MEP is, as yet, an undefined term and that EPA needs to further clarify the MEP standards by providing a regulatory definition that includes recognition of cost considerations and technical feasibility. Commenters argued that, without a definition, the regulatory community is not adequately on notice regarding the standard with which they need to comply. EPA disagrees that affected MS4 permittees will lack notice of the applicable standard. The framework for the small MS4 permits described in this notice provides EPA's interpretation of the standard and how it should be applied.

EPA has intentionally not provided a precise definition of MEP to allow maximum flexibility in MS4 permitting. MS4s need the flexibility to optimize reductions in storm water pollutants on a location-by-location basis. EPA envisions that this evaluative process will consider such factors as conditions of receiving waters, specific local concerns, and other aspects included in a comprehensive watershed plan. Other factors may include MS4 size, climate, implementation schedules, current ability to finance the program, beneficial uses of receiving water, hydrology, geology, and capacity to perform operation and maintenance.

The pollutant reductions that represent MEP may be different for each small MS4, given the unique local hydrologic and geologic concerns that may exist and the differing possible pollutant control strategies. Therefore, each permittee will determine appropriate BMPs to satisfy each of the six minimum control measures through an evaluative process. Permit writers may evaluate small MS4 operator's proposed storm water management controls to determine whether reduction of pollutants to the MEP can be achieved with the identified BMPs.

EPA envisions application of the MEP standard as an iterative process. MEP should continually adapt to current conditions and BMP effectiveness and should strive to attain water quality standards. Successive iterations of the mix of BMPs and measurable goals will be driven by the objective of assuring maintenance of water quality standards. If, after implementing the six minimum control measures there is still water quality impairment associated with discharges from the MS4, after successive permit terms

  

the permittee will need to expand or better tailor its BMPs within the scope of the six minimum control measures for each subsequent permit. EPA envisions that this process may take two to three permit terms.

One commenter observed that MEP is not static and that if the six minimum control measures are not achieving the necessary water quality improvements, then an MS4 should be expected to revise and, if necessary, expand its program. This concept, it is argued, must be clearly part of the definition of MEP and thus incorporated into the binding and operative aspects of the rule. As is explained above, EPA believes that it is. The iterative process described above is intended to be sensitive to water quality concerns. EPA believes that today's rule contains provisions to implement an approach that is consistent with this comment.

**b. Program Requirements'Minimum Control Measures**

A regulated small MS4 operator must develop and implement a storm water management program designed to reduce the discharge of pollutants from their MS4 to protect water quality. The storm water management program must include the following six minimum measures.

i. Public Education and Outreach on Storm Water Impacts. Under today's final rule, operators of small MS4s must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps to reduce storm water pollution. The public education program should inform individuals and households about the problem and the steps they can take to reduce or prevent storm water pollution.

EPA believes that as the public gains a greater understanding of the storm water program, the MS4 is likely to gain ***68755** more support for the program (including funding initiatives). In addition, compliance with the program will probably be greater if the public understands the personal responsibilities expected of them. Well-informed citizens can act as formal or informal educators to further disseminate information and gather support for the program, thus easing the burden on the municipalities to perform all educational activities.

MS4s are encouraged to enter into partnerships with their States in fulfilling the public education requirement. It may be more cost-effective to utilize a State education program instead of numerous MS4s developing their own programs. MS4 operators are also encouraged to work with other organizations (e.g., environmental, nonprofit and industry organizations) that might be able to assist in fulfilling this requirement.

The public education program should be tailored, using a mix of locally appropriate strategies, to target specific audiences and communities (particularly minority and disadvantaged communities). Examples of strategies include distributing brochures or fact sheets, sponsoring speaking engagements before community groups, providing public service announcements, implementing educational programs targeted at school age children, and conducting community-based projects such as storm drain stenciling, and watershed and beach cleanups. Operators of MS4s may use storm water educational information provided by the State, Tribe, EPA, or environmental, public interest, trade organizations, or other MS4s. Examples of successful public education efforts concerning polluted runoff can be found in many State nonpoint source pollution control programs under CWA section 319.

The public education program should inform individuals and households about steps they can take to reduce storm water pollution, such as ensuring proper septic system maintenance, ensuring the use and disposal of landscape and garden chemicals including fertilizers and pesticides, protecting and restoring riparian vegetation, and properly disposing of used motor oil or household hazardous wastes. Additionally, the program could inform individuals and groups on how to become involved in local stream and beach restoration activities as well as activities coordinated by youth service and conservation corps and other citizen groups. Finally, materials or outreach programs should be directed toward targeted groups of commercial, industrial, and institutional entities likely to have significant storm water impacts. For example, MS4 operators should provide information to restaurants on the impact of grease clogging storm drains and to auto garages on the impacts of used oil discharges.

  

EPA received comments from representatives of State DOTs and U.S. Department of Defense (DOD) installations seeking exemption from the public education requirement. While today's rule does not exempt DOTs and military bases from the user education requirement, the Agency believes the flexibility inherent in the Rule addresses many of the concerns expressed by these commenters.

Certain DOT representatives commented that if their agencies were not exempt from the user education measure's requirements, they should at least be allowed to count DOT employee education as an adequate substitute. EPA supports the use of existing materials and programs, granted such materials and programs meet the rule's requirement that the MS4 user community (i.e., the public) is also educated concerning the impacts of storm water discharges on water bodies and the steps to reduce storm water pollution.

Finally, certain DOD representatives requested that “public,” as applied to their installations, be defined as the resident and employee populations within the fence line of the facility. EPA agrees that the education effort should be directed toward those individuals who frequent the federally owned land (i.e., residents and individuals who come there to work and use the MS4 facilities).

EPA also received a number of comments from municipalities stating that education would be more thorough and cost effective if accomplished by EPA on the national level. EPA believes that a collaborative State and local approach, in conjunction with significant EPA technical support, will best meet the goal of targeting, and reaching, specific local audiences. EPA technical support will include a tool box which will contain fact sheets, guidance documents, an information clearinghouse, and training and outreach efforts.

Finally, EPA received comments expressing concern that the public education program simply encourages the distribution of printed material. EPA is sensitive to this concern. Upon evaluation, the Agency made changes to the proposal's language for today's rule. The language has been changed to reflect EPA's belief that a successful program is one that includes a variety of strategies locally designed to reach specific audiences.

ii. Public Involvement/Participation. Public involvement is an integral part of the small MS4 storm water program. Accordingly, today's final rule requires that the municipal storm water management program must comply with applicable State and local public notice requirements. Section 122.34(b)(2) recommends a public participation process with efforts to reach out and engage all economic and ethnic groups. EPA believes there are two important reasons why the public should be allowed and encouraged to provide valuable input and assistance to the MS4's program.

First, early and frequent public involvement can shorten implementation schedules and broaden public support for a program. Opportunities for members of the public to participate in program development and implementation could include serving as citizen representatives on a local storm water management panel, attending public hearings, working as citizen volunteers to educate other individuals about the program, assisting in program coordination with other pre-existing programs, or participating in volunteer monitoring efforts. Moreover, members of the public may be less likely to raise legal challenges to a MS4's storm water program if they have been involved in the decision making process and program development and, therefore, internalize personal responsibility for the program themselves.

Second, public participation is likely to ensure a more successful storm water program by providing valuable expertise and a conduit to other programs and governments. This is particularly important if the MS4's storm water program is to be implemented on a watershed basis. Interested stakeholders may offer to volunteer in the implementation of all aspects of the program, thus conserving limited municipal resources.

EPA recognizes that there are a number of challenges associated with public involvement. One challenge is in engaging people in the public meeting and program design process. Another challenge is addressing conflicting viewpoints. Nevertheless, EPA

strongly believes that these challenges can be addressed by use of an aggressive and inclusive program. Section II.K. provides further discussion on public involvement.

A number of municipalities sought clarification from EPA concerning what the public participation program must ***68756** actually include. In response, the actual requirements are minimal, but the Agency's recommendations are more comprehensive. The public participation program must only comply with applicable State and local public notice requirements. The remainder of the preamble, as well as the Explanatory Note accompanying the regulatory text, provide guidance to the MS4s concerning what elements a successful and inclusive program should include. EPA will provide technical support as part of the tool box (i.e., providing model public involvement programs, conducting public workshops, etc.) to assist MS4 operators meet the intent of this measure.

Finally, the Agency encourages MS4s to seek public participation prior to submitting an NOI. For example, public participation at this stage will allow the MS4 to involve the public in developing the BMPs and measurable goals for their NOI.

iii. Illicit Discharge Detection and Elimination. Discharges from small MS4s often include wastes and wastewater from non-storm water "illicit" discharges. Illicit discharge is defined at 40 CFR 122.26(b)(2) as any discharge to a municipal separate storm sewer that is not composed entirely of storm water, except discharges pursuant to an NPDES permit and discharges resulting from fire fighting activities. As detailed below, other sources of non-storm water, that would otherwise be considered illicit discharges, do not need to be addressed unless the operator of the MS4 identifies one or more of them as a significant source of pollutants into the system. EPA's Nationwide Urban Runoff Program (NURP) indicated that many storm water outfalls still discharge during substantial dry periods. Pollutant levels in these dry weather flows were shown to be high enough to significantly degrade receiving water quality. Results from a 1987 study conducted in Sacramento, California, revealed that slightly less than one-half of the water discharged from a municipal separate storm sewer system was not directly attributable to precipitation runoff (U.S. Environmental Protection Agency, Office of Research and Development. 1993. Investigation of Inappropriate Pollutant Entries Into Storm Drainage Systems—A User's Guide. Washington, DC EPA 600/R-92/238.) A significant portion of these dry weather flows results from illicit and/or inappropriate discharges and connections to the municipal separate storm sewer system. Illicit discharges enter the system through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the storm drain system or spills collected by drain inlets).

Under the existing NPDES program for storm water, permit applications for large and medium MS4s are to include a program description for effective prohibition against non-storm water discharges into their storm sewers (see 40 CFR 122.26 (d)(1)(v)(B) and (d)(1)(iv)(B)). Further, EPA believes that in implementing municipal storm water management plans under these permits, large and medium MS4 operators generally found their illicit discharge detection and elimination programs to be cost-effective. Properly implemented programs also significantly improved water quality.

In today's rule, any NPDES permit issued to an operator of a regulated small MS4 must, at a minimum, require the operator to develop, implement and enforce an illicit discharge detection and elimination program. Inclusion of this measure for regulated small MS4s is consistent with the "effective prohibition" requirement for large and medium MS4s. Under today's rule, the NPDES permit will require the operator of a regulated small MS4 to: (1) Develop (if not already completed) a storm sewer system map showing the location of all outfalls, and names and location of all waters of the United States that receive discharges from those outfalls; (2) to the extent allowable under State, Tribal, or local law, effectively prohibit through ordinance, or other regulatory mechanism, illicit discharges into the separate storm sewer system and implement appropriate enforcement procedures and actions as needed; (3) develop and implement a plan to detect and address illicit discharges, including illegal dumping, to the system; and (4) inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.

The illicit discharge and elimination program need only address the following categories of non-storm water discharges if the operator of the small MS4 identifies them as significant contributors of pollutants to its small MS4: water line flushing,

  

landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water (discharges or flows from fire fighting activities are excluded from the definition of illicit discharge and only need to be addressed where they are identified as significant sources of pollutants to waters of the United States). If the operator of the MS4 identifies one or more of these categories of sources to be a significant contributor of pollutants to the system, it could require specific controls for that category of discharge or prohibit the discharges completely.

Several comments were received on the mapping requirements of the proposal. Most comments said that more flexibility should be given to the MS4s to determine their mapping needs, and that resources could be better spent in addressing problems once the illicit discharges are detected. EPA reviewed the mapping requirements in the proposed rule and agrees that some of the information is not necessary in order to begin an illicit discharge detection and elimination program. Today's rule requires a map or set of maps that show the locations of all outfalls and names and locations of receiving waters. Knowing the locations of outfalls and receiving waters are necessary to be able to conduct dry weather field screening for non-storm water flows and to respond to illicit discharge reports from the public. EPA recommends that the operator collect any existing information on outfall locations (e.g., review city records, drainage maps, storm drain maps), and then conduct field surveys to verify the locations. It will probably be necessary to "walk" (i.e. wade small receiving waters or use a boat for larger receiving waters) the streambanks and shorelines, and it may take more than one trip to locate all outfalls. A coding system should be used to mark and identify each outfall. MS4 operators have the flexibility to determine the type (e.g. topographic, GIS, hand or computer drafted) and size of maps which best meet their needs. The map scale should be such that the outfalls can be accurately located. Once an illicit discharge is detected at an outfall, it may be necessary to map that portion of the storm sewer system leading to the outfall in order to locate the source of the discharge.

Several comments requested clarification of the requirement to develop and implement a plan to detect and eliminate illicit discharges. EPA recommends that plans include procedures for the following: locating priority areas; tracing the source of an illicit discharge; removing the source of the discharge; and program evaluation ***68757** and assessment. EPA recommends that MS4 operators identify priority areas (i.e., problems areas) for more detailed screening of their system based on higher likelihood of illicit connections (e.g., areas with older sanitary sewer lines), or by conducting ambient sampling to locate impacted reaches. Once priority areas are identified, EPA recommends visually screening outfalls during dry weather and conducting field tests, where flow is occurring, of selected chemical parameters as indicators of the discharge source. EPA's manual for investigation of inappropriate pollutant entries into the storm drainage system (EPA, 1993) suggests the following parameter list: specific conductivity, fluoride and/or hardness concentration, ammonia and/or potassium concentration, surfactant and/or fluorescence concentration, chlorine concentration, pH and other chemicals indicative of industrial sources. The manual explains why each parameter is a good indicator and how the information can be used to determine the type of source flow. The Agency is not recommending that fluoride and chlorine, generally used to locate potable water discharges, be addressed under this program, therefore a short list of parameters may include conductivity, ammonia, surfactant and pH. Some MS4s have found it useful to measure for fecal coliform or E. coli in their testing program. Observations of physical characteristics of the discharge are also helpful such as flow rate, temperature, odor, color, turbidity, floatable matter, deposits and stains, and vegetation.

The implementation plan should also include procedures for tracing the source of an illicit discharge. Once an illicit discharge is detected and field tests provide source characteristics, the next step is to determine the actual location of the source. Techniques for tracing the discharge to its place of origin may include: following the flow up the storm drainage system via observations and/or chemical testing in manholes or in open channels; televising storm sewers; using infrared and thermal photography; conducting smoke or dye tests.

The implementation plan should also include procedures for removing the source of the illicit discharge. The first step may be to notify the property owner and specify a length of time for eliminating the discharge. Additional notifications and escalating legal actions should also be described in this part of the plan.

  

Finally, the implementation plan should include procedures for program evaluation and assessment. Procedures could include documentation of actions taken to locate and eliminate illicit discharges such as: number of outfalls screened, complaints received and corrected, feet of storm sewers televised, numbers of discharges and quantities of flow eliminated, number of dye or smoke tests conducted. Appropriate records of such actions should be kept and should be submitted as part of the annual reports for the first permit term, as specified by the permitting authority (reports only need to be submitted in years 2 and 4 in later permits). For more on reporting requirements, see § 122.34(g).

EPA received comments regarding an MS4's legal authority beyond its jurisdictional boundaries to inspect or take enforcement against illicit discharges. EPA recognizes that illicit flows may originate in one jurisdiction and cross into one or more jurisdictions before being discharged at an outfall. In such instances, EPA expects the MS4 that detects the illicit flow to trace it to the point where it leaves their jurisdiction and notify the adjoining MS4 of the flow, and any other physical or chemical information. The adjoining MS4 should then trace it to the source or to the location where it enters their jurisdiction. The process of notifying the adjoining MS4 should continue until the source is located and eliminated. In addition, because any non-storm water discharge to waters of the U.S. through an MS4 is subject to the prohibition against unpermitted discharges pursuant to CWA section 301 (a), remedies are available under the federal enforcement provisions of CWA sections 309 and 505.

EPA requested and received comments regarding the prohibition and enforcement provision for this minimum measure. Commenters specifically questioned the proposal that the operator only has to implement the appropriate prohibition and enforcement procedures "to the extent allowable under State or Tribal law." They raised concerns that by qualifying prohibition and enforcement procedures in this manner, the operator could altogether ignore this minimum measure where affirmative legal authority did not exist. Comments suggested that EPA require States to grant authority to those municipalities where it did not exist. Other comments, however, stated that municipalities cannot exercise legal authority not granted to them under State law, which varies considerably from one State to another. EPA has no intention of directing State legislatures on how to allocate authority and responsibility under State law. As noted above, there is at least one remedy (the federal CWA) to control non-storm water discharges through MS4s. If State law prevents political subdivisions from controlling discharges through storm sewers, EPA anticipates common sense will prevail to provide those MS4 operators with the ability to meet the requirements applicable for their discharges.

One comment reinforced the importance of public information and education to the success of this measure. EPA agrees and suggests that MS4 operators consider a variety of ways to inform and educate the public which could include storm drain stenciling; a program to promote, publicize, and facilitate public reporting of illicit connections or discharges; and distribution of visual and/or printed outreach materials. Recycling and other public outreach programs could be developed to address potential sources of illicit discharges, including used motor oil, antifreeze, pesticides, herbicides, and fertilizers.

EPA received comments that State DOT's lack authority to implement this measure. EPA believes that most DOTs can implement most parts of this measure. If a DOT does not have the necessary legal authority to implement any part of this measure, EPA encourages them to coordinate their storm water management efforts with the surrounding MS4s and other State agencies. Many DOTs that are regulated under Phase I of this program are co-permittees with the local regulated MS4. Under today's rule, DOTs can use any of the options of §122.35 to share their storm water management responsibilities.

EPA received comments requesting clarification of various terms such as "outfall" and "illicit discharge." One comment asked EPA to reinforce the point that a "ditch" could be considered an outfall. The term "outfall" is defined at 40 CFR 122.26(b)(9) as "a point source at the point where a municipal separate storm sewer discharges to waters of the United States * * *". The term municipal separate storm sewer is defined at 40 CFR § 122.26(b)(8) as "a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) * * *". Following the logic of these definitions, a "ditch" may be part of the municipal separate storm sewer, and at the point where the ditch discharges to waters of the United States, it would be an outfall. As with any determination about jurisdictional provisions of the CWA, however, final decisions require case specific evaluations of fact. ***68758**

  

One commenter specifically requested clarification on the relationship between the term "illicit discharge" and non-storm water discharges from fire fighting. The comment suggested that it would be impractical to attempt to determine whether the flow from a specific fire (i.e., during a fire) is a significant source of pollution. EPA intends that MS4s will address all allowable non-storm water flows categorically rather than individually. If an MS4 is concerned that flows from fire fighting are, as a category, contributing substantial amounts of pollutants to their system, they could develop a program to address those flows prospectively. The program may include an analysis of the flow from several sources, steps to minimize the pollutant contribution, and a plan to work with the sources of the discharge to minimize any adverse impact on water quality. During the development of such a program, the MS4 may determine that only certain types of flows within a particular category are a concern, for example, fire fighting flows at industrial sites where large quantities of chemicals are present. In this example, a review of existing procedures with the fire department and/or hazardous materials team may reveal weaknesses or strengths previously unknown to the MS4 operator.

EPA received comments requesting modifications to the rule to include on-site sewage disposal systems (i.e., septic systems) in the scope of the illicit discharge program. On-site sewage disposal systems that flow into storm drainage systems are within the definition of illicit discharge as defined by the regulations. Where they are found to be the source of an illicit discharge, they need to be eliminated similar to any other illicit discharge source. Today's rule was not modified to include discharges from on-site sewage disposal systems specifically because those sources are already within the scope of the existing definition of illicit discharge.

iv. Construction Site Storm Water Runoff Control. Over a short period of time, storm water runoff from construction site activity can contribute more pollutants, including sediment, to a receiving stream than had been deposited over several decades (see section I.B.3). Storm water runoff from construction sites can include pollutants other than sediment, such as phosphorus and nitrogen, pesticides, petroleum derivatives, construction chemicals, and solid wastes that may become mobilized when land surfaces are disturbed. Generally, properly implemented and enforced construction site ordinances effectively reduce these pollutants. In many areas, however, the effectiveness of ordinances in reducing pollutants is limited due to inadequate enforcement or incomplete compliance with such local ordinances by construction site operators (Paterson, R.G. 1994. "Construction Practices: The Good, the Bad, and the Ugly." Watershed Protection Techniques 1(2)).

Today's rule requires operators of regulated small MS4s to develop, implement, and enforce a pollutant control program to reduce pollutants in any storm water runoff from construction activities that result in land disturbance of 1 or more acres (see §122.34(b)(4)). Construction activity on sites disturbing less than one acre must be included in the program if the construction activity is part of a larger common plan of development or sale that would disturb one acre or more.

The construction runoff control program of the regulated small MS4 must include an ordinance or other regulatory mechanism to require erosion and sediment controls to the extent practicable and allowable under State, Tribal or local law. The program also must include sanctions to ensure compliance (for example, non-monetary penalties, fines, bonding requirements, and/or permit denials for non-compliance). The program must also include, at a minimum: requirements for construction site operators to implement appropriate erosion and sediment control BMPS, such as silt fences, temporary detention ponds and diversions; procedures for site plan review by the small MS4 which incorporate consideration of potential water quality impacts; requirements to control other waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may adversely impact water quality; procedures for receipt and consideration of information submitted by the public to the MS4; and procedures for site inspection and enforcement of control measures by the small MS4.

Today's rule provides flexibility for regulated small MS4s by allowing them to exclude from their construction pollutant control program runoff from those construction sites for which the NPDES permitting authority has waived NPDES storm water small construction permit requirements. For example, if the NPDES permitting authority waives permit coverage for storm water discharges from construction sites less than 5 acres in areas where the rainfall erosivity factor is less than 5, then the regulated small MS4 does not have to include these sites in its storm water management program. Even if requirements for a discharge

from a given construction site are waived by the NPDES permitting authority, however, the regulated small MS4 may still chose to control those discharges under the MS4's construction pollutant control program, particularly where such discharges may cause siltation problems in storm sewers. See Section II.I.1.b for more information on construction waivers by the permitting authority.

Some commenters suggested that the proposed construction minimum measure requirements went beyond the permit application requirements concerning construction for medium and large MS4s. In response, EPA has made changes to the proposed measure so that it more closely resembles the MS4 permit application requirements in existing regulations. For example, as described below, the Agency revised the proposed requirements for "pre-construction review of site management plans" to require "procedures for site plan review."

One commenter expressed concerns that addressing runoff from construction sites within urbanized areas (through the small MS4 program) differently from construction sites outside urbanized areas (which will not be covered by the small MS4 program) will encourage urban sprawl. Today's rule, together with the existing requirements, requires all construction greater than or equal to 1 acre, unless waived, to be covered by an NPDES permit whether it is located inside or outside of an urbanized area (see §122.26(b)(15)). Today's rule does not require small MS4s to control runoff from construction sites more stringently or prescriptively than is required for construction site runoff outside urbanized areas. Therefore, today's rule imposes no substantively different onsite controls on runoff of storm water from construction sites in urbanized areas than from construction sites outside of urbanized areas.

One commenter recommended that the small MS4 construction site storm water runoff control program address all storm water runoff from construction sites, not just the runoff into the MS4. The commenter also believed that MS4s should provide clear, objective standards for all construction sites. EPA agrees. Because today's rule only regulates discharges from the MS4, the construction pollutant control measure only requires small MS4 operators to control runoff into its system. As a practical matter, however, EPA anticipates that MS4 operators will find that regulation of all construction site ***68759** runoff, whether they runoff into the MS4 or not, will prove to be the most simple and efficient program. The Agency may provide more specific criteria for construction site BMPs in the forthcoming rule being developed under CWA section 402(m). See section II.D.1 of today's rule.

One commenter stated that there is no need for penalties at the local level by the small MS4 because the CWA already imposes sufficient penalties to ensure compliance. EPA disagrees and believes that enforcement and compliance at the local level is both necessary and preferable. Examples of sanctions, some not available under the CWA, include non-monetary penalties, monetary fines, bonding requirements, and denial of future or other local permits.

One commenter recommended that EPA should not include the requirement to control pollutants other than sediment from construction sites in this measure. EPA disagrees with this comment. The requirement is to control waste that "may cause adverse impacts on water quality." Such wastes may include discarded building materials, concrete truck washout, chemicals, pesticides, herbicides, litter, and sanitary waste. These wastes, when exposed to and mobilized by storm water, can contribute to water quality impairment.

The proposed rule required "procedures for pre-construction review of site management plans." EPA requested comment on expanding this provision to require both review and approval of construction site storm water plans. Many commenters expressed the concern that review and approval of site plans is not only costly and time intensive, but may unnecessarily delay construction projects and unduly burden staff who administer the local program. In addition, some commenters expressed confusion whether EPA proposed pre-construction review for all site management plans or only higher priority sites. To address these comments, and be consistent with the permit application requirements for larger MS4s, EPA changed "procedures for pre-construction review of site management plans" to "procedures for site plan review." Today's rule requires the small MS4 to develop procedures for site plan review so as to incorporate consideration of adverse potential water quality impacts. Procedures should include review of site erosion and sediment control plans, preferably before construction activity begins on a site. The

  

objective is for the small MS4 operator and the construction site operator to address storm water runoff from construction activity early in the project design process so that potential consequences to the aquatic environment can be assessed and adverse water quality impacts can be minimized or eliminated.

One commenter requested that EPA delete the requirement for "procedures for receipt and consideration of information submitted by the public" because it went beyond existing storm water requirements. Another commenter stated that establishing a separate process to respond to public inquiries on a project is a burden to small communities, especially if the project has gone through an environmental review. One commenter requested clarification of this provision. EPA has retained this requirement in today's final rule to require some formality in the process for addressing public inquiries regarding storm water runoff from construction activities. EPA does not intend that small MS4s develop a separate, burdensome process to respond to every public inquiry. A small MS4 could, for example, simply log public complaints on existing storm water runoff problems from construction sites and pass that information on to local inspectors. The inspectors could then investigate complaints based on the severity of the violation and/or priority area.

One commenter believed that the proposed requirement of "regular inspections during construction" would require every construction project to be inspected more than once by the small MS4 during the term of a construction project. EPA has deleted the reference to "regular inspections." Instead, the small MS4 will be required to "develop procedures for site inspection and enforcement of control measures." Procedures could include steps to identify priority sites for inspection and enforcement based on the nature and extent of the construction activity, topography, and the characteristics of soils and receiving water quality.

In order to avoid duplication of small MS4 construction requirements with NPDES construction permit requirements, today's rule adds §122.44(s) to recognize that the NPDES permitting authority can incorporate qualifying State, Tribal, or local erosion and sediment control requirements in NPDES permits for construction site discharges. For example, a construction site operator who complies with MS4 construction pollutant control programs that are referenced in the NPDES construction permit would satisfy the requirements of the NPDES permit. See section II.I.1.d for more information on incorporating qualifying programs by reference into NPDES construction permits. This provision has no impact on, or direct relation to, the small MS4 operator's responsibilities under the construction site storm water runoff control minimum measure. Conversely, under §122.35(b), the permitting authority may recognize in the MS4's permit that another governmental entity, or the permitting authority itself, is responsible for implementing one or more of the minimum measures (including construction site storm water runoff control), and not include this measure in the small MS4's permit. In this case, the other governmental entity's program must satisfy all of the requirements of the omitted measure.

v. Post-Construction Storm Water Management in New Development and Redevelopment. The NURP study and more recent investigations indicate that prior planning and designing for the minimization of pollutants in storm water discharges is the most cost-effective approach to storm water quality management. Reducing pollutant concentrations in storm water after the discharge enters a storm sewer system is often more expensive and less efficient than preventing or reducing pollutants at the source. Increased human activity associated with development often results in increased pollutant loading from storm water discharges. If potential adverse water quality impacts are considered from the beginning stages of a project, new development and redevelopment provides more opportunities for water quality protection. For example, minimization of impervious areas, maintenance or restoration of natural infiltration, wetland protection, use of vegetated drainage ways, and use of riparian buffers have been shown to reduce pollutant loadings in storm water runoff from developed areas. EPA encourages operators of regulated small MS4s to identify specific problem areas within their jurisdictions and initiate innovative solutions and designs to focus attention on those areas through local planning.

In today's rule at §122.34(b)(5), NPDES permits issued to an operator of a regulated small MS4 will require the operator to develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that result in land disturbance of greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the MS4. Specifically, the NPDES permit will require the operator of a regulated small MS4 to: (1) Develop and implement ***68760** strategies which include a combination of structural and/

or non-structural best management practices (BMPs) appropriate for the community; (2) use an ordinance, or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State, Tribal or local law; (3) ensure adequate long-term operation and maintenance of BMPs; and (4) ensure that controls are in place that would minimize water quality impacts. EPA intends the term "redevelopment" to refer to alterations of a property that change the "footprint" of a site or building in such a way that results in the disturbance of equal to or greater than 1 acre of land. The term is not intended to include such activities as exterior remodeling, which would not be expected to cause adverse storm water quality impacts and offer no new opportunity for storm water controls.

EPA received comments requesting guidance and clarification of the rule requirements. The scope of the comments ranged from general requests for more details on how MS4 operators should accomplish the four requirements listed above, to specific requests for information regarding transfer of ownership for structural controls, as well as ongoing responsibility for operation and maintenance. By the term "combination" of BMPs, EPA intends a combination of structural and/or non-structural BMPs. For this requirement, the term "combination" is meant to emphasize that multiple BMPs should be considered and adopted for use in the community. A single BMP generally cannot significantly reduce pollutant loads because pollutants come from many sources within a community. The BMPs chosen should: (1) Be appropriate for the local community; (2) minimize water quality impacts; and (3) attempt to maintain pre-development runoff conditions. In choosing appropriate BMPs, EPA encourages small MS4 operators to participate in locally-based watershed planning efforts which attempt to involve a diverse group of stakeholders. Each new development and redevelopment project should have a BMP component. If an approach is chosen that primarily focuses on regional or non-structural BMPs, however, then the BMPs may be located away from the actual development site (e.g., a regional water quality pond).

Non-structural BMPs are preventative actions that involve management and source controls such as: (1) Policies and ordinances that provide requirements and standards to direct growth to identified areas, protect sensitive areas such as wetlands and riparian areas, maintain and/or increase open space (including a dedicated funding source for open space acquisition), provide buffers along sensitive water bodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation; (2) policies or ordinances that encourage infill development in higher density urban areas, and areas with existing storm sewer infrastructure; (3) education programs for developers and the public about project designs that minimize water quality impacts; and (4) other measures such as minimization of the percentage of impervious area after development, use of measures to minimize directly connected impervious areas, and source control measures often thought of as good housekeeping, preventive maintenance and spill prevention. Detailed examples of non-structural BMPs follow.

Preserving open space may help to protect water quality as well as provide other benefits such as recharging groundwater supplies, detaining storm water, supporting wildlife and providing recreational opportunities. Although securing funding for open space acquisition may be difficult, various funding mechanisms have been used. New Jersey uses a portion of their State sales tax (voter approved for a ten year period) as a stable source of funding to finance the preservation of historic sites, open space and farmland. Colorado uses part of the proceeds from the State lottery to acquire and manage open space. Some local municipalities use a percentage of the local sales tax revenue to pay for open space acquisition (e.g., Jefferson County, CO has had an open space program in place since 1977 funded by a 0.50 percent sales tax). Open space can be acquired in the form of: fee simple purchase; easements; development rights; purchase and sellback or leaseback arrangements; purchase options; private land trusts; impact fees; and land dedication requirements. Generally, fee simple purchases provide the highest level of development control and certainty of preservation, whereas the other forms of acquisition may provide less control, though they would also generally be less costly.

Cluster development, while allowing housing densities comparable to conventional zoning practice, concentrates housing units in a portion of the total site area which provides for greater open space, recreation, stream protection and storm water control. This type of development, by reducing lot sizes, can protect sensitive areas and result in less impervious surface, as well as reduce the cost for roads and other infrastructure.

  

Minimizing directly connected impervious areas (DCIAs) is a drainage strategy that seeks to reduce paved areas and directs storm water runoff to landscaped areas or to structural controls such as grass swales or buffer strips. This strategy can slow the rate of runoff, reduce runoff volumes, attenuate peak flows, and encourage filtering and infiltration of storm water. It can be made an integral part of drainage planning for any development (Urban Drainage and Flood Control District, Denver, CO. 1992. Urban Storm Drainage Criteria Manual, Volume 3—Best Management Practices). The Urban Drainage and Flood Control District manual describes three levels for minimizing DCIAs. At Level 1 all impervious surfaces are made to drain over grass-covered areas before reaching a storm water conveyance system. Level 2 adds to Level 1 and replaces street curb and gutter systems with low-velocity grass-lined swales and pervious street shoulders. In addition to Levels 1 and 2, Level 3 over-sizes swales and configures driveway and street crossing culverts to use grass-lined swales as elongated detention basins.

Structural BMPs include: (1) Storage practices such as wet ponds and extended-detention outlet structures; (2) filtration practices such as grassed swales, sand filters and filter strips; and (3) infiltration practices such as infiltration basins and infiltration trenches.

EPA recommends that small MS4 operators ensure the appropriate implementation of the structural BMPs by considering some or all of the following: (1) Pre-construction review of BMP designs; (2) inspections during construction to verify BMPs are built as designed; (3) post-construction inspection and maintenance of BMPs; and (4) sanctions to ensure compliance with design, construction or operation and maintenance (O&M) requirements of the program.

EPA cautions that certain infiltration systems such as dry wells, bored wells or tile drainage fields may be subject to Underground Injection Control (UIC) program requirements (see 40 CFR Part 144.12.). To find out more about these requirements, contact your state UIC Program, or call EPA's Safe Drinking Water Hotline at 1-800-426-4791.

In order to meet the third post-construction requirement (ensuring adequate long-term O&M of BMPs), EPA recommends that small MS4 operators evaluate various O&M management agreement options. The most common options are agreements between the ***68761** MS4 operator and another party such as post-development landowners (e.g., homeowners' associations, office park owners, other government departments or entities), or regional authorities (e.g., flood control districts, councils of government). These agreements typically require the post-construction property owner to be responsible for the O&M and may include conditions which: allow the MS4 operator to be reimbursed for O&M performed by the MS4 operator that is the responsibility of the property owner but is not performed; allow the MS4 operator to enter the property for inspection purposes; and in some cases specify that the property owner submit periodic reports.

In providing the guidance above, EPA intends the requirements in today's rule to be consistent with the permit application requirements for large MS4s for post-construction controls for new development and redevelopment. MS4 operators have significant flexibility both to develop this measure as appropriate to address local concerns, and to apply new control technologies as they become available. Storm water pollution control technologies are constantly being improved. EPA recommends that MS4s be responsive to these changes, developments or improvements in control technologies. EPA will provide more detailed guidance addressing the responsibility for long-term O&M of storm water controls in guidance materials. The guidance will also provide information on appropriate planning considerations, structural controls and non-structural controls. EPA also intends to develop a broad menu of BMPs as guidance to ensure flexibility to accommodate local conditions.

EPA received comments suggesting that requirements for new development be treated separately from redevelopment in the rule. The comment stressed that new development on raw land presents fewer obstacles and more opportunities to incorporate elements for preventing water quality impacts, whereas redevelopment projects are constrained by space limitations and existing infrastructure. Another comment suggested allowing waivers from the redevelopment requirements if the redevelopment does not result in additional adverse water quality impacts, and where BMPs are not technologically or economically feasible. EPA recognizes that redevelopment projects may have more site constraints which narrow the range of appropriate BMPs. Today's rule provides small MS4 operators with the flexibility to develop requirements that may be different for redevelopment projects,

  

and may also include allowances for alternate or off-site BMPs at certain redevelopment projects. Non-structural BMPs may be the most appropriate approach for smaller redevelopment projects.

EPA received comments requesting clarification on what is meant by "pre-development" conditions within the context of redevelopment. Pre-development refers to runoff conditions that exist onsite immediately before the planned development activities occur. Pre-development is not intended to be interpreted as that period before any human-induced land disturbance activity has occurred.

EPA received comments on the guidance language in the proposed rule and preamble which suggest that implementation of this measure should "attempt to maintain pre-development runoff conditions" and that "post-development conditions should not be different than pre-development conditions in a way that adversely affects water quality." Many comments expressed concern that maintaining pre-development runoff conditions is impossible and cost-prohibitive, and objected to any reference to "flow" or increase in volume of runoff. Other comments support the inclusion of this language in the final rule. Similar references in today's rule relating to pre-development runoff conditions are intended as recommendations to attempt to maintain pre-development runoff conditions. With these recommendations, EPA intends to prevent water quality impacts resulting from increased discharges of pollutants, which may result from increased volume of runoff. In many cases, consideration of the increased flow rate, velocity and energy of storm water discharges following development unavoidably must be taken into consideration in order to reduce the discharge of pollutants, to meet water quality standards and to prevent degradation of receiving streams. EPA recommends that municipalities consider these factors when developing their post-construction storm water management program.

Some comments said that the quoted phrases in the paragraph above are directives that imply federal land use control, which they argue is beyond the authority of the CWA. EPA recognizes that land use planning is within the authority of local governments.

EPA disagrees, however, with the implication that today's rule dictates any such land use decisions. The requirement for small MS4 operators to develop a program to address discharges resulting from new development and redevelopment is essentially a pollution prevention measure. The Rule provides the MS4 operator with flexibility to determine the appropriate BMPs to address local water quality concerns. EPA recognizes that these program goals may not be applied to every site, and expects that MS4s will develop an appropriate combination of BMPs to be applied on a site-by-site, regional or watershed basis.

vi. Pollution Prevention/Good Housekeeping for Municipal Operations. Under today's final rule, operators of MS4s must develop and implement an operation and maintenance program ("program") that includes a training component and has the ultimate goal of preventing or reducing storm water from municipal operations (in addition to those that constitute storm water discharges associated with industrial activity). This measure's emphasis on proper O&M of MS4s and employee training, as opposed to requiring the MS4 to undertake major new activities, is meant to ensure that municipal activities are performed in the most efficient way to minimize contamination of storm water discharges.

The program must include government employee training that addresses prevention measures pertaining to municipal operations such as: parks, golf courses and open space maintenance; fleet maintenance; new construction or land disturbance; building oversight; planning; and storm water system maintenance. The program can use existing storm water pollution prevention training materials provided by the State, Tribe, EPA, or environmental, public interest, or trade organizations.

EPA also encourages operators of MS4s to consider the following in developing a program: (1) Implement maintenance activities, maintenance schedules, and long-term inspection procedures for structural and non-structural storm water controls to reduce floatables and other pollutants discharged from the separate storm sewers; (2) implement controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, and salt/sand storage locations and snow disposal areas operated by the MS4; (3) adopt procedures for the proper disposal of waste removed from the separate storm sewer systems and areas listed above in (2), including dredge ***68762** spoil, accumulated sediments, floatables, and other debris;

  

and (4) adopt procedures to ensure that new flood management projects are assessed for impacts on water quality and existing projects are assessed for incorporation of additional water quality protection devices or practices. Ultimately, the effective performance of the program measure depends on the proper maintenance of the BMPs, both structural and non-structural. Without proper maintenance, BMP performance declines significantly over time. Additionally, BMP neglect may produce health and safety threats, such as structural failure leading to flooding, undesirable animal and insect breeding, and odors. Maintenance of structural BMPs could include: replacing upper levels of gravel; dredging of detention ponds; and repairing of retention basin outlet structure integrity. Maintenance of non-structural BMPs could include updating educational materials periodically.

EPA emphasizes that programs should identify and incorporate existing storm water practices and training, as well as non-storm water practices or programs that have storm water pollution prevention benefits, as a means to avoid duplication of efforts and reduce overall costs. EPA recommends that MS4s incorporate these new obligations into their existing programs to the greatest extent feasible and urges States to evaluate MS4 programs with programmatic efficiency in mind. EPA designed this minimum control measure as a modified version of the permit application requirements for medium and large MS4s described at 40 CFR 122.26(d)(2)(iv), in order to provide more flexibility for these smaller MS4s. Today's requirements provide for a consistent approach to control pollutants from O&M among medium, large, and regulated small MS4s.

By properly implementing a program, operators of MS4s serve as a model for the rest of the regulated community. Furthermore, the establishment of a long-term program could result in cost savings by minimizing possible damage to the system from floatables and other debris and, consequently, reducing the need for repairs.

EPA received comments requesting clarification of what this measure requires. Certain municipalities expressed concern that the measure has the potential to impose significant costs associated with EPA's requirement that operators of MS4s consider implementing controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, and salt/sand storage locations and snow disposal areas operated by the municipality. EPA disagrees that a requirement to consider such controls will impose considerable costs.

One commenter objected to the preamble language from the proposal suggesting that EPA does not expect the MS4 to undertake new activity. While it remains the Agency's expectation that major new activity will not be required, the MEP process should drive MS4s to incorporate the measure's obligations into their existing programs to achieve the pollutant reductions to the maximum extent practicable.

Certain commenters requested a definition for “municipal operations.” EPA has revised the language to more clearly define municipal operations. Questions may remain concerning whether discharges from specific municipal activities constitute discharges associated with industrial activities (requiring NPDES permit authorization according to the requirements for industrial storm water that apply in that State) or from municipal operations (subject only to the controls developed in the MS4 control program). Even though there may be different substantive requirements that apply depending on the source of the discharge, EPA has modified the deadlines for permit coverage so that all the regulated municipally owned and operated sources become subject to permit requirements on the same date. The deadline is the same for permit coverage for this minimum measure as for permit coverage for municipally owned/operated industrial sources.

**c. Application Requirements**

An NPDES permit that authorizes the discharge from a regulated small MS4 may take the form of either an individual permit issued to one or more facilities as co-permittees or a general permit that applies to a group of MS4s. For reasons of administrative efficiency and to reduce the paperwork burden on permittees, EPA expects that most discharges from regulated small MS4s will be authorized under general permits. These NPDES general permits will provide specific instructions on how to obtain coverage, including application requirements. Typically, such application requirements will be satisfied by the submission of a Notice of Intent (NOI) to be covered by the general permit. In this section, EPA explains the small MS4 operator's application requirements for obtaining coverage under a NPDES permit for storm water.

i. Best Management Practices and Measurable Goals, Section 122.34(d) of today's rule requires the operator of a regulated small MS4 that wishes to implement a program under §122.34 to identify and submit to the NPDES permitting authority a list of the best management practices ("BMPs") that will be implemented for each minimum control measure in their storm water management program. They also must submit measurable goals for the development and implementation of each BMP. The BMPs and the measurable goals must be included either in an NOI to be covered under a general permit or in an individual permit application.

The operator's submission must identify, as appropriate, the months and years in which the operator will undertake actions required to implement each of the minimum control measures, including interim milestones and the frequency of periodic actions. The Agency revised references to "starting and completing" actions from the proposed rule because many actions will be repetitive or ongoing. The submission also must identify the person or persons responsible for implementing or coordinating the small MS4 storm water program. See § 122.34(d). The submitted BMPs and measurable goals become enforceable according to the terms of the permit. The first permit can allow the permittee up to five years to fully implement the storm water management program.

Several commenters opposed making the measurable goals enforceable permit conditions. Some suggested that a permittee should be able to change its goals so that BMPs that are not functioning as intended can be replaced. EPA agrees that a permittee should be free to switch its BMPs and corresponding goals to others that accomplish the minimum measure or measures. The permittee is required to implement BMPs that address the minimum measures in §122.34(b). If the permittee determines that its original combination of BMPs are not adequate to achieve the objectives of the municipal program, the MS4 should revise its program to implement BMPs that are adequate and submit to the permitting authority a revised list of BMPs and measurable goals. EPA suggests that permits describe the process for revising BMPs and measurable goals, such as whether the permittee should follow the same procedures as were required for the submission of the original NOI and whether the permitting authority's approval is necessary prior to the permittee implementing the revised ***68763** BMPs. The permittee should indicate on its periodic report whether any BMPs and measurable goals have been revised since the last periodic report.

Some commenters expressed concern that making the measurable goals enforceable would encourage the development of easily attained goals and, conversely, discourage the setting of ambitious goals. Others noted that it is often difficult to determine the pollutant reduction that can be achieved by BMPs until several years after implementation. Much of the opposition to the enforceability of measurable goals appears to have been based on a mistaken understanding that measurable goals must consist of pollutant reduction targets to be achieved by the corresponding BMPs.

Today's rule requires the operator to submit either measurable goals that serve as BMP design objectives or goals that quantify the progress of implementation of the actions or performance of the permittee's BMPs. At a minimum, the required measurable goals should describe specific actions taken by the permittee to implement each BMP and the frequency and the dates for such actions. Although the operator may choose to do so, it is not required to submit goals that measure whether a BMP or combination of BMPs is effective in achieving a specific result in terms of storm water discharge quality. For example, a measurable goal might involve a commitment to inspect a given number of drainage areas of the collection system for illicit connections by a certain date. The measurable goal need not commit to achieving a specific amount of pollutant reduction through the elimination of illicit connections. Other measurable goals could include the date by which public education materials would be developed, a certain percentage of the community participating in a clean-up campaign, the development of a mechanism to address construction site runoff, and a reduction in the percentage of imperviousness associated with new development projects.

To reduce the risk that permittees will develop inadequate BMPs, EPA intends to develop a menu of BMPs to assist the operators of regulated small MS4s with the development of municipal programs. States may also develop a menu of BMPs. Today's rule provides that the measurable goals that demonstrate compliance with the minimum control measures in §§122.34 (b)(3) through (b)(6) do not have to be met if the State or EPA has not issued a menu of BMPs at the time the MS4 submits its NOI. Commenters pointed out that the proposed rule would have made the measurable goals unenforceable if the menu of BMPs was not available, but the proposal was silent as to the enforceability of the implementation of BMPs. Today's rule clarifies that

  

the operators are not free to do nothing prior to the issuance of a menu of BMPs; they still must make a good faith effort to implement the BMPs designed to comply with each measure. See §122.34(d)(2). The operators would not, however, be liable for failure to meet its measurable goals if a menu of BMPs was not available at the time they submit their NOI.

The proposed rule provision in §123.35 stated that the "[f]ailure to issue the menu of BMPs would not affect the legal status of the general permit." This concept is included in the final rule in §122.34(d)(2)'s clarification that the permittee still must comply with other requirements of the general permit.

Unlike the proposed rule, today's rule does not require that each BMP in the menu developed by the State or EPA be regionally appropriate, cost-effective and field-tested. Various commenters criticized those criteria as unworkable, and one described them as "ripe for ambiguity and abuse." Other commenters feared that the operators of regulated small MS4s would never be required to achieve their goals until menus were developed that were cost-effective, field-tested and appropriate for every conceivable subregion.

While some municipal commenters supported the requirement that a menu of BMPs be made available that included BMPs that had been determined to be regionally appropriate, field-tested and cost-effective, others raised concerns that they would be restricted to a limited menu. Some commenters supported such a detailed menu because they thought they would only be able to select BMPs that were on the menu, while others thought that it was the permitting authority's responsibility to develop BMPs narrowly tailored to their situation. In response, EPA notes that the operators will not be restricted to implementing only, or all of, the BMPs included on the menu. Since the menu does not require permittees to implement the BMPs included on the menu, it is also not necessary to apply the public notice and other procedures that some commenters thought should be applied to the development of the menu of BMPs.

The purpose of the BMP menu is to provide guidance to assist the operators of regulated small MS4s with the development and refinement of their local program, not to limit their options. Permittees may implement BMPs other than those on the menu unless a State restricts its permittees to specific BMPs. To the extent possible, EPA will develop a menu of BMPs that describes the appropriateness of BMPs to specific regions, whether the BMPs have been field-tested, and their approximate costs. The menu, however, is not intended to relieve permittees of the need to implement BMPs that are appropriate for their specific circumstances.

If there are no known relevant BMPs for a specific circumstance, a permittee has the option of developing and implementing pilot BMPs that may be better suited to their circumstances. Where BMPs are experimental, the permittee should consider committing to measurable goals that address its schedule for implementing its selected BMPs rather than goals of achieving specific pollutant reductions. If the BMPs implemented by the permittee do not achieve the desired objective, the permittee may be required to commit to different or revised BMPs.

As stated in §123.35(g), EPA is committed to issuing a menu of BMPs prior to the deadline for the issuance of permits. This menu would serve as guidance for all operators of regulated small MS4s nationwide. After developing the initial menu of BMPs, EPA intends to periodically modify, update, and supplement the menu of BMPs based on the assessments of the MS4 storm water program and research. States may rely on EPA's menu of BMPs or issue their own. If States develop their own menus, they would constitute additional guidance (or perhaps requirements in some States) for the operators to follow. Several commenters were confused by the proposed rule language that stated that States must provide or issue a menu of BMPs and, if they fail to do so, EPA "may" do so. Some read this language as not requiring either EPA or the State to develop the menu. EPA had intended that it would develop a menu and that States could either provide the EPA developed menu or one developed by the State.

EPA has dropped the proposed language that States "must" develop the menu of BMPs. Some commenters thought that it was inappropriate to require States to issue guidance. A menu of BMPs issued by either EPA or a permittee's State will satisfy the condition in §122.34(d) that a regulatory authority provide a menu of BMPs. A State could require its permittees to follow its menu of BMPs provided that they are adequate to implement §122.34(b).

  

Several commenters raised concerns that operators of small MS4s could be ***68764** required to submit their BMPs and measurable goals before EPA or the State has issued a menu of BMPs. EPA has assumed primary responsibility for developing a menu of BMPs to minimize the possibility of this occurring. Should a general permit be issued before a menu of BMPs is available, the permit writer would have the option of delaying the date by which the identification of the BMPs and measurable goals must be submitted to the permitting authority until some time after a menu of BMPs is available.

Several municipal commenters raised concerns that they would begin to develop a program only to be later told by the permitting authority or challenged in a citizen suit that their BMPs were inadequate. They expressed a need for certainty regarding what their permit required. Several commenters suggested that EPA require permitting authorities to approve or disapprove the submitted BMPs and measurable goals. EPA disagrees that formal approval or disapproval by the permitting authority is needed.

EPA acknowledges that the lack of a formal approval process does place on the permittee some responsibility for designing and determining the adequacy of its BMPs. Once the permittee has submitted its BMPs to the permitting authority as part of its NOI, it must implement them in order to achieve the corresponding measurable goals. EPA does not believe that this results in the uncertainty to the extent expressed by some commenters or unduly expose the permittee to the risk of citizen suit. If the permit is very specific regarding what the permittee must do, then the uncertainty is eliminated. If the permit is less prescriptive, the permittee has greater latitude in determining for itself what constitutes an adequate program. A citizen suit could impose liability on the permittee only if the program that it develops and implements clearly does not satisfy the requirements of the general permit. EPA believes today's approach strikes a balance between the competing goals of providing certainty as to what constitutes an adequate program and providing flexibility to the permittees.

Commenters were divided on whether five years was a reasonable and expeditious schedule for a MS4 to implement its program. Some thought that it was an appropriate amount of time to allow for the development and implementation of adequate programs. One questioned whether the permittee had to be implementing all of its program within that time, and suggested that there may be cases where a permitting authority would need flexibility to allow more time. One commenter suggested that five years is too long and would amount to a relaxation of implementation in their area. EPA believes it will take considerable time to complete the tasks of initially developing a program, commencing to implement it, and achieving results. EPA notes, however, that full implementation of an appropriate program must occur as expeditiously as possible, and not later than five years.

EPA solicited comment on how an NOI form might best be formatted to allow for measurable goal information (e.g., through the use of check boxes or narrative descriptions) while taking into account the Agency's intention to facilitate computer tracking. All commenters supported the development of a checklist NOI, but most noted that there would need to be room for additional information to cover unusual situations. One noted that, while a summary of measurable goals might be reduced to one sheet, attachments that more fully described the program and the planned BMPs would be necessary. EPA agrees that in most cases a “checklist” will not be able to capture the information on what BMPs a permittee intends to implement and its measurable goals for their implementation. EPA will continue to consider whether to develop a model NOI form and make it available for permitting authorities that choose to use it. What will be required on an MS4's NOI, however, is more extensive than what is usually required on an NOI, so a “form” NOI for MS4s may be impractical.

ii. Individual Permit Application for a §122.34(b) program. In some cases, an operator of a regulated small MS4s may seek coverage under an individual NPDES permit, either because it chooses to do so or because the NPDES permitting authority has not made the general permit option available to that source. For small MS4s that are to implement a §122.34(b) program in today's rule, EPA is promulgating simplified individual permit application requirements at § 122.33(b)(2)(i). Under the simplified individual permit application requirements, the operator submits an application to the NPDES permitting authority that includes the information required under §122.21(f) and an estimate of square mileage served by the small MS4. They are also required to supply the BMP and measurable goal information required under §122.34(d). Consistent with CWA section 308 and analogous State law, the permitting authority could request any additional information to gain a better understanding of the system and the areas draining into the system.

  

Commenters suggested that the requirements of §122.21(f) are not necessarily applicable to a small MS4. One suggested that it was not appropriate to require the following information: a description of the activities conducted by the applicant which require it to obtain an NPDES permit; the name, mailing address, and location of the facility; and up to four Standard Industrial Classification ("SIC") codes which best reflect the principal products or services provided by the facility. In response, EPA notes that the requirements in §122.21(f) are generic application requirements applicable to NPDES applicants. With the exception of the SIC code requirement, EPA believes that they are applicable to MS4s. In the SIC code portion of the standard application, the applicant may simply put "not applicable."

One commenter asked that EPA clarify whether §122.21(f)(5)'s requirement to indicate "whether the facility is located on Indian lands," referred to tribal lands, Indian country, or Indian reservations. For some local governments this is a complex issue with no easy "yes" or "no" answer. See the discussion in the Section II.F in the proposal to today's rule regarding what tribal lands are subject to the federal trust responsibility for purposes of the NPDES program.

One commenter suggested that the application should not have to list the permits and approvals required under §122.21(f)(6). EPA notes that the applicant must only list the environmental permits that the applicant has received that cover the small MS4. The applicant is not required to list permits for other operations conducted by the small MS4 operator (e.g., for an operation of an airport or landfill). Again, in most cases the applicant could respond "not applicable" to this portion of the application.

One commenter suggested that the topographic map requirement of §122.21(f)(7) was completely different from, and significantly more onerous than, the mapping requirement outlined in the proposed rule at §122.34(b)(3)(i). EPA agrees and has modified the final rule to clarify that a map that satisfies the requirements of §122.34(b)(3)(i) also satisfies the map requirements for MS4 applicants seeking individual permits under §122.33(b)(2)(i).

EPA is adding a new paragraph to §122.44(k) to clarify that requirements to implement BMPs developed pursuant to CWA 402(p) are appropriate permit ***68765** conditions. While such conditions could be included under the existing provision in §122.44(k)(3) for "practices reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA," EPA believes it is clearer to specifically list in § 122.44(k) BMPs that implement storm water programs in light of the frequency with which they are used as effluent limitations.

iii. Alternative Permit Options/Tenth Amendment. As an alternative to implementing a program that addresses each of the six minimum measures according to the requirements of §122.34(b), today's rule provides the operators of regulated small MS4s with the option of applying for an individual permit under existing §122.26(d). See §122.33(b)(2)(ii). If a system operator does not want to be held accountable for implementation of each of the minimum measures, an individual permit option under §122.33(b)(2)(ii) remains available. (As explained in the next section of this preamble, §122.35(b) also provides an opportunity for relief from permit obligations for some of the minimum measures, but that relief exists within the framework of the minimum measures.)

EPA originally drafted the individual permit application requirements in § 122.26(d) to apply to medium and large MS4s. Today's rule abbreviates the individual permit application requirements for small MS4s. Although EPA believes that the storm water management program requirements of §122.34, including the minimum measures, provide the most appropriate means to control pollutants from most small MS4s, the Agency does recognize that the operators of some small MS4s may prefer more individualized permit requirements. Among other possible reasons, an operator may seek to avoid having to "regulate" third parties discharging into the separate storm sewer system. Alternatively, an operator may determine that structural controls, such as constructed wetlands, are more appropriate or effective to address the discharges that would otherwise be addressed under the construction and/or development/redevelopment measures.

Some MS4s commenters alleged that an absolute requirement to implement the minimum measures violates the Tenth Amendment to the U.S. Constitution. While EPA disagrees that requiring MS4s to implement the minimum measures would

  

violate the Constitution, today's rule does provide small MS4s with the option of developing more individualized measures to reduce the pollutants and pollution associated with urban storm water that will be regulated under today's rule.

Some commenters specifically objected that §122.34's minimum measures for small MS4s violate the Tenth Amendment insofar as they require the operators of MS4s to regulate third parties. The minimum measures include requirements for small MS4 operators to prohibit certain non-storm water discharges, control storm water discharges from construction greater than one acre, and take other actions to control third party sources of storm water discharges into their MS4s. Commenters also argued that it was inappropriate for EPA to require local governments to enact ordinances that will consume local revenues and put local governments in the position of bearing the political responsibility for implementing the program. One commenter argued that EPA was prohibited from conditioning the issuance of an NPDES permit upon the small MS4 operators waiving their constitutional right to be free from such requirements to regulate third parties. The Agency replies to each comment in turn.

Because the rule does rely on local governments—who operate municipal separate storm sewer systems—to regulate discharges from third parties into storm sewers, EPA acknowledges that the rule implicates the Tenth Amendment and constitutional principles of federalism. EPA disagrees, however, that today's rule is inconsistent with federalism principles. [As political subdivisions of States, municipalities enjoy the same protections as States under the Tenth Amendment.]

The Supreme Court has interpreted the Tenth Amendment to preclude federal actions that compel States or their political subdivisions to enact or administer a federal regulatory program. See New York v. United States, 505 U.S. 144 (1992); Printz v. United States, 117 S.Ct. 2365 (1997). The Printz case, however, did acknowledge that the restriction does not apply when federal requirements of general applicability—requirements that regulate all parties engaging in a particular activity—do not excessively interfere with the functioning of State governments when those requirements are applied to States (or their political subdivisions). See Printz, 117 S.Ct. at 2383.

Today's rule imposes a federal requirement of general applicability, namely, the requirement to obtain and comply with an NPDES permit, on municipalities that operate a municipal separate storm sewer system. By virtue of this rule, the permit will require the municipality/storm sewer operator to develop a storm water control program. The rule specifies the components of the control program, which are primarily "management'-type controls, for example, municipal regulation of third party storm water discharges associated with construction, as well as development and redevelopment, when those discharges would enter the municipal system.

Unlike the circumstances reviewed in the New York and Printz cases, today's rule merely applies a generally applicable requirement (the CWA permit requirement) to municipal point sources. The CWA establishes a generally applicable requirement to obtain an NPDES permit to authorize point source discharge to waters of the United States. Because municipalities own and operate separate storm sewers, including storm sewers into which third parties may discharge pollutants, NPDES permits may require municipalities to control the discharge of pollutants into the storm sewers in the first instance. Because NPDES permits can impose end-of-pipe numeric effluent limits, narrative effluent limits in the form of "management" program requirements are also within the scope of Clean Water Act authority. As noted above, however, EPA believes that such narrative limitations are the most appropriate form of effluent limitation for these types of permits. For municipal separate storm sewer permits, CWA section 402(p)(3)(B)(iii) specifically authorizes "controls to reduce pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants."

The Agency did not design the minimum measures in §122.34 to "commandeer" state regulatory mechanisms, but rather to reduce pollutant discharges from small MS4s. The permit requirement in CWA section 402 is a requirement of general applicability. The operator of a small MS4 that does not prohibit and/or control discharges into its system essentially accepts "title" for those discharges. At a minimum, by providing free and open access to the MS4s that convey discharges to the waters of the United States, the municipal storm sewer system enables water quality impairment by third parties. Section 122.34 requires the operator of a regulated small MS4 to control a third ***68766** party only to the extent that the MS4 collection

system receives pollutants from that third party and discharges it to the waters of the United States. The operators of regulated small MS4s cannot passively receive and discharge pollutants from third parties. The Agency concedes that administration of a municipal program will consume limited local revenues for implementation; but those consequences stem from the municipal operator's identity as a permitted sewer system operator. The Tenth Amendment does not create a blanket municipal immunity from generally applicable requirements. Development of a program based on the minimum measures and implementation of that program should not "excessively interfere" with the functioning of municipal government, especially given the "practicability" threshold under CWA section 402(p)(3)(B)(iii).

As noted above, today's rule also allows regulated small MS4s to opt out of the minimum measures approach. The individual permit option provides for greater flexibility in program implementation and also responds to the comment about requiring a municipal permit applicant's waiver of any arguable constitutional rights. The individual permit option responds to questions about the rule's alleged unconstitutionality by more specifically focusing on the pollutants discharged from municipal point sources. Today's rule gives operators of MS4s the option to seek an individual permit that varies from the minimum measures/ management approach that is otherwise specified in today's rule. Even if the minimum measures approach was constitutionally suspect, a requirement that standing alone would violate constitutional principles of federalism does not raise concerns if the entity subject to the requirement may opt for an alternative action that does not raise a federalism issue.

For municipal system operators who seek to avoid third party regulation according to all or some of the minimum measures, §122.26(d) requires the operator to submit a narrative description of its storm water sewer system and any existing storm water control program, as well as the monitoring data to enable the permit writer to develop appropriate permit conditions. The permit writer can then develop permit conditions and limitations that vary from the six minimum measures prescribed in today's rule. The information will enable the permit writer to develop an NPDES permit that will result in pollutant reduction to the maximum extent practicable. See NRDC v. EPA, 966 F.2d at 1308, n17. If determined appropriate under CWA section 402(p)(3)(B)(iii), for example BMPs to meet water quality standards, the permit could also incorporate any more stringent or prescriptive effluent limits based on the individual permit application information.

For small MS4 operators seeking an individual permit, both Part 1 and Part 2 of the application requirements in §122.26(d)(1) and (2) are required to be submitted within 3 years and 90 days of the date of publication of this Federal Register notice. Some of the information required in Part 1 will necessarily have to be developed by the permit applicant prior to the development of Part 2 of the application. The permit applicant should coordinate with its permitting authority regarding the timing of review of the information.

The operators of regulated small MS4s that apply under §122.26(d) may apply to implement certain of the §122.34(b) minimum control measures, and thereby focus the necessary evaluation for additional limitations on alternative controls to the §122.34(b) measures that the small MS4 will not implement. The permit writer may determine "equivalency" for some or all of the minimum measures by developing a rough estimate of the pollutant reduction that would be achieved if the MS4 implemented the §122.34 minimum measure and to incorporate that pollutant reduction estimate in the small MS4's individual permit as an effluent limitation. The Agency recognizes that, based on current information, any such estimates will probably have a wide range. Anticipation of this wide range is one of the reasons EPA believes MS4 operators need flexibility in determining the mix of BMPs (under the minimum measures) to achieve water quality objectives. Therefore, for example, if a system operator seeks to employ an alternative that involves structural controls, wide ranges will probably be associated with gross pollutant reduction estimates. Permit writers will undoubtedly develop other ways to ensure that permit limits ensure reduction of pollutants to the maximum extent practicable.

Small MS4 operators that pursue this individual permit option do not need to submit details about their future program requirements (e.g., the MS4's future plans to obtain legal authority required by §§122.26(d)(1)(ii) and (d)(2)). A small MS4 operator might elect to supply such information if it intends for the permit writer to take those plans into account when developing the small MS4's permit conditions.

  

Several operators of small MS4s commented that they currently lacked the authority they would need to implement one or more of the minimum measures in §122.34(b). Today's rule recognizes that the operators of some small MS4s might not have the authority under State law to implement one or more of the measures using, for example, an ordinance or other regulatory mechanism. To address these situations, each minimum measure in §122.34(b) that would require the small MS4 operator to develop an ordinance or other regulatory mechanism states that the operator is only required to implement that requirement to "the extent allowable under State, Tribal or local law." See § 122.34(b)(3)(ii) (illicit discharge elimination), § 122.34(b)(4)(ii) (construction runoff control) and §122.34(b)(5)(ii) (post-construction storm water management). This regulatory language does not mean that a operator of a small MS4 with ordinance making authority can simply fail to pass an ordinance necessary for a §122.34(b) program. The reference to "the extent allowable under * * * local law" refers to the local laws of other political subdivisions to which the MS4 operator is subject. Rather, a small MS4 operator that seeks to implement a program under section §122.34(b) may omit a requirement to develop an ordinance or other regulatory mechanism only to the extent its municipal charter, State constitution or other legal authority prevents the operator from exercising the necessary authority. Where the operator cannot obtain the authority to implement any activity that is only required to "the extent allowable under State, Tribal or local law," the operator may satisfy today's rule by administering the remaining §122.34(b) requirements.

Finally, although today's rule provides operators of small MS4s with an option of applying for a permit under §122.26(d), States authorized to administer the NPDES program are not required to provide this option. NPDES-authorized States could require all regulated small MS4s to be permitted under the minimum measures management approach in §122.34 as a matter of State law. Such an approach would be deemed to be equally or more stringent than what is required by today's rule. See 40 CFR 123.2(i). The federalism concerns discussed above do not apply to requirements imposed by a State on its political subdivisions.

iv. Satisfaction of Minimum Measure Obligations by Another Entity. An operator of a regulated small MS4 may ***68767** satisfy the requirement to implement one or more of the six minimum measures in §122.34(b) by having a third party implement the measure or measures. Today's rule provides a variety of means for small MS4 operators to share responsibility for different aspects of their storm water management program. The means by which the operators of various MS4s share responsibility may affect who is ultimately responsible for performance of the minimum measure and who files the periodic reports on the implementation of the minimum measure. Section 122.35 addresses these issues. The rule describes two different variants on third party implementation with different consequences if the third party fails to implement the measure.

If the permit covering the discharge from a regulated small MS4 identifies the operator as the entity responsible for a particular minimum control measure, then the operator-permittee remains responsible for the implementation of that measure even if another entity has agreed to implement the control measure. Section 122.35(a). Another party may satisfy the operator-permittee's responsibility by implementing the minimum control measure in a manner at least as stringent or prescriptive as the corresponding NPDES permit requirement. If the third party fails to do so, the operator-permittee remains responsible for its performance. The operator of the MS4 should consider entering into an agreement with the third party that acknowledges the responsibility to implement the minimum measure. The operator-permittee's NOI and its annual §122.34(f)(3) reports submitted to the NPDES permitting authority must identify the third party that is satisfying one or more of the permit obligations. This requirement ensures that the permitting authority is aware which entity is supposed to implement which minimum measures.

If, on the other hand, the regulated small MS4's permit recognizes that an NPDES permittee other than the operator-permittee is responsible for a particular minimum control measure, then the operator-permittee is relieved from the responsibility for implementing that measure. The operator-permittee is also relieved from the responsibility for implementing any measure that the operator's permit indicates will be performed by the NPDES permitting authority. Section 122.35(b). The MS4 operator-permittee would be responsible for implementing the remaining minimum measures.

Today's final rule differs from the proposed version of §122.35(b), which stated that, even if the third party's responsibility is recognized in the permit, the MS4 operator-permittee remained responsible for performance if the third party failed to perform the measure consistent with §122.34(b). Under today's rule, the operator-permittee is relieved from responsibility for performance of a measure if the third party is an NPDES permittee whose permit makes it responsible for performance of the

measure (including, for example, a State agency other than the State agency that issues NPDES permits) or if the third party is the NPDES permitting authority itself. Because the permitting authority is acknowledging the third party's responsibility in the permit, commenters thought that the MS4 operator-permittee should not be responsible for ensuring that the other entity is implementing the control measure properly. EPA agrees that the operator-permittee should not be conditionally responsible when the requirements are enforceable against some other NPDES permittee. If the third party fails to perform the minimum measure, the requirements will be enforceable against the third party. In addition, the NPDES permitting authority could reopen the operator-permittee's permit under § 122.62 and modify the permit to make the operator responsible for implementing the measure. A new paragraph has been added to §122.62 to clarify that the permit may be reopened in such circumstances.

Today's rule also provides that the operator-permittee is not conditionally responsible where it is the State NPDES permitting authority itself that fails to implement the measure. The permitting authority does not need to issue a permit to itself (i.e., to the same State agency that issues the permit) for the sole purpose of relieving the small MS4 from responsibility in the event the State agency does not satisfy its obligation to implement a measure. EPA does not believe that the small MS4 should be responsible in the situation where the NPDES permit issued to the small MS4 operator recognizes that the State agency that issues the permit is responsible for implementing a measure. If the State does fail to implement the measure, the State agency could be held accountable for its commitment in the permit to implement the measure. Where the State does not fulfill its responsibility to implement a measure, a citizen also could petition for withdrawal of the State's NPDES program or it could petition to have the MS4's permit reopened to require the MS4 operator to implement the measure.

EPA notes that not every State program that addresses erosion and sediment control from construction sites will be adequate to satisfy the requirement that each regulated small MS4 have a program to the extent required by § 122.34(b)(4). For example, although all NPDES States are required to issue NPDES permits for construction activity that disturbs greater than one acre, the State's NPDES permit program will not necessarily be extensive enough to satisfy a regulated small MS4's obligation under §122.34(b)(4). NPDES States will not necessarily be implementing all of the required elements of that minimum measure, such as procedures for site plan review in each jurisdiction required to develop a program and procedures for receipt and consideration of information submitted by the public on individual construction sites. In order for a State erosion and sediment control program to satisfy a small MS4 operator's obligation to implement §122.34(b)(4), the State program would have to include all of the elements of that minimum measure.

Where the operator-permittee is itself performing one or more of the minimum measures, the operator-permittee remains responsible for all of the reporting requirements under §122.34(f)(3). The operator-permittee's reports should identify each entity that is performing the control measures within the geographic jurisdiction of the regulated small MS4. If the other entity also operates a regulated MS4 and files reports on the progress of implementation of the measures within the geographic jurisdiction of the MS4, then the operator-permittee need not include that same information in its own reports.

If the other entity operates a regulated MS4 and is performing all of the minimum measures for the permittee, the permittee is not required to file the reports required by §122.34(f)(3). This relief from reporting is specified in §122.35(a).

Section 122.35 addresses the concerns of some commenters who sought relief for governmental facilities that are classified as small MS4s under today's rule. These facilities frequently discharge storm water through another regulated MS4 and could be regulated by that MS4's program. For example, a State owned office complex that operates its storm sewer system in an urbanized area will be regulated as an MS4 under today's rule even though its system may be subject to the storm water controls of the municipality in ***68768** which it is located. Today's rule specifically revised the definition of MS4 to recognize that different levels of government often operate MS4s and that each such separate entity (including the federal government) should be responsible for its discharges. If both MS4s agree, the downstream MS4 can develop a storm water management program that regulates the discharge from both MS4s. The upstream small MS4 operator still must submit an NOI that identifies the entity on which the upstream small MS4 operator is relying to satisfy its permit obligations. No reports are required from the upstream small MS4 operator, but the upstream operator must remain in compliance with the downstream MS4 operator's storm water

  

management program. This option allows small MS4s to work together to develop one storm water management program that satisfies the permit obligations of both. If they cannot agree, the upstream small MS4 operator must develop its own program.

As mentioned previously, comments from federal facilities and State organizations that operate MS4s requested that their permit requirements differ from those of MS4s that are political subdivisions of States (cities, towns, counties, etc.). EPA acknowledges that there are differences; e.g., many federal and State facilities do not serve a resident population and thus might require a different approach to public education. EPA believes, however, that MS4s owned by State and federal governments can develop storm water management plans that address the minimum measures. Federal and State owned small MS4s may choose to work with adjacent municipally owned MS4s to develop a unified plan that addresses all of the required measures within the jurisdiction of all of the contiguous MS4s. The options in §122.35 minimize the burden on small MS4s that are covered by another MS4's program.

One commenter recommended that if one MS4 discharges into a second MS4, the operator of the upstream MS4 should have to provide a copy of its NOI or permit application to the operator of the receiving MS4. EPA did not adopt this recommendation because the NOI and permit application will be publicly available; but EPA does recommend that NPDES permitting authorities consider it as a possible permit requirement. The commenter also suggested that monitoring data should be collected by the upstream MS4 and provided to the downstream MS4. EPA is not adopting such a uniform monitoring requirement because EPA believes it is more appropriate to let the MS4 operators work out the need for such data. If necessary, the downstream MS4s might want to make such data a condition to allowing the upstream MS4 to connect to its system.

v. Joint Permit Programs. Many commenters supported allowing the operators of small MS4s to apply as co-permittees so they each would not have to develop their own storm water management program. Today's rule specifically allows regulated small MS4s to join with either other small MS4s regulated under §122.34(d) or with medium and large MS4s regulated under §122.26(d).

As is discussed in the previous section, regulated small MS4s may indicate in their NOIs that another entity is performing one or more of its required minimum control measures. Today's rule under §122.33(b)(1) also specifically allows the operators of regulated small MS4s to jointly submit an NOI. The joint NOI must clearly indicate which entity is required to implement which control measure in each geographic jurisdiction within the service area of the entire small MS4. The operator of each regulated small MS4 remains responsible for the implementation of each minimum measure for its MS4 (unless, as is discussed in the previous section above, the permit recognizes that another entity is responsible for completing the measure.) The joint NOI, therefore, is legally equivalent to each entity submitting its own NOI. EPA is, however, revising the rule language to specifically authorize the joint submission of NOIs in response to comments that suggested that such explicit authorization might encourage programs to be coordinated on a watershed basis.

Section 122.33(b)(2)(iii) authorizes regulated small MS4s to jointly apply for an individual permit to implement today's rule, where allowed by an NPDES permitting authority. The permit application should contain sufficient information to allow the permitting authority to allocate responsibility among the parties under one of the two permitting options in §§122.33(b)(2)(i) and (ii).

Section 122.33(b)(3) of today's rule also allows an operator of a regulated small MS4 to join as a co-permittee in an existing NPDES permit issued to an adjoining medium or large MS4 or source designated under the existing storm water program. This co-permittee option applies only with the agreement of all co-permittees. Under this co-permittee arrangement, the operator of the regulated small MS4 must comply with the terms and conditions of the applicable permit rather than the permit condition requirements of §122.34 of today's rule. The regulated small MS4 that wishes to be a co-permittee must comply with the applicable requirements of §122.26(d), but would not be required to fulfill all the permit application requirements applicable to medium and large MS4s. Specifically, the regulated small MS4 is not required to comply with the application requirements of §122.26(d)(1)(iii) }(Part 1 source identification), §122.26 (d)(1)(iv) (Part 1 discharge characterization), and § 122.26(d)(2)(iii) (Part 2 discharge characterization data). Furthermore, the regulated small MS4 operator could satisfy the requirements in §

  

122.26(d)(1)(v) (Part 1 management programs) and §122.26(d)(2)(iv) (Part 2 proposed management program) by referring to the adjoining MS4 operator's existing plan. An operator pursuing this option must describe in the permit modification request how the adjoining MS4's storm water program addresses or needs to be supplemented in order to adequately address discharges from the MS4. The request must also explain the role of the small MS4 operator in coordinating local storm water activities and describe the resources available to accomplish the storm water management plan.

EPA sought comments regarding the appropriateness of the application requirements in these subsections of §122.26(d). One commenter stated that newly regulated smaller MS4s should not be required to meet the existing regulations' Part II application requirements under §122.26(d) regarding the control of storm water discharges from industrial activity. EPA disagrees. The smaller MS4 operators designated for regulation in today's rule may satisfy this requirement by referencing the legal authority of the already regulated MS4 program to the extent the newly regulated MS4 will rely on such legal authority to satisfy its permit requirements. If the smaller MS4 operator plans to rely on its own legal authorities, it must identify it in the application. If the smaller MS4 operator does not elect to use its own legal authority, they may file an individual permit application for an alternate program under §122.33(b)(2)(ii).

The explanatory language in §122.33(b)(3) recommends that the smaller MS4s designated under today's rule identify how an existing plan “would need to be supplemented in order to adequately address your discharges.” One commenter suggested that this must be regulatory language and not guidance. EPA disagrees that this needs to be mandatory language. ***68769** Since many of the smaller MS4s designated today are “donut holes” within the geographic jurisdiction of an already regulated MS4, the larger MS4's program generally will be adequate to address the newly regulated MS4's discharges. The small MS4 applicant should consider the adequacy of the existing MS4's program to address the smaller MS4's water quality needs, but EPA is not imposing specific requirements. Where circumstances suggest that the existing program is inadequate with respect to the newly designated MS4 and the applicant does not address the issue, the NPDES permitting authority must require that the existing program be supplemented.

Commenters recommended that the application deadline for smaller MS4s designated today be extended so that existing regulated MS4s would not have to modify their permit in the middle of their permit term, provided that permit renewal would occur within a reasonable time (12 to 18 months) of the deadline. In response, EPA notes that today's rule allows operators of newly designated small MS4s up to three years and 90 days from the promulgation of today's rule to submit an application to be covered under the permit issued to an already regulated MS4. The permitting authority has a reasonable time after receipt of the application to modify the existing permit to include the newly designated source. If an existing MS4's permit is up for renewal in the near future, the operator of a newly designated small MS4 may take that into account when timing its application and the NPDES permitting authority may take that into account when processing the application.

Another commenter suggested that the rule should include a provision to allow permit application requirements for smaller MS4s designated today to be determined by the permitting authority to account for the particular needs/wants of an already regulated MS4 operator. EPA does not believe that the regulations should specifically require this approach. When negotiating whether to include a newly designated MS4 in its program, the already regulated MS4 operator may require the newly designated MS4's operator to provide any information that is necessary.

The co-permitting approach allows small MS4s to take advantage of existing programs to ease the burden of creating their own programs. The operators of regulated small MS4s, however, may find it simpler to apply for a program under today's rule, and to identify the medium or large MS4 operator that is implementing portions of its §122.34(b) minimum measures.

**d. Evaluation and Assessment**

Under today's rule, operators of regulated small MS4s are required to evaluate the appropriateness of their identified BMPs and progress toward achieving their identified measurable goals. The purpose of this evaluation is to determine whether or not the MS4 is meeting the requirements of the minimum control measures. The NPDES permitting authority is responsible for determining whether and what types of monitoring needs to be conducted and may require monitoring in accordance with State/

Tribe monitoring plans appropriate to the watershed. EPA does not encourage requirements for "end-of-pipe" monitoring for regulated small MS4s. Rather, EPA encourages permitting authorities to carefully examine existing ambient water quality and assess data needs. Permitting authorities should consider a combination of physical, chemical, and biological monitoring or the use of other environmental indicators such as exceedance frequencies of water quality standards, impacted dry weather flows, and increased flooding frequency. (Claytor, R. and W. Brown. 1996. Environmental Indicators to Assess Storm Water Control Programs and Practices. Center for Watershed Protection, Silver Spring, MD.) Section II.L., Water Quality Issues, discusses monitoring in greater detail.

As recommended by the Intergovernmental Task Force on Monitoring Water Quality (ITFM), the NPDES permitting authority is encouraged to consider the following watershed objectives in determining monitoring requirements: (1) To characterize water quality and ecosystem health in a watershed over time, (2) to determine causes of existing and future water quality and ecosystem health problems in a watershed and develop a watershed management program, (3) to assess progress of watershed management program or effectiveness of pollution prevention and control practices, and (4) to support documentation of compliance with permit conditions and/or water quality standards. With these objectives in mind, the Agency encourages participation in group monitoring programs that can take advantage of existing monitoring programs undertaken by a variety of governmental and nongovernental entities. Many States may already have a monitoring program in effect on a watershed basis. The ITFM report is included in the docket for today's rule (Intergovernmental Task Force on Monitoring Water Quality. 1995. The Strategy for Improving Water-Quality Monitoring in the United States: Final Report of the Intergovernmental Task Force on Monitoring Water Quality. Copies can be obtained from: U.S. Geological Survey, Reston, VA.).

EPA expects that many types of entities will have a role in supporting group monitoring activities—including federal agencies, State agencies, the public, and various classes or categories of point source dischargers. Some regulated small MS4s might be required to contribute to such monitoring efforts. EPA expects, however, that their participation in monitoring activities will be relatively limited. For purposes of today's rule, EPA recommends that, in general, NPDES permits for small MS4s should not require the conduct of any additional monitoring beyond monitoring that the small MS4 may be already performing. In the second and subsequent permit terms, EPA expects that some limited ambient monitoring might be appropriately required for perhaps half of the regulated small MS4s. EPA expects that such monitoring will only be done in identified locations for relatively few pollutants of concern. EPA does not anticipate "end-of-pipe" monitoring requirements for regulated small MS4s.

EPA received a wide range of comments on this section of the rule. Some commenters believe that EPA should require monitoring; others want a strong statement that the newly regulated small MS4s should not be required to monitor. Many commenters raised questions about exactly what EPA expects MS4s to do to evaluate and assess their BMPs. EPA has intentionally written today's rule to provide flexibility to both MS4s and permitting authorities regarding appropriate evaluation and assessment. Permitting authorities can specify monitoring or other means of evaluation when writing permits. If additional requirements are not specified, MS4s can decide what they believe is the most appropriate way to evaluate their storm water management program. As mentioned above, EPA expects that the necessity for monitoring and its extent may change from permit cycle to permit cycle. This is another reason for making the evaluation and assessment rule requirements very flexible.

i. Recordkeeping. The NPDES permitting authority is required to include at least the minimum appropriate recordkeeping conditions in each permit. Additionally, the NPDES permitting authority can specify that permittees develop, maintain, and/or ***68770** submit other records to determine compliance with permit conditions. The MS4 operator must keep these records for at least 3 years but is not required to submit records to the NPDES permitting authority unless specifically directed to do so. The MS4 operator must make the records, including the storm water management program, available to the public at reasonable times during regular business hours (see 40 CFR 122.7 for confidentiality provision). The MS4 operator is also able to assess a reasonable charge for copying and to establish advance notice requirements for members of the public.

EPA received a comment that questioned EPA's authority to require MS4s to make their records available to the public. EPA disagrees with the commenter and believes that the CWA does give EPA the authority to require that MS4 records be available. It is also more practical for the public to request records directly from the MS4 than to request them from EPA who would

then make the request to the MS4. Based on comments, EPA revised the proposed rule so as not to limit the time for advance notice requirements to 2 business days.

ii. Reporting. Under today's rule, the operator of a regulated small MS4 is required to submit annual reports to the NPDES permitting authority for the first permit term. For subsequent permit terms, the MS4 operator must submit reports in years 2 and 4 unless the NPDES permitting authority requires more frequent reports. EPA received several comments supporting this timing for report submittal. Other commenters suggested that annual reports during the first permit cycle are too burdensome and not necessary. EPA believes that annual reports are needed during the first 5-year permit term to help permitting authorities track and assess the development of MS4 programs, which should be established by the end of the initial term. Information contained in these reports can also be used to respond to public inquiries.

The report must include (1) the status of compliance with permit conditions, an assessment of the appropriateness of identified BMPs and progress toward achieving measurable goals for each of the minimum control measures, (2) results of information collected and analyzed, including monitoring data, if any, during the reporting period, (3) a summary of what storm water activities the permittee plans to undertake during the next reporting cycle, and (4) a change in any identified measurable goal(s) that apply to the program elements.

The NPDES permitting authority is encouraged to provide a brief two-page reporting format to facilitate compiling and analyzing the data from submitted reports. EPA does not believe that submittal of a brief annual report of this nature is overly burdensome, and has not changed the required reporting time frame from the proposal. The permitting authority will use the reports in evaluating compliance with permit conditions and, where necessary, will modify the permit conditions to address changed conditions.

iii. Permit-As-A-Shield. Section 122.36 describes the scope of authorization (i.e. “permit-as-a-shield”) under an NPDES permit as provided by section 402(k) of the CWA. Section 402(k) provides that compliance with an NPDES permit is deemed compliance, for purposes of enforcement under CWA sections 309 and 505, with CWA sections 301, 302, 306, 307, and 403, except for any standard imposed under section 307 for toxic pollutants injurious to human health.

EPA's Policy Statement on Scope of Discharge Authorization and Shield Associated with NPDES Permits, originally issued on July 1, 1994, and revised on April 11, 1995, provides additional information on this matter.

**e. Other Applicable NPDES Requirements**

Any NPDES permit issued to an operator of a regulated small MS4 must also include other applicable NPDES permit requirements and standard conditions, specifically the applicable requirements and conditions at 40 CFR 122.41 through 122.49. Reporting requirements for regulated small MS4s are governed by §122.34 and not the existing requirements for medium and large MS4s at § 122.42(c). In addition, the NPDES permitting authority is encouraged to consult the Interim Permitting Approach, issued on August 1, 1996. The discussion on the Interim Permitting Approach in Section II.L.1, Water Quality Based Effluent Limits, provides more information. The provisions of §§122.41 through 122.49 establish permit conditions and limitations that are broadly applicable to the entire range of NPDES permits. These provisions should be interpreted in a manner that is consistent with provisions that address specific classes or categories of discharges. For example, §122.44(d) is a general requirement that each NPDES permit shall include conditions to meet water quality standards. This requirement will be met by the specific approach outlined in today's rule for the implementation of BMPs. BMPs are the most appropriate form of effluent limitations to satisfy technology requirements and water quality-based requirements in MS4 permits (see the introduction to Section II.H.3, Municipal Permit Requirements, Section II.H.3.h, Reevaluation of Rule, and the discussion of the Interim Permitting Policy in Section II.L.1. below).

**f. Enforceability**

  

NPDES permits are federally enforceable. Violators may be subject to the enforcement actions and penalties described in CWA sections 309, 504, and 505 or under similar water pollution enforcement provisions of State, tribal or local law. Compliance with a permit issued pursuant to section 402 of the Clean Water Act is deemed compliance, for purposes of sections 309 and 505, with sections 301, 302, 306, 307, and 403 (except any standard imposed under section 307 for toxic pollutants injurious to human health).

**g. Deadlines**

Today's final rule includes "expeditious deadlines" as directed by CWA section 402(p)(6). In proposed §122.26(e), the permit application for the "ISTEA" facilities was maintained as August 7, 2001 and the permit application deadline for storm water discharges associated with other construction activity was established as 3 years and 90 days from the final rule date. In proposed § 122.33(c)(1), operators of regulated small MS4s were required to seek permit coverage within 3 years and 90 days from the date of publication of the final rule. In proposed §122.33(c)(2), operators of regulated small MS4s designated by the NPDES permitting authority on a local basis under §122.32(a)(2) must seek coverage under an NPDES permit within 60 days of notice, unless the NPDES permitting authority specifies a later date.

In order to increase the clarity of today's final rule, EPA has changed the location of some of the above requirements. All application deadlines for both Phase I and Phase II are now listed or referenced in §122.26(e). Section 122.26(e)(1) contains the deadlines for storm water associated with industrial activity. Paragraph (i) has been changed to correct a typographical error. Paragraph (ii) has been revised to reflect the changed application date for "ISTEA" facilities. (See discussion in section I.3, ISTEA Sources). The application deadline for storm water discharges associated with other construction activity is now in a new §122.26(e)(8). The application deadline for regulated small MS4s ***68771** remains in §122.33(c) because this section is written in "readable regulation" format, but it is also described in a new § 122.26(e)(9).

Under today's rule, permitting authorities are allowed up to 3 years to issue a general permit and MS4s designated under §122.32(a)(1) are allowed up to 3 years and 90 days to submit a permit application. Operators of regulated small MS4s that choose to be a co-permittee with an adjoining MS4 with an existing NPDES storm water permit must apply for a modification of that permit within the same time frame. Several commenters stated that 90 days was not adequate time to submit an NOI. This might be true if facilities did not start developing their storm water program until publication of their general permit. In fact, municipalities should start developing their storm water program upon publication of today's final rule, if they have not already done so. Municipalities that are uncertain if they fall within the urbanized area should ask their permitting authority. EPA believes that municipalities should not automatically take three years and 90 days to develop a program and submit their NOI. Three years is the maximum amount of time to issue a general permit. MS4s that are automatically designated under today's rule may have less than 3 years and 90 days if the permitting authority issues a permit that requires submission of NOIs before that time. EPA encourages States to modify their NPDES program to include storm water and issue their permits as soon as possible. It is important for permitting authorities to keep their municipalities informed of their progress in developing or modifying their NPDES storm water requirements.

EPA recognizes that MS4s brought into the program due to the 2000 Census calculations do not have as much time to develop a program as those already designated from the 1990 Census. However, the official Bureau of the Census urbanized area calculation for the 2000 Census is expected to be published in the Federal Register in the spring of 2002, which should give the potentially affected MS4s adequate time to prepare for compliance under the applicable permit. However, if the publication of this information is delayed, MS4s in newly designated urbanized areas will have 180 days from the time the new designations are published to submit an NOI, consistent with the time frame for other regulated MS4s that are designated after promulgation of the rule.

The proposed application deadline for MS4s designated under §122.32(a)(2) was within 60 days of notice. Many commenters stated that 60 days does not provide adequate time for the preparation of an NOI or permit application. EPA agrees that newly designated MS4s may not be aware that they might be designated since the permitting authority could take several years to develop designation criteria. EPA has decided that the application time frame for these facilities should be consistent with the

180 days allowed for facilities designated under §§122.26(a)(9)(i)(C) and (D). Section 122.33(c)(2) of today's final rule contains the modified time frame of 180 days to apply for coverage.

**h. Reevaluation of Rule**

The municipal caucus of the Storm Water Phase II FACA Subcommittee asked EPA to demonstrate its commitment to revisit the municipal requirements of today's rule and make changes where necessary after evaluating the storm water program and researching the effectiveness of municipal BMPs. In §122.37 of today's final rule, EPA commits to revisiting the regulations for the municipal storm water discharge control program after completion of the first two permit terms. EPA intends to use this time to work closely with stakeholders on research efforts. Gathering and analyzing data related to the storm water program, including data regarding the effectiveness of BMPs, is critical to EPA's storm water program evaluation. EPA does not intend to change today's NPDES municipal storm water program until the end of this period, except under the following circumstances: a court decision requires changes; a technical change is necessary for implementation; or the CWA is modified, thereby requiring changes. After careful analysis, EPA might also consider changes from consensus-based stakeholder requests regarding requirements applicable to newly regulated MS4s. EPA will apply the August 1, 1996, Interim Permitting Approach to today's program during this interim period and encourages all permitting authorities to use this approach in municipal storm water permits for newly regulated MS4s and in determining MS4 permit requirements under a TMDL approach. After careful consideration of the data, EPA will make modifications as necessary.

EPA received comments that supported waiting two permit cycles before re-evaluating the rule and other comments that requested re-evaluation much sooner. EPA anticipates two full permit cycles are necessary to obtain enough data to significantly evaluate the rule. The re-evaluation time frame of 13 years from today remains as proposed.

***I. Other Designated Storm Water Discharges***

**1. Discharges Associated with Small Construction Activity**

Section 122.26(b)(15) of today's rule designates certain construction activities for regulation as "storm water discharges associated with small construction activity." Specifically, storm water discharges from construction activity equal to or greater than 1 acre and less than 5 acres are automatically designated except in those circumstances where the operator (i.e., person responsible for discharges that might occur) certifies to the permitting authority that one of two specific waiver circumstances (described in section b. below) applies. Sites below one acre may be designated under § 122.26(b)(15)(ii) where necessary to protect water quality.

Today's rule regulates these construction-related storm water sources under CWA section 402(p)(6) to protect water quality rather than under CWA section 402(p)(2). Designation under 402(p)(6) gives States and EPA the flexibility to waive the permit requirement for construction activity that is not likely to impair water quality, and to designate additional sources below one acre that are likely to cause water quality impairment. Thus, the one acre threshold of today's rule is not an absolute threshold like the five acre threshold that applies under the existing storm water rule.

Today's rule regulating certain storm water discharges from construction activity disturbing less than 5 acres is consistent with the 9th Circuit remand in NRDC v. EPA, 966 F.2d 1292 (9th Cir. 1992). In that case, the court remanded portions of the existing storm water regulations related to discharges from construction sites. The existing Phase I regulations define "storm water discharges associated with industrial activity" to include storm water discharges from construction sites disturbing 5 acres or more of total land area (see 40 CFR 122.26(b)(14)(x)). In its decision, the court concluded that the 5-acre threshold was improper because the Agency had failed to identify information "to support its perception that construction activities on less than 5 acres are non-industrial in nature" (966 F.2d at 1306). The court remanded the exemption to EPA for further proceedings (966 F.2d at 1310). EPA's objectives in today's action include an effort to (1) address the 9th Circuit ***68772** remand to reconsider regulation of storm water discharges from construction activities that disturb less than 5 acres of land, (2) address water quality concerns

  

associated with such activities, and (3) balance conflicting recommendations and concerns of stakeholders in the regulation of additional construction activity.

EPA responded to the Ninth Circuit's decision by designating discharges from construction activities that disturb between 1 and 5 acres as "discharges associated with small construction activity" under CWA section 402(p)(6), rather than as "discharges associated with industrial activity" under CWA section 402(p)(2)(B). Although a size criterion alone may be an indicator of whether runoff from construction sites between 1 and 5 acres is "associated with industrial activity," the Agency is instead relying on a size threshold in tandem with provisions that allow for designations and waivers based on potential for "predicted water quality impairments" to regulate construction sites between 1 and 5 acres under CWA section 402(p)(6). This approach was chosen by the Agency for the sake of simplicity and certainty and, most importantly, to protect water quality consistent with the mandate of CWA section 402(p)(6). Today's rule also includes extended application deadlines for this new category of dischargers under the authority of CWA section 402(p)(6) (see §122.26(e)(8) of today's rule).

In today's rule, EPA is regulating storm water discharges from additional construction sites to better protect the Nation's waters, while remaining sensitive to a concern that the Agency should not regulate discharges from construction sites that might not or do not have adverse water quality impacts. EPA believes that today's rule will successfully accomplish this objective by establishing a 1-acre threshold nationwide that includes the flexibility to allow the permitting authority to both waive requirements for discharges from sites that are not expected to cause adverse water quality impacts and to designate discharges from sites below 1-acre based on adverse water quality impacts.

In addition to the diminishing water quality benefits of regulating all sites below one acre, the Agency relied on practical considerations in establishing a one acre threshold and not setting a lower threshold. Regardless of the threshold established by EPA, a NPDES permit can only be required if a construction site has a point source discharge. A point source discharge means that pollutants are added to waters of the United States through a discernible, confined, discrete conveyance. "Sheet flow" runoff from a small construction site would not result in a point source discharge unless and until it channelized. As the amount of disturbed land surface decreases, precipitation is less likely to channelize and create a "point source" discharge (assuming the absence of steep slopes or other factors that lead to increased channelization). Categorical designation of very small sites may create confusion about applicability of the NPDES permitting program to those sites. EPA's one acre threshold reflects, in part, the need to recognize that smaller sites are less likely to result in point source discharges. Of course, the NPDES permitting authority could designate smaller sites (below one acre, assuming point source discharges occur from the smaller designated sites) for regulation if a watershed or other local assessment indicated the need to do so. The Phase II rule includes this designation authority at 40 CFR 122.26(a)(9)(i)(D) and (b)(15)(ii).

The one acre threshold also provides an administrative tool for more easily identifying those sites that are identified for coverage by the rule (but may receive a waiver) and those that are not automatically covered (but may be designated for inclusion). Although all construction sites less than five acres could have a significant water quality impact cumulatively, EPA is automatically designating for permit coverage only those storm water discharges from construction sites that disturb land equal to or greater than one acre. Categorical regulation of discharges from construction below this one acre threshold would overwhelm the resources of permitting authorities and might not yield corresponding water quality benefits. Construction activities that disturb less than one acre make up, in total, a very small percentage of the total land disturbance from construction nationwide. The one acre threshold is reasonable for accomplishing the water quality goals of CWA section 402(p)(6) because it results in 97.5% of the total acreage disturbed by construction being designated for coverage by the NPDES storm water program, while excluding from automatic coverage the numerous smaller sites that represent 24.7% of the total number of construction sites.

Some commenters believed that EPA has not adequately identified water quality problems associated with storm water discharges from construction activity disturbing less than five acres. Other commenters believed that storm water discharges from small construction activity is a significant water quality problem nationwide. Section I.B.3, Construction Site Runoff, provides a detailed discussion of adverse water quality impacts resulting from construction site storm water discharges. EPA is

  

regulating storm water discharges from construction activity disturbing between 1 and 5 acres because the cumulative impact of many sources, and not just a single identified source, is typically the cause for water quality impairments, particularly for sediment-related water quality standards.

Several commenters requested that EPA regulate discharges from small construction activity as "discharges associated with industrial activity" under CWA 402(p)(4) and not, as proposed, as "storm water discharges associated with other activity" under CWA 402(p)(6). EPA is regulating discharges from small construction sites as "small construction activity" under the authority of CWA section 402(p)(6), rather than section 402(p)(4), to ensure that regulation of these sources is water quality-sensitive. CWA section 402(p)(6) affords the opportunity for designations and waivers of sources based on potential for "predicted water quality impairments." Regulation of storm water "associated with industrial activity" does not necessarily focus regulation to protect water quality.

**a. Scope**

The definition of "storm water discharges associated with small construction activity" includes discharges from construction activities, such as clearing, grading, and excavating activities, that result in the disturbance of equal to or greater than 1 acre and less than 5 acres (see §122.26(b)(15)(i)). Such activities could include: road building; construction of residential houses, office buildings, or industrial buildings; or demolition activity. The definition of "storm water discharges associated with small construction activity" also includes any other construction activity, regardless of size, designated based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to waters of the United States (§122.26(b)(15)(ii)). This designation is made by the Director, or in States with approved NPDES programs, either the Director or the EPA Regional Administrator.

For the purposes of today's rule, the definition of "storm water discharges associated with small construction activity" includes discharges from activities disturbing less than 1 acre if that construction activity is part of a ***68773** "larger common plan of development or sale" with a planned disturbance of equal to or greater than 1 acre of land. A "larger common plan of development or sale" means a contiguous area where multiple separate and distinct construction activities are planned to occur at different times on different schedules under one plan, e.g., a housing development of five ¼ acre lots (§122.26(b)(15)(i)).

In addition to the regulatory text for smaller construction, the Agency is also revising the existing text of §122.26(b)(14)(x) to clarify EPA's intention regarding construction projects involving a larger common plan of development or sale ultimately disturbing 5 or more acres. Operators of such sites are required to seek coverage under an NPDES permit regardless of the number of lots in the larger plan because designation for permit coverage is based on the total amount of land area to be disturbed under the common plan. This designation attempts to address the potential cumulative effects of numerous construction activities concentrated in a given area.

Several commenters asked that EPA allow the permitting authority to set the appropriate size threshold based on water quality studies. While EPA agrees that location-specific water quality studies provide an ideal information base from which to make regulatory decisions, today's rule establishes a default standard for regulation in the absence of location-specific studies. The rule does allow for deviation from the default standard through additional designations and waivers, however, when supported by location-specific water quality information. The rule codifies the ability of permitting authorities to provide waivers for sites greater than or equal to one acre (the default standard) and designate additional discharges from small sites below one acre when location-specific information suggests that the default 1 acre standard is either unnecessary (waivers) or too limited (designations) to protect water quality.

Some commenters wanted EPA to base the regulation of storm water discharges from construction sites not only on size, but also on the duration and intensity of activity occurring on the site. EPA believes that a national 1-acre threshold, in combination with waivers and additional designations, is the most effective and simplest way to address adverse water quality impacts from storm water from small construction sites. Moreover, as discussed below, the waiver for rainfall erosivity does account for

  

projects of limited duration. EPA believes, however, that the intensity of activity occurring on-site would be a very difficult condition to quantify.

Many commenters requested that EPA maintain the 5 acre threshold from the existing regulations, which include opportunities for site-specific designation, as the regulatory scope for regulating storm water from construction sites, i.e., that the Agency not automatically regulate storm water discharges from sites less than 5 acres. Several commenters wanted construction requirements to be applied to sites smaller than 1 acre, while some commenters suggested alternative thresholds of 2 or 3 acres. The rest of the commenters supported the 1 acre threshold. None of the commenters presented any data or rationales to support a specific size threshold.

EPA examined alternative size thresholds, including 0.5 acre, 1 acre, 2 acres and 5 acres. EPA had difficulty evaluating the alternative size thresholds because, while directly proportional to the size of the disturbed site, the water quality threat posed by discharges from construction sites of differing sizes varies nationwide, depending on the local climatological, geological, geographical, and hydrological influences. In order to ensure improvements in water quality nationwide, however, today's rule does not allow various permitting authorities to establish different size thresholds except based on the waiver and designation provisions of the rule. EPA believes that the water quality impact from small construction sites is as high as or higher than the impact from larger sites on a per acre basis. By selecting the 1 acre size threshold and coupling it with waivers and additional designations, EPA is seeking to standardize improvement of water quality on a national basis while providing permitting authorities with the opportunity to designate those unregulated activities causing water quality impairments regardless of site size, as well as to waive requirements when information demonstrates that regulation is unnecessary.

EPA recognizes that the size criterion alone may not be the most ideal predictor of the need for regulation, but effective protection of water quality depends as much on simplicity in implementation as it does on the scientific information underlying the regulatory criteria. The default size criterion of 1 acre will ensure protection against adverse water quality impacts from storm water from small construction sites while not overburdening the resources of permitting authorities and the construction industry to implement the program to protect water quality in the first place.

One commenter stated a need to clarify whether routine road maintenance is considered construction activity for the purpose of today's rule. The NPDES general permit for discharges from construction sites larger than 5 acres defined “commencement of construction” as the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities (63 FR 7913). For construction sites disturbing less than 5 acres, EPA does not consider construction activity to include routine maintenance performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility.

Two commenters believed that the Multi-Sector General Permit for storm water discharges from industrial activities (MSGP) (60 FR 50804) already applies to storm water discharges from construction activities at oil and gas exploration and production sites and asked for a clarification on this issue. Commenters also requested a single general permit to authorize both industrial storm water discharges and construction site discharges which occur at the same industrial site.

Currently, when construction activity disturbing more than 5 acres occurs on an industrial site covered by the MSGP, authorization under a separate NPDES construction permit is needed because the MSGP does not include the “construction” industrial sector. While the MSGP does address sediment and erosion control, it is not as specific as the NPDES general permit for storm water discharges from construction activities disturbing more than 5 acres. Though permitting authorities could conceivably develop a single general permit to authorize storm water discharges associated with construction activity at these industrial facilities, the commenter's request is not addressed by today's rulemaking. When today's rule is implemented through general permits (to be issued later), the permitting authority will have discretion whether or not to incorporate the permit requirements for both the industrial storm water discharges and construction site storm water discharges into a single general permit. This type of request should be addressed to the permitting authority.

  

One commenter suggested that discharges from small construction sites should be regulated through a "self-implementing rule" approach. While today's rule is not a self-implementing rule, it does add §122.28(b)(2)(v), which ***68774** gives the permitting authority the discretion to authorize a construction general permit for sites less than 5 acres without submitting a notice of intent. Such non-registration general permits function similarly to self-implementing rules, but are, in fact, permits. Today's rule will be implemented through NPDES permits rather than self-implementing regulations to capitalize on the compliance, tracking, enforcement, and public participation associated with NPDES permits (see discussion in section II.C).

Other commenters believed that only the permitting authority should regulate construction site storm water discharges (under a NPDES permit) and that a small MS4 operator's regulation of storm water discharges associated with construction (under the small MS4 NPDES storm water program) is redundant. EPA disagrees that control measure implementation by the NPDES authority and the small MS4 operator is redundant. To the extent the two efforts overlap, today's rule provides for consolidation and coordination of substantive requirements via incorporation by reference permitting. Small MS4s operators may choose to impose more prescriptive requirements than an NPDES permitting authority based on localized water quality needs. In those cases, EPA intends that the substantive requirements from the small MS4 program should apply as the NPDES permit requirements for the construction site discharger. In cases where a small MS4 program does not prioritize and focus on storm water from construction sites (beyond the small MS4 minimum control measure in today's rule, which does not require the small MS4 operator to control construction site discharges in a manner as prescriptive as is expected for discharges regulated under NPDES permits), the Agency intends that the NPDES general permit will provide the substantive standards applicable to the construction site discharge. EPA does anticipate, however, that implementation of MS4 programs to address construction site runoff within their jurisdiction will enhance overall NPDES compliance by construction site dischargers. EPA also notes that under §122.35(b), the permitting authority may recognize its own program to control storm water discharges from construction sites in lieu of requiring such a program in an MS4's NPDES permit, provided that the permitting authority's program satisfies the requirements of §122.34(b)(4), including, for example, procedures for site plan reviews and consideration of information submitted by the public on individual construction sites in each jurisdiction required to be covered by the program.

**b. Waivers**

Under §122.26(b)(15)(i) of today's rule, NPDES permitting authorities may waive today's requirement for construction site operators to obtain a permit in two circumstances. The first waiver is intended to apply where little or no rainfall is expected during the period of construction. The second waiver may be granted when a TMDL or equivalent analysis indicates that controls on construction site discharges are not needed to protect water quality.

The first waiver is based on "low predicted rainfall erosivity" which can be found using tables of rainfall-runoff erosivity (R) values published for each region in the U.S. R factors are published in the U.S. Department of Agriculture (USDA) Agricultural Handbook 703 (Renard, K.G., Foster, G.R., Weesies, G.A., McCool, D.K., and D.C. Yoder. 1997. Predicting Soil Erosion by Water: A Guide to Conservation Planning with the Revised Universal Soil Loss Equation (RUSLE). U.S. Department of Agriculture Handbook 703). The R factor varies based on the time during the year when construction activity occurs, where in the country it occurs, and how long the construction activity lasts. The permitting authority may determine, using Handbook 703, which times of year, if any, the waiver opportunity is available for construction activity. EPA will provide assistance either through computer programs or the World Wide Web on how to determine whether this waiver applies for a particular geographic area and time period. Application of this waiver for regulatory purposes will be determined by the authorized NPDES authority. This waiver is discussed further in the following section titled Rainfall-Erosivity Waiver.

The second waiver is based on a consideration of ambient water quality. This waiver is available after a State or EPA develops and implements TMDLs for the pollutant(s) of concern from storm water discharges associated with construction activity. This waiver is also available for sites discharging to non-impaired waters that do not require TMDLs, when an equivalent analysis has determined allocations for small construction sites for the pollutant(s) of concern or determined that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. The Agency envisions an equivalent analysis that would demonstrate

that water quality is not threatened by storm water discharges from small construction activity. This waiver is discussed further below in the sections titled TMDL Waiver and Water Quality Issues.

The proposed rule included a waiver based on "low predicted soil loss." This waiver provision would have been applicable on a case-by-case basis where the annual soil loss rate for the period of construction for a site, using the Revised Universal Soil Loss Equation (RUSLE), would be less than 2 tons/acre/year. The annual soil loss rate of less than 2 tons/acre/year would be calculated through the use of the RUSLE equation, assuming the constants of no ground cover and no runoff controls in place.

Several commenters found the low soil loss waiver too complex and impractical, and stated that expertise is not available at the local level to prepare and evaluate eligibility for the waiver. Another commenter questioned whether two tons/acre/year was an appropriate threshold for predicting adverse water quality impacts. Two other commenters said that RUSLE was never intended to predict off-site impacts and is not an indicator of potential harm to water quality. EPA agrees with the commenters on the difficulty associated with determining and implementing this waiver. Most construction site operators are not familiar with the RUSLE program, and the potential burden on the permitting authority, construction industry, USDA's Natural Resources Conservation Service and conservation districts probably would have been significant. The Agency has not included this waiver in the final rule.

Two commenters asked that EPA allow States the flexibility to develop their own waiver criteria but did not suggest how the Agency (or affected stakeholders) could evaluate the acceptability of alternative State waiver criteria. Therefore, the final rule does not provide for any such alternative waivers. If a State does seek to develop alternate waiver criteria, then EPA procedures afford the opportunity for subsequent actions, for example, under the Project XL Program in EPA's Office of Reinvention, which seeks cleaner, smarter, and cheaper solutions to environmental problems. Many commenters suggested that EPA extend these waivers to existing industrial storm water regulations for construction activity greater than 5 acres. These construction site discharges are ***68775** regulated as industrial storm water discharges under CWA 402(p)(2) and are not eligible for such water quality-based waivers.

Two commenters were concerned that waivers would create a potential for significant degradation of small streams. EPA disagrees. If small streams are threatened, the permitting authority would choose not to provide any waivers. In addition, permitting authorities may protect small streams by designating discharges from small construction activity based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to waters of the U.S.

Two commenters asked that the waiver options be eliminated. They felt it would create a gross inequity within the construction community if some projects will not be subject to the requirements of today's rule. While the comments may be valid, EPA disagrees that waivers should be disallowed on this basis. Construction site discharges that qualify for a waiver from permitting requirements are not expected to present a threat to water quality, which is the basis for designation and regulation under today's rule.

A number of commenters suggested additional waivers in cases where new development will result in no additional adverse impacts to water quality as compared to the existing development it replaces. EPA believes these waivers are either unworkable or unnecessary. It would be very difficult for most construction operators to determine, as well as for other stakeholders to verify, on a site-by-site basis, that there is no potential for adverse impact to water quality compared to the replaced development.

Other commenters proposed waivers in cases where a local erosion and sediment control program covers the project or a separate waiver for small linear utility projects. Instead of waivers, today's rule addresses the first suggestion through the qualifying program provision described in the section titled Cross-Referencing State/Local Erosion and Sediment Control Programs below. Today's rule provides waivers for small linear projects in so far as they satisfy conditions for low rainfall erosivity. (See § 122.26(b)(15)(i)(A).)

  

Other commenters suggested waivers based on distance to water body, existence of vegetated buffer around water body, slope of disturbed land, or if discharging to very large bodies of water. As a result of public outreach, EPA believes that these proposed waivers would be generally unworkable for construction site dischargers and permitting authorities because of the difficulty in applying them to all small sites.

One commenter mentioned that waivers for the R factor (rainfall-erosivity) and soil loss are effluent standards that have not been developed in accordance with sections 301 and 304 of the CWA. EPA disagrees that these sections are relevant to the designation of sources in today's rule. The waiver provisions in this section of the rule are jurisdictional because they affect the scope of the universe of entities subject to the NPDES program. Therefore, the waiver provisions are not themselves substantive control standards implemented through NPDES permits, and thus, not subject to the statutory criteria in sections 301 and 304.

Another commenter stated that waivers would allow exemptions to the technology based requirements and would thus be inconsistent with the two-fold approach of the CWA (a technology based minimum and a water quality based overlay). EPA acknowledges that the CWA does not generally provide for waivers for the Act's technology-based requirements. The waiver provisions do not create exemptions from technology-based standards that apply to NPDES dischargers; they provide exemption from the underlying requirement for an NPDES permit in the first place. Protection of water quality is the reason these smaller sites are designated for regulation under NPDES. The Act's two fold approach imposes more stringent water quality based effluent limitations when technology-based limitations applicable to regulated dischargers are insufficient to meet water quality standards. Under today's rule, water quality protection is the basis for determining which of the unregulated sources should be regulated at all. Thus, today's rule is entirely consistent with the Act's two fold approach.

i. Rainfall-Erosivity Waiver. The rainfall-erosivity waiver under § 122.26(b)(15)(i)(A) is intended to exempt the requirements for a permit when and where negligible rainfall/runoff-erosivity is expected. In the development of the Universal Soil Loss Equation, analysis of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy times the maximum 30 minute intensity. The average annual sum of the storm energy and intensity values for an area comprise the R factor—the rainfall erosivity index. A detailed explanation of the R factor can be found in Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE) (USDA, 1997).

This waiver is time-sensitive and is dependent on when during the year a construction activity takes place, how long it lasts, and the expected rainfall and intensity during that time. R factors vary based on location. EPA anticipates that this waiver opportunity responds to concerns about the requirement for a permit when it is not expected to rain, especially in the arid areas of the U.S. Under today's rule, the permitting authority could waive the requirements for a permit for time periods when the rainfall-erosivity factor (“R” in RUSLE) is less than five during the period of construction. For the purposes of calculating this waiver, the period of construction activity starts at the time of initial disturbance and ends with the time of final stabilization. The operator must submit a written certification to the Director in order to apply for such a waiver. EPA believes that those areas receiving negligible rainfall during certain times of the year are unlikely to have storm events causing discharges that could adversely impact receiving streams. Consequently, BMPs would not be necessary on those smaller sites. This waiver is most applicable to projects of short duration and to the arid regions of the country where the occurrence of rainfall follows a cyclic pattern—between no rain and extremely heavy rain. EPA review of rainfall records for these areas indicates that, during periods of the year when the number of events and quantity of rain are low, storm water discharges from the smaller construction sites regulated under today's rule should be minimal.

Some commenters supported the use of the R factor as a waiver, while others felt that a waiver based on rainfall statistics ignores the fact that it may rain on any given day and it is the cumulative effect of wet weather discharges which cause water quality impairments. A commenter also asked what happens in “El Nin6***o***” years when significantly more rainfall than normal occurs. Another commenter also expressed concern that this waiver was not based on a measured water quality impact, but instead on an indicator of potential impact. In response to the previous comments, EPA notes that, under CWA 402(p)(6), sources are designated on their potential for adverse impact. Designation under the section is prospective, not retrospective or remedial

only. For that reason, the waivers under today's rule also operate prospectively. EPA wanted to waive requirements for sites with little ***68776** potential to impair water quality, and the R factor is the most straightforward way to do this. The permitting authority, if electing to use waivers, could always suspend the use of waivers in certain areas or during certain times. In addition, the permitting authority may choose to use a lower R factor threshold than the one set by EPA. Application of this waiver is at the discretion of the permitting authority, subject only to the limitation that R factors cannot exceed 5.

One commenter expressed the need for EPA to provide a justification for the threshold value used for the R factor. None of the commenters included any data to show that EPA's proposed R factor of 2 was either too high or too low. EPA is using the R factor as an indicator of the potential to impact water quality. In an effort to determine which R threshold should be used, EPA conducted additional analysis of the rainfall/runoff erosivity factor for 134 sites across the country. For an R factor threshold of 5, approximately 12% of sites would be waived if the project period lasted 6 months, 27% for 3 months, 47% for 1 month, and 60% of sites would be waived if the project lasted for only 15 days. None of the 134 sites would be waived if the project lasted an entire year. For an R factor threshold of 2, approximately 9% of sites would be waived if the project period lasted 6 months, 15% for 3 months, 31% for 1 month, and 43% for 15 days. For an R factor threshold of 10, approximately 22~~f sites would be waived if the project period lasted 6 months, 37% for 3 months, 60% for 1 month, and 78% for 15 days. EPA believes that an R factor of 5 is an adequate threshold to waive requirements for sites because they would not reasonably be expected to impair water quality.~~

EPA will develop, as part of the tool box described in section II.A.5, guidance materials and computer or web-accessible programs to assist permitting authorities and construction site discharges in determining if any resulting storm water discharges from specific projects are eligible for this waiver.

ii. Water Quality Waiver. The water quality waiver under § 122.26(b)(15)(i)(B) is available where storm water controls are not needed based on a comprehensive, location-specific evaluation of water quality needs. The waiver is available based on either an EPA-approved “total maximum daily load” (TMDL) under section 303(d) of the CWA that addresses the pollutant(s) of concern or, for sites discharging to non-impaired waters that do not require TMDLs, an equivalent analysis that has either determined allocations for small construction sites for the pollutant(s) of concern or determined that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. The pollutants of concern that must be addressed include sediment or a parameter that addresses sediment (such as total suspended solids (TSS), turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. The operator must certify to the NPDES permitting authority that the construction activity will take place, and storm water discharges will occur, within the applicable drainage area evaluated in the TMDLs or equivalent analyses.

Today's rule modifies the approach in the proposed rule. EPA proposed to allow a waiver of permit requirements for small construction if storm water controls were determined to be unnecessary based on “wasteload allocations that are part of ‘total maximum daily loads' (TMDLs) that address the pollutants of concern,” or “a comprehensive watershed plan, implemented for the water body, that includes the equivalents of TMDLs, and addresses the pollutants of concern.”

Commenters asked for clarification of the terms “comprehensive watershed plans” and “equivalent of TMDLs.” EPA intended that both terms would include a comprehensive analysis that determines that controls on small construction sites are not needed based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. Today's rule makes this clarification.

One commenter pointed out that there are no water quality standards for suspended solids, the major pollutant expected in discharges from construction activity. The commenter asserted that no waiver would ever be available. Another commenter noted that there are no sediment criteria developed for streams, also making this waiver useless. EPA notes that a number of States and Tribes have water quality standards that address TSS, which are narrative in form, and that may serve as a basis for water quality-based effluent limits. As efforts to identify impairments and improve water quality progress, some States may

yet develop water quality standards for suspended solids. Although several TMDLs for sediment and related parameters have been established, EPA does recognize that currently it is extremely difficult to develop TMDLs for sediment. EPA is partially addressing this concern by clarifying in today's rule that the waivers may be based on a TMDL or equivalent analyses for sediment or one of the various pollutant parameters that are a proxy for sediment. These include TSS, turbidity and siltation.

Other commenters noted that this waiver was unattainable if a TMDL or equivalent analysis must be available for every pollutant that could possibly be present in any amount in discharges from small construction sites regardless of whether the pollutant is causing water quality impairment. Commenters asked that EPA identify what constitutes the "pollutants of concern" for which a TMDL or its equivalent must be developed. EPA has revised the proposed rule in response to these concerns.

In order for discharges from construction sites under five acres to qualify for the water quality waiver of today's rule, the construction site operator must demonstrate that storm water controls are not necessary for sediment or a parameter that addresses sediment (such as TSS, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. Even if the water body is not currently impaired for sediment, today's rule requires an analysis of the potential impacts of sediment because the storm water discharges from the construction activity will be a new source of loading to the water body that could constitute a new impairment. Because the water body will not necessarily have been included on a "303(d) list" and a TMDL will not necessarily be required, the rule continues to allow an analysis that is the equivalent of a TMDL. The designation of storm water discharges from small construction activity for regulation in today's rule is intended to control pollutants other than sediment. This waiver provision requires a TMDL or equivalent analysis for a pollutant other than gross particulates (i.e., sediment and other particulate-focused pollutant parameters) only if the receiving water is currently impaired for that pollutant.

One commenter expressed the concern that construction operators will not know if they are in a watershed covered by a TMDL. To the extent this is an operator's concern, he or she could contact their NPDES permitting ***68777** authority before applying for permit coverage to determine if receiving water is subject to a TMDL. Alternatively, the permitting authority could identify the TMDL (or equivalent analysis) areas in the general permit or another operator-accessible information source.

Another commenter expressed the concern that a TMDL waiver is likely to be ineffective because the TMDL list is submitted only once every 2 years. By the time a water is listed, the activity may have been completed and stabilized. The commenter argued that, if a watershed is impaired due to sediment from construction, then storm water controls will still be needed, because small construction can only be waived when it is not identified as a source of impairment. In response, EPA notes that an analysis that is the equivalent of a TMDL (specifically, equivalent to the component of a TMDL that comprehensively analyses existing ambient conditions against the applicable water quality standards) may also provide a basis for waiver from the default 1 acre designation. Also, even if a water has been identified as impaired for sediment, it is possible that a site or category of sites may receive an allocation that is sufficiently high enough to allow discharges without storm water controls.

**c. Permit Process and Administration**

The operator of the construction site, as with any operator of a point source discharge, is responsible for obtaining coverage under a NPDES permit as required by §122.21(b). The "operator" of the construction site, as explained in the current NPDES construction general permit, is typically the party or parties that either individually or collectively meet the following two criteria: (1) Operational control over the site specifications, including the ability to make modifications in the specifications; and (2) day-to-day operational control of those activities at the site necessary to ensure compliance with permit conditions (63 FR 7859). If more than one party meets these criteria, then each party involved would typically be a co-permittee with any other operators. The operator could be the owner, the developer, the general contractor, or individual contractor. When responsibility for operational control is shared, all operators must apply.

In today's rule, EPA is not requiring an NOI for NPDES general permits for storm water discharges from construction activities regulated by §122.26(b)(15) if the NPDES permitting authority finds that the use of NOIs would be inappropriate (see §122.28(b)(2)(v)). Under this approach, the NPDES permitting authority will have the discretion to decide whether or not

to require NOIs for discharges from construction activity less than 5 acres. Compared to the existing storm water regulation, the permitting authority thus has increased flexibility in program implementation. EPA does recommend the use of NOIs, however because NOIs track permit coverage and provide a useful information source to prioritize inspections or enforcement. Requiring an NOI allows for greater accountability by, and tracking of, dischargers. This simple permit application and reporting mechanism also allows for better outreach to the regulated community, uses an existing and familiar mechanism, and is consistent with the existing requirements for storm water discharges from larger construction activities. Today's rule does not amend the requirement for NOIs in general permits for storm water discharges from construction activity disturbing 5 acres for more. See §122.28(b)(2)(v).

EPA expects that the vast majority of discharges of storm water associated with small construction activity identified in §122.26(b)(15) will be regulated through general permits. In the event that an NPDES permitting authority decides to issue an individual construction permit, however, individual application requirements for these construction site discharges are found at § 122.26(c)(1)(ii). For any discharges of storm water associated with small construction activity identified in §122.26(b)(15) that are not authorized by a general permit, a permit application made pursuant to §122.26(c) must be submitted to the Director by 3 years and 90 days after publication of the final rule.

Some commenters expressed concern that linear construction projects (e.g., roads, highways, pipelines) that cross several jurisdictions will have to comply with multiple sets of requirements from various jurisdictions, including multiple local governments and States. EPA is limited in its options to address these concerns because the Agency cannot issue NPDES permits in States authorized to implement the NPDES program nor preempt other more stringent local and State requirements. EPA believes, however, that the option for incorporating by reference the State, Tribal or local requirements (see discussion in Section II.I.2.d., Cross-Referencing State/Local Erosion and Sediment Control Programs) should limit the administrative burden on the operator responsible for discharges from linear construction projects. If the operator were to implement the most comprehensive of the various requirements for the whole project, it could avoid confusion due to differing requirements for different sections of the project. In addition, linear utility projects, which usually have a shorter project period, are more likely to be eligible for the rainfall erosivity waiver.

One commenter stated there was no reason to delay the application period for regulated storm water discharges from small construction activities. The commenter requested that the newly regulated construction site discharges should be required to seek permit coverage within 90 days, as opposed to 3 years, of the effective date of the rule. The Agency does not accept this request. EPA anticipates that NPDES permitting authorities will need one to two years to develop adequate legal authority to implement a program to address this new category of discharges, as well as to develop and issue general permits. Moreover, to ensure effective implementation to protect water quality, regulatory authorities will need additional time to inform small construction site operators of requirements and provide guidance and training on these requirements.

Finally, EPA received a comment requesting that the three year file retention requirement be deleted for discharges from small construction sites. While EPA recognizes that the three year record retention schedule may be unnecessary for certain construction projects, the Agency has determined it is necessary to retain files after the completion of the project to ensure permit compliance, including applicable construction site stabilization enabling permit termination for such sites.

**d. Cross-Referencing State, Tribal or Local Erosion and Sediment Control Programs**

In developing the NPDES permit requirements for construction sites less than 5 acres, members of the Storm Water Phase II FACA Subcommittee asked EPA to try to minimize redundancy in the construction permit requirements. In response, today's rule at §122.44(s) provides for incorporation of qualifying State, Tribal or local erosion and sediment control program requirements by reference into the NPDES permit authorizing storm water discharges from construction sites (described under §§122.26(b)(15) and (b)(14)(x)). The incorporation by reference approach applies not only to the newly regulated storm water discharges (from construction activity disturbing between 1 and 5 acres, including designated sites, but ***68778** excluding waived sites) but also to discharges from construction activity disturbing 5 or more acres already covered by the existing storm water regulations. For this latter category of discharges from construction activity disturbing 5 or more acres, the incorporation by reference

approach requires that the pollutant control requirements from the incorporated program also satisfy the statutory standard for limitations representing application of the best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT).

For permits issued for discharges from small construction activity defined under §122.26(b)(15), a qualifying State, Tribal, or local erosion and sediment control program is one that includes the program elements described under § 122.44(s)(1). These elements include requirements for construction site operators to implement appropriate erosion and sediment control BMPs, requirements to control waste, a requirement to develop a storm water pollution prevention plan, and requirements to submit a site plan for review. A storm water pollution prevention plan includes site descriptions, descriptions of appropriate control measures, copies of approved State, Tribal or local requirements, maintenance procedures, inspection procedures, and identification of non-storm water discharges. The construction site's permit would require it to follow the requirements of the qualifying local program rather than require it to follow two different sets of requirements. If a partially-qualifying program does not have all of the elements described under §122.44(s)(1), then the NPDES permitting authority may still incorporate language in the small construction site discharge's permit that requires the construction site operator to follow the program, but the construction site discharge permit also must incorporate the missing required elements in order to satisfy CWA requirements.

The term “local” refers to the geographic area of applicability, not the form of government that develops and administers the program. Thus, a qualifying federal erosion and control program, such as certain programs developed and administered by the federal Bureau of Land Management, could be a qualifying local program.

As a result of this provision, local requirements will, in effect, provide the substantive construction site erosion and sediment control requirements for the NPDES permit authorization. Therefore, by following one set of erosion and sediment control requirements, construction site operators satisfy both local and NPDES permit requirements without duplicative effort. At the same time, noncompliance with the referenced local requirements will be considered noncompliance with the NPDES permit which is federally enforceable. The NPDES permitting authority will, of course, retain the discretion to decide whether to include the alternative requirements in the general permit. EPA believes that this approach will best balance the need for consideration of specific local requirements and local implementation with the need for federal and citizen oversight, and will extend supplemental NPDES requirements to control storm water discharges from construction sites.

EPA developed the “incorporation by reference” approach based on implementation efforts designed by the State of Michigan. Michigan relies on localities to develop substantive controls for storm water discharges associated with construction activities on a localized basis. Localities, however, are not required to do so. In areas where the local authority does not choose to participate, the State administers the sedimentation and erosion control requirements. The State agency, as the NPDES permitting authority, receives an NOI (termed “notice of coverage” by Michigan) under the general permit and tracks and exercises oversight, as appropriate, over the activity causing the storm water discharge. Michigan's goal under these procedures is to utilize the existing erosion and sediment control program infrastructure authorized under State law for storm water discharge regulation. (See U.S. Environmental Protection Agency, Office of Water. January 7, 1994. Memo: From Michael B. Cook, Director OWEC, to Water Management Division Directors, Regarding the “Approach Taken by Michigan to Regulate Storm Water Discharges from Construction Activities.”)

Most commenters supported the general concept of incorporating by reference qualifying programs. Two commenters expressed concern that different local construction requirements will create an impossible regulatory scheme for builders who work in different localities. EPA believes that allowing States to incorporate qualifying programs by reference will minimize the differences for builders who work in different areas of the State. These differences already exist, however, not only for erosion and sediment controls, but also other aspects of construction. In any event, the criteria for qualification for localized programs should provide a certain degree of standardization for various localities' requirements. EPA expects that the new rule for construction and post-construction BMPs being developed under CWA section 304(m) will also encourage standardization of local requirements. (See discussion of this new rulemaking in section II.D.1, Federal Role of this preamble).

  

Two commenters requested that an "incorporation by reference" should include permission, in writing, from the qualifying local program administrator because of a perceived extra burden on the referenced program. Any program requirements incorporated by reference in NPDES permits should already apply to construction site dischargers in the applicable area and therefore should not add any additional burden to the referenced program. EPA has left to the discretion of the permitting authority the decision on whether to seek permission from the qualifying program before cross-referencing it in an NPDES permit.

One commenter stated that a qualifying local program should require a SWPPP. The proposed rule defined the qualifying local program as a program the meets the minimum program requirements established in the proposed construction minimum control measure for small MS4s. To ensure consistency in the controls for storm water discharges between the larger, already regulated construction sites and the discharges from smaller sites that will be regulated as a result of today's rule, EPA has made a change to define a qualifying local program as one that includes the elements described in §122.44(s)(1). Section 122.44(s)(1) requires the development and implementation of a storm water pollution prevention plan as a criterion for qualification of local programs for incorporation by reference. As noted above, if a qualifying program does not include all the elements in §122.44(s)(1) then the permitting authority will need to specify the missing elements in order to rely on the incorporation by reference approach.

One commenter asked what happens in regard to the use of qualifying programs when a construction site operator is also the qualifying local program operator. The provision for incorporation by reference applies in this situation also. The local program operator will be required to comply with requirements it has established for others. ***68779**

**e. Alternative Approaches**

EPA received a number of comments on alternative permitting approaches. Several commenters supported regulating discharges only from those construction sites within urbanized areas. Other commenters opposed this approach. EPA chose to address storm water discharges from construction sites located both within and outside urbanized areas because of the potential for adverse water quality impact from storm water discharges from smaller sites in all areas. Regulating only those sites within urbanized areas would have excluded a large number of potential contributors to water quality impairment and would not address large areas of new development occurring on the outer fringes of urbanized areas. In fact, designating only small construction discharges within urbanized areas might create a perverse incentive for building only outside urbanized areas. Such an incentive would be inconsistent with the Agency's intention behind designating to protect water quality. The Agency intends that designation to protect water quality in today's rule should be both remedial and preventive.

A number of commenters encouraged EPA to cover municipal construction activities under the small MS4 general permit, instead of issuing a separate NPDES construction permit to these municipal construction projects. Similarly, a number of commenters supported EPA giving industrial facilities the option of having storm water from construction activities on the site covered by the industrial storm water permit. Several other commenters found that combining multiple permit types under one general permit introduced a degree of complexity which was confusing to permittees. Permitting authorities have the option of combining MS4 and construction permits or industrial and construction permits, however, specific requirements for each would still need to be included in the permit issued. EPA agrees that this would probably result in a more complex and confusing permit compared to the existing component permits.

Several commenters supported an alternative for regulated small MS4s where a local qualified program alone, without an NPDES permit, is sufficient to enforce compliance with construction site discharge requirements. On the other hand, one commenter stated that linking the local construction erosion and sediment control program to the existing NPDES program for storm water from larger construction has driven improvements in many local programs. Another commenter stated that the potential fines under the NPDES program will encourage compliance and will be much stronger than any fines a local program may have. EPA agrees that the NPDES program is the best approach to address water quality impacts from construction sites and provides benefits such as accountability and federal enforcement.

A number of commenters supported issuing one permit for each construction company, instead of a permit for each individual construction activity (also requested for storm water discharges from the larger, already regulated construction sites). Other

  

commenters found that a 'licensing' program for construction site operators would have many problems, including identifying who to permit and tracking information on active sites. EPA is regulating only the storm water discharges associated with construction activity from small sites, not the construction activity itself. Separate NPDES permits (either individual or general permit coverage) for construction site discharges avoid potential problems in tracking sites and operator accountability. Section 122.28(b)(2)(v) gives permitting authorities the option to issue a general permit without requiring an NOI. If an NOI is not required for each activity, permitting authorities could pursue other options such as a company-wide NOI, license instead of an NOI, or another mechanism.

**2. Other Sources**

In the Storm Water Discharges Potentially Addressed by Phase II of the National Pollutant Discharge Elimination System Storm Water Program, Report to Congress, March 1995, ("Report") submitted by EPA pursuant to CWA section 402(p)(5), EPA examined the remaining unregulated point sources of storm water for the potential to adversely affect water quality. Due to very limited national data on which to estimate pollutant loadings on the basis of discharge categories, the discussion of the extent of unregulated storm water discharges is limited to an analysis of the number and geographic distribution of the unregulated storm water discharges. Therefore, EPA is not designating any additional unregulated point sources of storm water on a nationwide, categorical basis. Instead, the remainder of the sources will be regulated based on case-by-case post-promulgation designations by the NPDES permitting authority.

EPA did, however, evaluate a variety of categories of discharges for potential designation in the Report. EPA's efforts to identify sources and categories of unregulated storm water discharges for potential designation for regulation in today's rule started with an examination of approximately 7.7 million commercial, retail, industrial, and institutional facilities identified as "unregulated." In general, the distribution of these facilities follows the distribution of population, with a large percentage of facilities concentrated within urbanized areas (see page 4-35 of the Report). This examination resulted in identification of two general classes of facilities with the potential for discharging pollutants to waters of the United States through storm water point sources.

The first group (Group A) included sources that are very similar, or identical, to regulated "storm water discharges associated with industrial activity" but that were not included in the existing storm water regulations because EPA used SIC codes in defining the universe of regulated industrial activities. By relying on SIC codes, a classification system created to identify industries rather than environmental impacts from these industries discharges, some types of storm water discharges that might otherwise be considered "industrial" were not included in the existing NPDES storm water program. The second general class of facilities (Group B) was identified on the basis of potential for activities and pollutants that could contribute to storm water contamination.

EPA estimates that Group A has approximately 100,000 facilities. Discharges from facilities in this group, which may be of high priority due to their similarity to regulated storm water discharges from industrial facilities, include, for example, auxiliary facilities or secondary activities (e.g., maintenance of construction equipment and vehicles, local trucking for an unregulated facility such as a grocery store) and facilities intentionally omitted from existing storm water regulations (e.g., publicly owned treatment works with a design flow of less than 1 million gallons per day, landfills that have not received industrial waste).

Group B consists of nearly one million facilities. EPA organized Group B sources into 18 sectors for the purposes of the Report. The automobile service sector (e.g., gas/service stations, general automobile repair, new and used car dealerships, car and truck rental) makes up more than one-third of the total number of facilities identified in all 18 sectors.

EPA conducted a geographical analysis of the industrial and commercial facilities in Groups A and ***68780** B. The geographical analysis shows that the majority are located in urbanized areas (see Section 4.2.2, Geographic Extent of Facilities, in the Report). In general, about 61 percent of Group A facilities and 56 percent of Group B facilities are located in urbanized areas. The analysis also showed that nearly twice as many industrial facilities are found in all urbanized areas as are found in large and medium municipalities alone. Notable exceptions to this generalization included lawn/garden establishments, small unregulated animal

feedlots, wholesale livestock, farm and garden machinery repair, bulk petroleum wholesale, farm supplies, lumber and building materials, agricultural chemical dealers, and petroleum pipelines, which can frequently be located in smaller municipalities or rural areas.

In identifying potential categories of sources for designation in today's notice, EPA considered designation of discharges from Group A and Group B facilities. EPA applied three criteria to each potential category in both groups to determine the need for designation: (1) The likelihood for exposure of pollutant sources included in that category, (2) whether such sources were adequately addressed by other environmental programs, and (3) whether sufficient data were available at this time on which to make a determination of potential adverse water quality impacts for the category of sources. As discussed previously, EPA searched for applicable nationwide data on the water quality impacts of such categories of facilities.

By application of the first criterion, the likelihood for exposure, EPA considered the nature of potential pollutant sources in exposed portions of such sites. As precipitation contacts industrial materials or activities, the resultant runoff is likely to mobilize and become contaminated by pollutants. As the size of these exposed areas increases, EPA expects a proportional increase in the pollutant loadings leaving the site. If EPA concluded that a category of sources has a high potential for exposure of raw materials, intermediate products, final products, waste materials, byproducts, industrial machinery, or industrial activity to rainfall, the Agency rated that category of sources as having “high” potential for adverse water quality impact. EPA's application of the first criterion showed that a number of Group A and B sources have a high likelihood of exposure of pollutants.

Through application of the second criterion, EPA assessed the likelihood that pollutant sources are regulated in a comprehensive fashion under other environmental protection programs, such as programs under the Resource Conservation and Recovery Act (RCRA) or the Occupational Health and Safety Act (OSHA). If EPA concluded that the category of sources was sufficiently addressed under another program, the Agency rated that source category as having “low” potential for adverse water quality impact. Application of the second criterion showed that some categories were likely to be adequately addressed by other programs.

After application of the third criterion, availability of nationwide data on the various storm water discharge categories, EPA concluded that available data would not support any such nationwide designations. While such data could exist on a regional or local basis, EPA believes that permitting authorities should have flexibility to regulate only those categories of sources contributing to localized water quality impairments.

EPA received comments requesting designation of additional industrial, commercial and retail sources (e.g. industrial activity “look-alikes”, roads, commercial facilities and institutions, and vehicle maintenance facilities) in the final rule, because the commenters believe that the data exist to support national designation of some of these sources. Other comments were received opposing designation of any additional sources. Today's rule does not designate any additional industrial or commercial category of sources either because EPA currently lacks information indicating a consistent potential for adverse water quality impact or because of EPA's belief that the likelihood of adverse impacts on water quality is low, with some possible exceptions on a more local basis. Since the time the Agency submitted the Report, EPA has continued to seek additional data and has requested available data from the FACA members. If sufficient regional or nationwide data become available in the future, the permitting authority could at that time designate a category of sources or individual sources on a case-by-case basis. Therefore, today's rule encourages control of storm water discharges from Groups A and B through self-initiated, voluntary BMPs, unless the discharge (or category of discharges) is designated for permitting by the permitting authority. See discussion in section I.D., EPA's Reports to Congress.

**3. ISTEA Sources**

Provisions within the Intermodal Surface Transportation and Efficiency Act (ISTEA) of 1991 temporarily exempted storm water discharges associated with industrial activity that are owned or operated by municipalities serving populations less than 100,000 people (except for airports, power plants, and uncontrolled sanitary landfills) from the need to apply for or obtain a storm water discharge permit (section 1068(c) of ISTEA). Congress extended the NPDES permitting moratorium for these facilities

  

to allow small municipalities additional time to comply with NPDES requirements for certain sources of industrial storm water. The August 7, 1995 storm water final rule (60 FR 40230) further extended this moratorium until August 7, 2001. However, today's rule changes this deadline so that previously exempted industrial facilities owned or operated by municipalities serving populations less than 100,000 people, must now submit an application for a permit within 3 years and 90 days from date of publication of today's rule.

EPA received comments recommending that permit requirements for municipally owned or operated industrial storm water discharges, including those previously exempt under ISTEA, be included in a single NPDES permit for all MS4 storm water discharges. The existing NPDES regulations already provide permitting authorities the ability to issue a single "combination" permit for MS4 discharges. However, if the permitting authorities chose to issue this type of permit, they must make sure that in doing so, they are not creating a double standard for industrial facilities covered under the combination permit versus those covered under separate general or individual permits. In order to avoid this double standard, combination permits would have to contain requirements that are the same or very similar to the requirements found in separate MS4 and industrial permits, i.e., the minimum measures and other necessary requirements of an MS4 permit, and the SWPPP, monitoring and reporting requirements, and other necessary requirements of an industrial permit. If such a combined MS4 general permit were issued, the regulations require that each discharger submit NOIs for their respective discharges, except for discharges from small construction activities. Flexibility exists in developing a combination NOI which could reduce the need to submit duplicative information, e.g. owner/operator name and address. The combination NOI would still need to require specific information for each separate municipally owned or operated industrial location, including ***68781** construction projects disturbing 5 or more acres. The regulations at §122.28(b)(2)(ii) list the necessary contents of an NOI, which require: the facility name, facility address, type of facility or discharge and receiving stream for each industrial discharge location. When viewed in its entirety, a combination permit, which by necessity would need to contain all elements of otherwise separate industrial and MS4 permit requirements, and require NOI information for each separate industrial activity, may have few advantages when compared to obtaining separate MS4 and industrial general permit coverage.

In order to allow the permitting authority to issue a single storm water permit for the MS4 and all municipally owned or operated industrial facilities, including those previously exempt under ISTEA, today's rule requires applications for ISTEA sources within 3 yrs and 90 days from date of publication of today's rule. The permitting authority has the ultimate decision to determine whether or not a single all-encompassing MS4 permit is appropriate.

**4. Residual Designation Authority**

The NPDES permitting authority's existing designation authority, as well as the petition provisions are being retained. Today's rule contains two provisions related to designation authority at §§122.26(a)(9)(i)(C) and (D). Subsection (C) adds designation authority where storm water controls are needed for the discharge based upon wasteload allocations that are part of TMDLs that address the pollutant(s) of concern. EPA intends that the NPDES permitting authority have discretion in the matter of designations based on TMDLs under subsection (C). Subsection (D) carries forward residual designation authority under former §122.26(g), and has been modified to provide clarification on categorical designation. Under today's rule, EPA and authorized States continue to exercise the authority to designate remaining unregulated discharges composed entirely of storm water for regulation on a case-by-case basis (including §123.35). Individual sources are subject to regulation if EPA or the State, as the case may be, determines that the storm water discharge from the source contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States. This standard is based on the text of section CWA 402(p). In today's rule, EPA believes, as Congress did in drafting section CWA 402(p)(2)(E), that individual instances of storm water discharge might warrant special regulatory attention, but do not fall neatly into a discrete, predetermined category. Today's rule preserves the regulatory authority to subsequently address a source (or category of sources) of storm water discharges of concern on a localized or regional basis. For example, as States and EPA implement TMDLs, permitting authorities may need to designate some point source discharges of storm water on a categorical basis either locally or regionally in order to assure progress toward compliance with water quality standards in the watershed.

  

EPA received comments asking that §122.26(a)(9)(i)(D) as proposed be modified to include specific language clarifying the permitting authority's ability to designate additional sources on a categorical basis as explained in the preamble to the proposed rule. One comment requested that the designation language include "categories of sources on a Statewide basis." EPA agrees that the intent of the language may not have been clear regarding categorical designation. Today's rule modifies subsection (D) to clarify that the designation authority can be applied within different geographic areas to any single discharge (i.e., a specific facility), or category of discharges that are contributing to a violation of a water quality standard or are significant contributors of pollutants to waters of the United States. The added term "within a geographic area" allows "State-wide" or "watershed-wide" designation within the meaning of the terms.

One commenter questioned the Agency's legal authority to provide for such residual designation authority. The stakeholder argued that the lapse of the October 1, 1994, permitting moratorium under CWA section 402(p)(1) eliminated the significance of the CWA section 402(p)(2) exceptions to the moratorium, including the exception for discharges of storm water determined to be contributing to a violation of a water quality standard or a significant contributor of pollutants under CWA section 402(p)(2)(E). The stakeholder further argued that EPA's authority to designate sources for regulation under CWA section 402(p)(6) is limited to storm water discharges other than those described under CWA section 402(p)(2). Because CWA section 402(p)(2)(E) describes individually designated discharges, the stakeholder concluded that regulations under CWA section 402(p)(6) cannot provide for post-promulgation designation of individual sources. EPA disagrees.

First, as explained previously, EPA anticipates that NPDES permitting authorities may yet determine that individual unregulated point sources of storm water discharges require regulation on a case-by-case basis. This conclusion is consistent with the Congress' recognition of the potential need for such designation under the first phase of storm water regulation as described in CWA section 402(p)(2)(E). Under CWA section 402(p)(2)(E), Congress recognized the need for both EPA and the State to retain authority to regulate unregulated point sources of storm water under the NPDES permit program. Second, to the extent that CWA section 402(p)(6) requires designation of a "category" of sources, the permitting authority may designate such (as yet unidentified) sources as a category that should be regulated to protect water quality. Though such sources may exist and discharge today, if neither EPA nor the State/Tribal NPDES permitting authority has designated the source for regulation under CWA section 402(p)(2)(E) to date, then CWA section 402(p)(6) provides the authority to designate such sources.

The Agency can designate a category of "not yet identified" sources to be regulated, based on local concerns, even if data do not exist to support nationwide regulation of such sources. EPA does not interpret the language in CWA section 402(p) to preclude States from exercising designation authority under these provisions because such designation (and subsequent regulation of designated sources) is within the "scope" of the NPDES program.

EPA also believes that sources regulated pursuant to a State designation are part of (and regulated under) a federally approved State NPDES program, and thus subject to enforcement under CWA sections 309 and 505. Under existing NPDES State program regulations, State programs that are "greater in scope of coverage" are not part of the federally-approved program. By contrast, any such State regulation of sources in this "reserved category" will be within the scope of the federal program because today's rule recognizes the need for such post promulgation designations of unregulated point sources of storm water. Such regulation will be "more stringent" than the federal program rather than "greater in scope of coverage" (40 CFR 123.1(h)).

EPA does not interpret the congressional direction in CWA section 402(p)(6) to preclude regulation of point sources of storm water that should be regulated to protect water quality. Under CWA section 510, Congress expressly recognized and preserved the authority of States to adopt and enforce ***68782** more stringent regulation of point sources, as well as any requirement respecting the control or abatement of pollution. Section 510 applies, "except as expressly provided" in the CWA. CWA section 502(14) does expressly provide affirmative limitations on the regulation of certain pollutant sources through the point source control program, the NPDES permitting program. Section 502(14) excludes agricultural storm water and return flows from irrigated agriculture from the definition of point source, and section 402(l) limits applicability of the section 402 permit program for return flows from irrigated agriculture, as well as for storm water runoff from certain oil, gas, and mining operations. Unlike sections 502(14) and 402(l), EPA does not interpret CWA section 402(p)(6) as an express provision limiting the authority to

  

designate point sources of storm water for regulation on a case-by-case basis after the promulgation of final regulations. Any source of storm water discharge is encouraged to assess its potential for storm water contamination and take preventive measures against contamination. Such proactive actions could result in the avoidance of future regulation.

One comment was received requesting clarification of the term "non-municipal" in §122.26(a)(9)(ii). The commenter is concerned that the term "non-municipal," in this context, implies that municipally owned or operated facilities cannot be designated. The term "non-municipal" in this context refers to the universe of unregulated industrial and commercial facilities that could potentially be designated according to §122.26(a)(9)(i) authority. There is no exemption for municipally owned or operated facilities under these designation provisions.

Finally, EPA received comments and evaluated the proposal under which operators of regulated small, medium, and large MS4s would be responsible for controlling discharges from industrial and other facilities into their systems in lieu of requiring NPDES permit coverage for such facilities. EPA did not adopt this framework due to concerns with administrative and technical burden on the MS4 operators, as well as concerns about such an intergovernmental mandate.

### *J. Conditional Exclusion for "No Exposure" of Industrial Activities and Materials to Storm Water*

**1. Background**

In 1992, the Ninth Circuit court remanded to EPA for further rulemaking, a portion of the definition of "storm water discharge associated with industrial activity" that excluded the category of industrial activity identified as "light industry" when industrial materials and/or activities were not exposed to storm water. See NRDC v. EPA, 966 F.2d 1292, 1305 (9th Cir. 1992). Today's final rule responds to that remand. In the 1990 storm water regulations, EPA excluded the light industry category from the requirement for an NPDES permit if the industrial materials and/or activities were not "exposed" to storm water (see §122.26(b)(14)). The Agency had reasoned that most of the activity at these types of facilities takes place indoors and that emissions from stacks, use of unhoused manufacturing equipment, outside material storage or disposal, and generation of large amounts of dust or particles would be atypical (55 FR 48008, November 16, 1990).

The Ninth Circuit determined that the exemption was arbitrary and capricious for two reasons. First, the court found that EPA had not established a record to support its assumption that light industry that was not exposed to storm water was not "associated with industrial activity," particularly when other types of industrial activity not exposed to storm water remained "associated with industrial activity." The court specifically found that "[t]o exempt these industries from the normal permitting process based on an unsubstantiated assumption about this group of facilities is arbitrary and capricious." Second, the court concluded that the exemption impermissibly "altered the statutory scheme" for permitting because the exemption relied on the unverified judgment of the light industrial facility operator to determine non-applicability of the permit application requirements. In other words, the court was critical that the operator would determine for itself that there was "no exposure" and then simply not apply for a permit without any further action. Without a basis for ensuring the effective operation of the permitting scheme—either that facilities would self-report actual exposure or that EPA would be required to inspect and monitor such facilities—the court vacated and remanded the rule to EPA for further rulemaking.

One of the major concerns expressed by the FACA Committee, was that EPA streamline and reinvent certain troublesome or problematic aspects of the existing permitting program for storm water discharges. One area identified was the mandatory applicability of the permitting program to all industrial facilities, even those "light industrial" activities that are of very low risk or of no risk to storm water contamination. Such dischargers may not have any industrial sources of storm water contamination on the plant site, yet they are still required to apply for an NPDES storm water permit and meet all permitting requirements. Examples of such facilities are a soap manufacturing plant (SIC Code 28) or hazardous waste treatment and disposal facility, where all industrial activities, even loading docks, are inside a building or under a roof.

Although they did not provide a written report, the FACA Committee members advised EPA that the existing storm water program should be revised to allow such facilities to seek an exclusion from the NPDES storm water permitting requirements.

The Committee agreed that such an exclusion should also provide a strong incentive for other industrial facilities that conduct industrial activities outdoors to move the activities under cover or into buildings to prevent contamination of rainfall and storm water runoff. The committee believed that such a "no exposure" permit exclusion could be a valuable incentive for storm water pollution prevention.

In today's final rule, the Agency responds to both of the bases for the court's remand. The exclusion from permitting based on "no exposure" applies to all industrial categories listed in the existing storm water regulations except construction. The court's opinion rejected EPA's distinction between light industry and other industry, but it did not preclude an interpretation that treats all "non-exposed" industrial facilities in the same fashion. Presuming that an industrial facility adequately prevents exposure of industrial materials and activities to storm water, today's rule treats discharges from "non-exposed" industrial facilities in a manner similar to the way Congress intended for discharges from administrative buildings and parking lots. Specifically, permits will not be required for storm water discharges from these facilities on a categorical basis.

To assure that discharges from industrial facilities really are similar to discharges from administrative buildings and parking lots, and to respond to the second basis for the court's remand, the permitting exclusion is "conditional". The person responsible for a point source discharge from a "no exposure" industrial source must meet the conditions of the exclusion, and complete, sign and submit the certification to the permitting authority for tracking and ***68783** accountability purposes. EPA believes today's rule, therefore, is fully consistent with the direction provided by the court.

EPA relied upon the "no exposure" concept discussed by the FACA Committee in developing the "no exposure" provisions of today's rule. EPA is deleting the sentence regarding "no exposure" for the facilities in §122.26(b)(14)(xi) and adding a new §122.26(g) titled "Conditional Exclusion for No Exposure of Industrial Activities to Storm Water." The "no exposure" provision will make storm water discharges from all classes of industrial facilities eligible for exclusion, except storm water discharges from regulated construction activities. Regulated construction activities cannot claim "no exposure" because the main pollutants of concern (e.g., sediment) generally cannot entirely be sheltered from storm water.

Today's rule represents a significant expansion in the scope of the "no exposure" provision originally promulgated in the 1990 rule, which was only for storm water discharges from light industry. The intent of today's "no exposure" provision is to provide a simplified method for complying with the CWA to all industrial facilities that are entirely indoors. This includes facilities that are located within a large office building, or at which the only items permanently exposed to precipitation are roofs, parking lots, vegetated areas, and other non-industrial areas or activities.

EPA received several comments related to storm water runoff from parking lots, roof tops, lawns, and other non-industrial areas of an industrial facility. Storm water discharges from these areas, which may contain pollutants or which may result in additional storm water flows, are not directly regulated under the existing storm water permitting program because they are not "storm water discharges associated with industrial activity". Many comments on this issue supported maintaining the exclusion from the existing regulations for storm water permitting for discharges from administrative buildings, parking lots, and other non-industrial areas. Other comments opposed allowing the continued exclusion for discharges from non-industrial areas of the site because discharges from these areas are potentially a significant cause of receiving water impairment. These comments urged that such discharges should not be excluded from NPDES permit coverage. Today's rule does not require permit coverage for discharges from a facility's exposed areas that are separate from industrial activities such as runoff from office buildings and accompanying parking lots, lawns and other non-industrial areas. This approach is consistent with the existing storm water rules which were based on Congress's intent to exclude non-industrial areas such as "parking lots and administrative and employee buildings." 133 Cong. Rec. 985 (1987). EPA also lacks data indicating that discharges from these areas at an industrial facility cause significant receiving water impairments. Therefore, the non-industrial areas at a facility do not need to be assessed as part of the "no exposure" certification.

EPA received comments related to industrial facilities that achieve "no exposure" by constructing large amounts of impervious surfaces, such as roofs, where previously there were pervious or porous surfaces into which storm water could infiltrate. Some

commenters made the point that large amounts of impervious area may cause a significant increase in storm water volume flowing off the industrial facility, and thus may cause adverse receiving water impacts simply due to the increased quantity of storm water flow. Some commenters said that storm water discharges from impervious areas at an industrial facility are generally more frequent, and often larger, than discharges from the pre-existing natural surfaces. They believe that these discharges will contain pollutants typical of commercial areas and roads and are an equal threat to direct human uses of the water and can cause equal damage to aquatic life and its habitat. Other commenters believe that if Congress or EPA addresses the issue of flow, it should be addressed on a broader scale than merely through the "no exposure" exclusion, and that EPA has no authority under any existing legal framework to regulate flow directly. Some commenters stated that developing federal parameters for the control of water quantity, i.e. flow, would result in federal intrusion into land use planning, an authority that they claim is solely within the purview of State governments and their political subdivisions.

EPA is not attempting to regulate flow via the "no exposure" provisions. EPA does agree, however, that increases in impervious surfaces can result in increased runoff volumes from the site which in turn may increase pollutant loading. In addition, the Agency notes that in some States water quality standards include water quality criteria for flow or turbidity. Therefore, in order to provide a minimal amount of information on possible impacts from increased pollutant loading and runoff volume, EPA's "no exposure" certification form (see Appendix 4) asks the discharger to indicate if they have paved or roofed over a formerly exposed, pervious area in order to qualify for the "no exposure" exclusion. If the answer is yes, the discharger must indicate, by choosing from three possible responses, approximately how much impervious area was created to achieve "no exposure". The choices are: (1) less than 1 acre, (2) 1 to 5 acres, and (3) more than 5 acres. This requirement provides additional information that will aid in determining if discharges from the facility are causing adverse receiving water impacts. EPA intends to prevent water quality impacts resulting from increased discharges of pollutants, which may result from increased volume of runoff. In many cases, consideration of the increased flow rate, velocity and energy of storm water discharges, following construction of large amounts of impervious surfaces, must be taken into consideration in order to reduce the discharge of pollutants, to meet water quality standards and to prevent degradation of receiving streams. EPA recommends that dischargers consider these factors when making modifications to their site in order to qualify for the "no exposure" exclusion.

**2. Today's Rule**

In order to claim relief under the "no exposure" provision, the discharger of an otherwise regulated facility must submit a no exposure certification that incorporates the questions of §122.26(g)(4)(iii) to the NPDES permitting authority once every 5 years. This provision applies across all categories of industrial activity covered by the existing program, except discharges from construction activities.

In addition to submitting a "no exposure" certification every 5 years, the facility must allow the NPDES permitting authority or operator of an MS4 (where there is a storm water discharge to the MS4) to inspect the facility and to make such inspection reports publicly available upon request. Also, upon request, the facility must submit a copy of the "no exposure" certification to the operator of the MS4 into which the facility discharges (if applicable). All "no exposure" certifications must be signed in accordance with the signatory requirements of §122.22. The "no exposure" certification is non-transferable. In the event that the facility operator changes, the new discharger must submit a new "no exposure" certification. ***68784**

Members of the FACA Committee urged that EPA not allow dischargers certifying "no exposure" to take actions to qualify for this provision that result in a net environmental detriment. In developing a regulatory implementation mechanism, however, EPA found that the phrase "no net environmental detriment," was too imprecise to use within this context. Therefore, today's rule addresses this issue by requiring information that should help the permitting authority to determine whether actions taken to qualify for the exclusion interfere with the attainment or maintenance of water quality standards, including designated uses. Permitting authorities will be able, where necessary, to make a determination by evaluating the activities that changed at the industrial site to achieve "no exposure", and assess whether these changes cause an adverse impact on, or have the reasonable potential to cause an instream excursion of, water quality standards, including designated uses. EPA anticipates that many efforts to achieve "no exposure" will employ simple good housekeeping and contaminant cleanup activities. Other efforts may involve moving materials and industrial activities indoors into existing buildings or structures.

  

In very limited cases, industrial operators may make major changes at a site to achieve "no exposure". These efforts may include constructing a new building or cover to eliminate exposure or constructing structures to prevent run-on and storm water contact with industrial materials or activities. Where major changes to achieve "no exposure" increase the impervious area of the site, the facility operator must provide this information on the "no exposure" certification form as discussed above. Using this and other available data and information, permitting authorities should be able to assess whether any major change has resulted in increased pollutant concentrations or loadings, toxicity of the storm water runoff, or a change in natural hydrological patterns that would interfere with the attainment and maintenance of water quality standards, including designated uses or appropriate narrative, chemical, biological, or habitat criteria where such State or Tribal water quality standards exist. In these instances, the facility operator and their NPDES permitting authority should take appropriate actions to ensure that attainment or maintenance of water quality standards can be achieved. The NPDES permitting authority should decide if the facility must obtain coverage under an individual or general permit to ensure that appropriate actions are taken to address adverse water quality impacts.

While the intent of today's "no exposure" provision is to reduce the regulatory burdens on industrial facilities and government agencies, the FACA Committee suggested that the NPDES permitting authority consider a compliance assessment program to ensure that facilities that have availed themselves of this "no exposure" option meet the applicable requirements. Inspections could be conducted at the discretion of the NPDES authority and be coordinated with other facility inspections. EPA expects, however, that the permitting authority will conduct inspections when it becomes aware of potential water quality impacts possibly caused by the facility's storm water discharges or when requested to do so by adversely affected members of the public. The intent of this provision is that the 5 year "no exposure" certification be fully available to, and enforceable by, appropriate federal and State authorities under the CWA. Private citizens can enforce against facilities for discharges of storm water that are inconsistent with a "no exposure" certification if storm water discharges from such facilities are not otherwise permitted and in compliance with applicable requirements.

EPA received comments from owners, operators and representatives of Phase I facilities classified as "light industry" as defined by the regulations at § 122.26(b)(14)(xi). The comments recommended maintaining the approach of the existing regulations which does not require the discharger to submit any supporting documentation to the permitting authority in order to claim the "no exposure" exclusion from permitting. As discussed previously, the "no exposure" concept was developed in response to the Ninth Circuit court's remand of part of the existing rules back to EPA. The court found that EPA cannot rely on the "unverified judgment" of the facility. The comments opposing documentation did not address the "unverified judgment" concern.

Today's rule is a "conditional" exclusion from permitting which requires all categories, including the "light industrial" facilities that have no exposure of materials to storm water, to submit a certification to the permitting authority. Upon receipt of a complete certification, the permitting authority can review the information, or call, or inspect the facility if there are doubts about the facility's "no exposure" claim. Also, if the facility discharges into an MS4, the operator of the MS4 can request a copy of the certification, and can inspect the facility. The public can request a copy of the certification and/or inspection reports. In adopting these conditional "no exposure" provisions, the Agency addressed the Ninth Circuit court's ruling regarding the discharger's unverified judgment.

EPA received one comment requesting clarification on whether the anti-backsliding provisions in the regulations at §122.44(l) apply to industrial facilities that are currently covered under an NPDES storm water permit, and whether such facilities could qualify for the "no exposure" exclusion under today's rule. The anti-backsliding provisions will not prevent most industrial facilities that can certify "no exposure" under today's rule from qualifying for an exclusion from permitting. The anti-backsliding provisions contain 5 exceptions that allow permits to be renewed, reissued or modified with less stringent conditions. One exception at §122.44(l)(2)(A) allows less stringent conditions if "material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation." Section 122.44(l)(B)(1) also allows less stringent requirements if "information is available which was not available at the time of permit issuance and which would have justified the application of less stringent effluent limitations at the time of permit issuance." Facility's operators who certify "no exposure" and submit the required information once every 5 years will have provided the permitting

authority "information that was not available at the time of permit issuance." Also, some facilities may, in order to achieve "no exposure", make "material and substantial alterations or additions to the permitted facility." Therefore, most facilities covered under existing NPDES general permits for storm water (e.g., EPA's Multi-Sector General Permit) will be eligible for the conditional "no exposure" exclusion from permitting without concern about the anti-backsliding provisions. Such dischargers will have met one or both of the anti-backsliding exceptions detailed above. Facilities that are covered under individual permits containing numeric limitations for storm water should consult with their permitting authority to determine whether the anti-backsliding provisions will prevent them from qualifying for the exclusion from permitting (for that discharge point) based on a certification of "no exposure".

***68785** EPA received several comments regarding the timing of when the "no exposure" certification should be submitted. The proposed rule said that the "no exposure" certification notice must be submitted "at the beginning of each permit term or prior to commencing discharges during a permit term." Some commenters interpreted this statement to mean that existing facilities can only submit the certification at the time a permit is being issued or renewed. EPA intended the phrase "at the beginning of each permit term" to mean "once every 5 years" and today's rule reflects this clarification. EPA envisions that the NPDES storm water program will be implemented primarily through general permits which are issued for a 5 year term. Likewise the "no exposure" certification term is 5 years. The NPDES permitting authority will maintain a simple registration list that should impose only a minor administrative burden on the permitting authority. The registration list will allow for tracking of industrial facilities claiming the exclusion. This change allows a facility to submit a "no exposure" certification at any time during the term of the permit, provided that a new certification is submitted every 5 years from the time it is first submitted (assuming that the facility maintains a "no exposure" status). Once a discharger has established that the facility meets the definition of "no exposure", and submits the necessary "no exposure" certification, the discharger must maintain their "no exposure" status. Failure to maintain "no exposure" at their facility could result in the unauthorized discharge of pollutants to waters of the United States and enforcement for violation of the CWA. Where a discharger believes that exposure could occur in the future due to some anticipated change at the facility, the discharger should submit an application and obtain coverage under an NPDES permit prior to such discharge to avoid penalties.

Where EPA is the permitting authority, dischargers may submit a "no exposure" certification at any time after the effective date of today's rule. Where EPA is not the permitting authority, dischargers may not be able to submit the certification until the non-federal permitting authority completes any necessary statutory or regulatory changes to adopt this "no exposure" provision. EPA recommends that the discharger contact the permitting authority for guidance on when the "no exposure" certification should be submitted.

EPA received comments on the proposed rule requirement that the discharger "must comply immediately with all the requirements of the storm water program including applying for and obtaining coverage under an NPDES permit," if changes occur at the facility which cause exposure of industrial activities or materials to storm water. The comments expressed the difficultly of immediate compliance. EPA expects that most facility changes can be anticipated, therefore dischargers should apply for and obtain NPDES permit coverage in advance of changes that result in exposure to industrial activities or materials. Permitting authorities may grant additional time, on a case-by-case basis, for preparation and implementation of a storm water pollution prevention plan.

Finally, today's rule at §122.26(g)(4) includes the information which must be included on the "no exposure" certification. Authorized States, Tribes or U.S. Territories may develop their own form which includes this required information, at a minimum. EPA adopted the requirements (with modification) from the draft "No Exposure Certification Form" published as an appendix to the proposed rule. Modifications were made to the draft form to address comments received and to streamline the required information. EPA included these certification requirements in today's rule in order to preserve its integrity. Dischargers in areas where EPA is the permitting authority should use the "No Exposure Certification" form included in Appendix 4.

**3. Definition of "No Exposure"**

  

For purposes of this section, “no exposure” means that all industrial materials or activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product. However, storm resistant shelter is not required for: (1) Drums, barrels, tanks, and similar containers that are tightly sealed, provided those containers are not deteriorated and do not leak; (2) adequately maintained vehicles used in material handling; and (3) final products, other than products that would be mobilized in storm water discharge (e.g., rock salt). Each of these three exceptions to the no exposure definition are discussed in more detail below.

EPA intends the term “storm resistant shelter” to include completely roofed and walled buildings or structures, as well as structures with only a top cover but no side coverings, provided material under the structure is not otherwise subject to any run-on and subsequent runoff of storm water. While the Agency intends that this provision promote permanent “no exposure”, EPA understands that certain vehicles could pass between buildings and, during passage, be exposed to rain and snow. Adequately maintained vehicles such as trucks, automobiles, forklifts, or other such general purpose vehicles at the industrial site that are not industrial machinery, and that are not leaking contaminants or are not otherwise a source of industrial pollutants, could be exposed to precipitation or runoff. Such activities alone does not prevent a discharger from being able to certify no exposure under this provision. Similarly, trucks or other vehicles awaiting maintenance at vehicle maintenance facilities, as defined at §122.26(b)(14)(viii), that are not leaking contaminants or are not otherwise a source of industrial pollutants, are not considered exposed.

In addition, EPA recognizes that there are circumstances where permanent “no exposure” of industrial activities or materials is not possible. Under such conditions, materials and activities may be sheltered with temporary covers, such as tarps, between periods of permanent enclosure. The final rule does not specify every such situation. EPA intends that permitting authorities will address this issue on a case-by-case basis. Permitting authorities can determine the circumstances under which temporary structures will or will not meet the requirements of this section. Until permitting authorities specifically determine otherwise, EPA recommends application of the “no exposure” exclusion for temporary sheltering of industrial materials or activities only during facility renovation or construction, provided that the temporary shelter achieves the intent of this section. Moreover, “exposure” that results from a leak in protective covering would only be considered “exposure” if not corrected prior to the next storm water discharge event. EPA received one comment requesting that this allowance for temporary shelter be limited to facility renovation or construction directly related to the industrial activity requiring temporary shelter, and be scheduled to minimize the use of temporary shelter. Another comment suggested placing time limits ***68786** on the use of temporary shelter. The commenter did not recommend a specific time period, rather the comment said that renovation in some instances may take years, and that EPA should not allow temporary shelter over prolonged periods. EPA agrees that the use of temporary shelter must be related to the renovation or construction at the site, and be scheduled or designed to minimize the use of temporary shelter. Further, EPA agrees that the use of temporary shelter should be limited in duration, but does not intend to define “temporary” or “prolonged period”.

Many final products are intended for outdoor use and pose little risk of storm water contamination, such as new cars. Therefore, final products, except those that can be mobilized in storm water discharge, can be “exposed” and still allow the discharge to certify “no exposure”. EPA intends the term “final products” to mean those products that are not used in producing another product. Any product that can be used to make another product is considered an “intermediate product.” For example, a facility that makes horse trailers can store the finished trailers outdoors as a final product. The storage of those final products does not prevent eligibility to claim “no exposure”. However, any facility that makes parts for the horse trailers (e.g., metal tubing, sheet metal, paint) is not eligible for the “no exposure” exclusion from permitting if those “intermediate products” are stored outdoors (i.e., “exposed”).

EPA received comments related to materials in drums, barrels, tanks and similar containers. Some comments objected to the language in the preamble to the proposed rule that would have recommended that the “exposure” determination for drums and

  

barrels be based on the "potential to leak." Those comments said that all drums and barrels have the potential to leak, thereby making certification impossible. They recommended allowing outdoor storage of drums and barrels except for those that "are leaking" at the time of certification. Other comments suggested allowing drums and barrels to be stored outside only if the drums and barrels: are empty; have secondary containment; or there is a spill contingency plan in place. Opposing comments suggested that allowing outdoor exposure of drums and barrels, based on existing integrity and condition, is inconsistent with the "however packaged" proposed rule language, and also would not satisfy the Ninth Circuit remand. The comments point out that the former rule was invalidated by the court in part because it relied on the "unverified judgment" of the light industrial facility operator to determine the non-applicability of the permit requirements, and that allowing the facility operator to determine the condition of their drums and barrels would result in the same flaw.

In response, EPA believes that drums and barrels that are stored outdoors pose little risk of storm water contamination unless they are open, deteriorated or leaking. The Agency has modified today's rule accordingly. EPA intends the term "open" to mean any container that is not tightly sealed and "sealed" to mean banded or otherwise secured and without operational taps or valves. Drums, barrels, tanks, and similar containers may only be stored outdoors under this conditional exclusion. The addition of material to or withdrawing of material from these containers while outside is deemed "exposure". Moving the containers while outside does not create "exposure" provided that the containers are not open, deteriorated or leaking. In order to complete the "no exposure" certification, a facility operator must inspect all drums, barrels, tanks or other containers stored outside to ensure that they are not open, deteriorated, or leaking. EPA recommends that the discharger designate someone at the facility to conduct frequent inspections to verify that the drums, barrels, tanks or other containers remain in a condition such that they are not open, deteriorated or leaking. Drums, barrels, tanks or other containers stored outside that have valves which are used to put material in or take material out of the container, and that have dripped or may drip, are considered to be "leaking" and must be under a storm resistant shelter in order to qualify for the no exposure exclusion. Likewise, leaking pipes containing contaminants exposed to storm water are deemed "exposed." If at any time drums, barrels, tanks or similar containers are opened, deteriorated or leaking, the discharger should take immediate actions to close or replace the container. Any resulting unpermitted discharge would violate the CWA. The Director, the operator of the MS4, or the municipality may inspect the facility to verify that all of the applicable areas meet the "no exposure" conditions as specified in the rule language. In requiring submission of the conditional "no exposure" certification and allowing the permitting authority and the operator of the MS4 to inspect the facility, today's rule does not rely on the unverified judgment of the facility to determine that the no exposure provision is being met.

EPA received several comments related to trash dumpsters that are located outside. The preamble to the proposed rule listed dumpsters in the same grouping as drums and barrels, which based exposure on the "potential to leak". Today's rule distinguishes between dumpsters and drums/barrels. In the Phase I Question and Answer document (volume 1, question 52) the Agency noted that a covered dumpster containing waste material that is kept outside is not considered "exposed" as long as "the container is completely covered and nothing can drain out holes in the bottom, or is lost in loading onto a garbage truck." EPA affirms this approach today. Industrial refuse and industrial trash that is left uncovered is deemed "exposed."

For purposes of this provision, particulate matter emissions from roof stacks/vents that are regulated and in compliance under other environmental protection programs, such as air quality control programs, and that do not cause storm water contamination, are considered "not exposed." EPA received comments on the phrase in the draft "no exposure" certification form that asked whether "particulate emissions from roof stacks/vents not otherwise regulated, and in quantities detectable in the storm water outflow," are exposed to precipitation. One comment expressed concern that the phrase "in quantities detectable in the storm water outflow" implies that the facility must conduct monitoring prior to completing the checklist, and must continue to monitor after receiving the no exposure exclusion, in order to be able to verify compliance with the no exposure provision. Another comment said that current measurement technology allows detection of pollutants at levels that may not cause environmental harm. EPA does not intend to require monitoring of runoff from facilities with roof stacks/vents prior to or after completing and submitting the no exposure certification. EPA has thus replaced the phrase "in quantities detectable" with "evident" to convey the message that emissions from some roof stacks/vents have the potential to contaminate storm water discharges in quantities that are considered significant or that cause or contribute to a water quality standards violation. In those instances where the permitting authority determines that particulate emissions from facility roof stacks/vents are a significant contributor

of pollutants or contributing to water quality violations, the permitting authority may require the discharger to apply for and obtain coverage under a ***68787** permit. Visible deposits of residuals (e.g., particulate matter) near roof or side vents are considered "exposed". Likewise, visible "track out" (i.e., pollutants carried on the tires of vehicles) or windblown raw materials are deemed "exposed."

EPA received a comment requesting an allowance under the "no exposure" provision for industrial facilities with several outfalls at a site where some, but not all of the outfalls drain non-exposed areas. The commenter provided an example of an industrial facility that has 5 outfalls draining different areas of the site, where two of those outfalls drain areas where industrial activities or materials are not exposed to storm water. The comment requested that the facility in this example be allowed to submit a "no exposure" certification in order to be relieved of permitting obligations for discharges from those two outfalls.

EPA agrees, but the comment would be implemented on an outfall-by-outfall basis in the permitting process, not through the "no exposure" exclusion. The "no exposure" provision was developed to allow exclusion from permitting of discharges from entire industrial facilities (except construction), based on a claim of "no exposure" for all areas of the facility where industrial materials or activities occur. Where exposure to industrial materials or activities exist at some but not all areas of the facility, the "no exposure" exclusion from permitting is not allowed because permit coverage is still required for storm water discharges from the exposed areas. Relief from permit requirements for outfalls draining non-exposed areas should be addressed through the permit process, in coordination with the permitting authority. Most NPDES general permits for storm water discharge provide enough flexibility to allow minimal or no requirements for non-exposed areas at industrial facilities. If the permitting authority determines that additional flexibility is needed for this scenario, the permits could be modified as necessary.

***K. Public Involvement/Public Role***

The Phase II FACA Subcommittee discussed the appropriate role of the public in successful implementation of a municipal storm water program. EPA believes that an educated and actively involved public is essential to a successful municipal storm water program. An educated public increases program compliance from residents and businesses as they realize their individual and collective responsibility for protecting water resources (e.g., the residents and businesses could be subject to a local ordinance that prohibits dumping used oil down storm sewers). Finally, the program is also more likely to receive public support and participation when the public is actively involved from the program's inception and allowed to participate in the decision making process.

In a time of limited staff and financial resources, public volunteers offer diverse backgrounds and expertise that may be used to plan, develop, and implement a program that is tailored to local needs (e.g., participate in public meetings and other opportunities for input, perform lawful volunteer monitoring, assist in program coordination with other preexisting and related programs, aid in the development and distribution of educational materials, and provide public training activities). The public's participation is also useful in the areas of information dissemination/education and reporting of violators, where large numbers of community members can be more effective than a few regulators.

The public can also petition the NPDES permitting authority to require an NPDES permit for a discharge composed entirely of storm water that contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States. In evaluating such a petition, the NPDES permitting authority is encouraged to consider the set of designation criteria developed for the evaluation of small MS4s located outside of an urbanized area in places with a population of at least 10,000 and a population density of 1,000 or more. Furthermore, any person can protect water bodies by taking civil action under section 505 of the CWA against any person who is alleged to be in violation of an effluent standard or permit condition. If civil action is taken, EPA encourages citizen plaintiffs to resolve any disagreements or concerns directly with the parties involved, either informally or through any available alternative dispute resolution process.

EPA recognizes that public involvement and participation pose challenges. It requires a substantial initial investment of staff and financial resources, which could be very limited. Even with this investment, the public might not be interested in participating. In addition, public participation could slow down the decision making process. However, the benefits are numerous.

EPA encourages members of the public to contact the NPDES permitting authority or local MS4s operator for information on the municipal storm water program and ways to participate. Such information may also be available from local environmental, nonprofit and industry groups.

Some commenters stressed the need to suggest to the public that they have a responsibility to fund the municipal storm water program. While EPA believes it is important that the program be adequately funded, today's rule does not address appropriate mechanisms or levels for such funding.

EPA received comments expressing concern that considerable public involvement requirements could result in increased litigation. EPA is not convinced there is a correlation between meaningful public education programs and any increased probability of litigation.

Finally, EPA received comments stating that the Agency should not en courage volunteer monitoring unless proper procedures are followed. EPA agrees. EPA encourages only lawful monitoring, i.e., obtaining the necessary approval if there is any question about lawful access to sites. Moreover, as a matter of good practice and to enhance the validity and usefulness of the results, any party, public or private, conducting water quality monitoring is encouraged to use appropriate quality control procedures and approved sampling and analytic methods.

### *L. Water Quality Issues*

**1. Water Quality Based Effluent Limits**

In addition to technology based requirements, all point source discharges of industrial storm water are subject to more stringent NPDES permitting requirements when necessary to meet water quality standards. CWA sections 402(p)(3)(A) and 301(b)(1)(C). For municipal separate storm sewers, EPA or the State may determine that other permit provisions (e.g. one of the minimum measures) are appropriate to protect water quality and, for discharges to impaired waters, to achieve reasonable further progress toward attainment of water quality standards pending implementation of a TMDL. CWA section 402(p)(3)(B)(iii). See Defenders of Wildlife, et al. Browner, No. 98-71080 (9th cir., August 11, 1999). Discharges of storm water also must comply with applicable antidegradation policies and implementation methods to maintain and protect water quality. 40 CFR 131.12. Section 122.34(a) emphasizes this point by specifically noting that a storm water management program designed to reduce the discharge of pollutants from the storm sewer system "to the maximum extent practicable" is also designed to protect water quality. ***68788** Permits issued to non-municipal sources of storm water must include water quality-based effluent limits where necessary to meet water quality standards.

Commenters challenged EPA's interpretation of the CWA as requiring water quality-based effluent limits for MS4s when necessary to protect water quality. Commenters asserted that CWA 402(p)(3)(B), which addresses permit requirements for municipal discharges, limits the scope of municipal program requirements to an effective prohibition on non-storm water discharges to a separate storm sewer and to controls which reduce pollutants to the "maximum extent practicable, including management practices, control techniques and system design and engineering methods." They asserted that the final rule should clarify that neither numeric nor narrative water quality-based limits are appropriate or authorized for MS4s.

EPA disagrees that section 402(p)(3) divests permitting authorities of the tools necessary to issue permits to meet water quality standards. Section 402(p)(3)(B)(iii) specifically preserves the authority for EPA or the State to include other provisions determined appropriate to reduce pollutants in order to protect water quality. Defenders of Wildlife, slip op. at 11688. Small MS4s regulated under today's rule are designated under CWA 402(p)(6) "to protect water quality."

Commenters argued that water quality standards, particularly numeric criteria, were not designed to address storm water discharges. The episodic nature and magnitude of storm water events, they argue, make it impossible to apply the "end of pipe" compliance assessment approach, for example, in the development of water quality based effluent limits.

EPA's disagrees with the commenters arguments about the inability of water quality criteria to address high flow conditions. Today's final rule does, however, address the concern that numeric effluent limits will necessitate end of pipe treatment and the need to provide a workable alternative.

Today's rule was developed under the approach outlined in the Interim Permitting Policy for Water Quality-Based Effluent Limitations in Storm Water Permits, issued on August 1, 1996. 61 FR 43761 (November 26, 1996) (the "Interim Permitting Policy"). EPA intends to issue NPDES permits consistent with the Interim Permitting Policy, which provides as follows:

In response to recent questions regarding the type of water quality-based effluent limitations that are most appropriate for NPDES storm water permits, EPA is adopting an interim permitting approach for regulating wet weather storm water discharges. Due to the nature of storm water discharges, and the typical lack of information on which to base numeric water quality-based effluent limitations (expressed as concentration and mass), EPA will use an interim permitting approach for NPDES storm water permits.

"The interim permitting approach uses best management practices (BMPs) in first-round storm water permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards. In cases where adequate information exists to develop more specific conditions or limitations to meet water quality standards, these conditions or limitations are to be incorporated into storm water permits, as necessary and appropriate. This interim permitting approach is not intended to affect those storm water permits that already include appropriately derived numeric water quality-based effluent limitations. Since the interim permitting approach only addresses water quality-based effluent limitations, it also does not affect technology-based effluent limitations, such as those based on effluent limitations guidelines or developed using best professional judgment, that are incorporated into storm water permits.

"Each storm water permit should include a coordinated and cost-effective monitoring program to gather necessary information to determine the extent to which the permit provides for attainment of applicable water quality standards and to determine the appropriate conditions or limitations of subsequent permits. Such a monitoring program may include ambient monitoring, receiving water assessment, discharge monitoring (as needed), or a combination of monitoring procedures designed to gather necessary information.

"This interim permitting approach applies only to EPA; however, EPA also encourages authorized States and Tribes to adopt similar policies for storm water permits. This interim permitting approach provides time, where necessary, to more fully assess the range of issues and possible options for the control of storm water discharges for the protection of water quality. This interim permitting approach may be modified as a result of the ongoing Urban Wet Weather Flows Federal Advisory Committee policy dialogue on this subject."

One commenter challenged the Interim Permitting Policy on a procedural basis, arguing that it was published without opportunity for public notice and comment. In response, EPA notes that the Policy was included verbatim and made available for public comment in the proposal to today's final rule. Prior to that proposal, the Agency defended the application of the Policy on a case-by-case basis in individual permit proceedings. Moreover, the essential elements of the Policy—that narrative effluent limitations are the most appropriate form of effluent limitations for storm water dischargers from municipal sources—was inherent in §122.34(a) of the proposed rule, and was the subject of extensive public comment. In any event, the Policy does not constitute a binding obligation. It is policy, not regulation.

Consistent with the recognition of data needs underlying the Policy, EPA will evaluate the small MS4 storm water regulations after the second round of permit issuance. Section 122.34(e)(2) of today's rule expressly provides that for the interim ten-year period, "EPA strongly recommends that until the evaluation of the storm water program in §122.37, no additional requirements beyond the minimum control measures be imposed on regulated small MS4s without the agreement of the operator of the affected small MS4, except where an approved TMDL or equivalent analysis provides adequate information to develop more

  

specific measures to protect water quality." This approach addresses the concern for protecting water resources from the threat posed by storm water discharges with the important qualification that there must be adequate information on the watershed or a specific site as a basis for requiring tailored storm water controls beyond the minimum control measures. As indicated, the Interim Permitting Policy has several important limitations—it does not apply to technology-based controls or to sources that already have numeric end of pipe effluent limitations. EPA encourages authorized States and Tribes to adopt policies similar to the Interim Permitting Policy when developing storm water discharge programs. For a discussion of appropriate monitoring activities, see Section H.3.d., Evaluation and Assessment.

Where a water quality analysis indicates there is a need and basis for deriving water quality-based effluent limits in NPDES permits for storm water discharges regulated under today's rule, EPA believes that most of these cases would be satisfied by narrative effluent ***68789** limitations that require the implementation of BMPs. NPDES permit limits will in most cases continue to be based on the specific approach outlined in today's rule for the implementation of BMPs as the most appropriate form of effluent limitation to satisfy technology and water quality-based requirements. See §122.34(a). For storm water management plans with existing BMPs, this may require further tailoring of BMPs to address the pollutant(s) of concern, the nature of the discharge and the receiving water. If the permitting authority determines that, through implementation of appropriate BMPs required by the NPDES storm water permit, the discharge has the necessary controls to provide for attainment of water quality standards, additional controls are not needed in the permit. Conversely, if a discharger (MS4, industrial or construction) fails to adopt and implement adequate BMPs, the permittee and/or the permitting authority should consider a different mix of BMPs or more specific conditions to ensure water quality protection.

Some commenters observed that there was no evidence from the experience of storm water dischargers regulated under the existing NPDES storm water program, or from studies or reports that allegedly support EPA's position, that implementation of BMPs to satisfy the six minimum control measures would meet applicable water quality standards for a regulated small MS4. In response, EPA acknowledges that the six minimum measures are intended to implement the statutory requirement to control discharges to the maximum extent practicable, and they may not result in the attainment of water quality standards in all cases. The control measures do, however, focus on and address well-documented threats to water quality associated with storm water discharges. Based on the collective expertise of the FACA Sub-committee, EPA believes that implementation of the six minimum measures will, for most regulated small MS4s, be adequate to protect water quality, and for other regulated small MS4s will substantially reduce the adverse impacts of their discharges on water quality.

Some commenters asserted that analyses of existing water quality criteria suggest that numeric criteria for aquatic life may be overprotective if applied to storm water discharges. These comments maintained that an approach that prohibits exceedance of applicable water quality criteria is unworkable. Various commenters recommended wet weather specific criteria, variances to the criteria during wet weather events, and seasonal designated uses. Other commenters noted that water quality-based effluent limits in NPDES permits have traditionally been developed based on dry weather flow conditions (e.g., assuming critical low-flow conditions in the receiving water to ensure protection of aquatic life and human health). Wet weather discharges, however, typically occur under high-flow conditions in the receiving water. Assumptions regarding mass balance equations and size of mixing zones may also not be pertinent during wet weather.

EPA acknowledges the need to devise a regulatory program that is both flexible enough to accommodate the episodic nature, variability and volume of wet weather discharges and prescriptive enough to ensure protection of the water resource. EPA believes that wet weather discharges can be adequately addressed in the existing regulations through refining designated uses and assigning criteria that are tailored to the level of water quality protection described by the refined designated use.

EPA believes that lack of precision in assigning designated uses and corresponding criteria by States and Tribes, in many cases may result in application of water quality criteria that may not appropriately match the intended condition of the water body. States and Tribes have frequently designated uses without regard to site-specific wet weather conditions. Because certain uses (swimming, for example) might not exist during high-intensity storm events or in the winter, States may factor such climatic conditions and seasonal uses into their use designations with appropriate analyses. This would acknowledge that a lower level

  

of control, at lower compliance cost, would be appropriate to protect that use. Before modifying any designated use, however, States would need to evaluate the effect of less stringent water quality criteria on protecting other uses, including any threatened or endangered species, drinking water supplies and downstream uses. EPA will further evaluate these issues in the context of the Water Quality Standards Regulation, Advance Notice of Proposed Rule Making (ANPRM), 63 FR, 36742, July 7, 1998.

One of the major themes presented by EPA in the ANPRM is that refinement in use designations and tailoring of water quality criteria to match refined use designations is an important future direction of the water quality standards program. In assigning criteria to protect general use classifications, a State or Tribe must ensure that the criteria are sufficiently protective to safeguard the full range of waters of the State, i.e., criteria would be based on the most sensitive use. This approach has been disputed, especially for aquatic life uses, where evidence suggests that the general use criteria will require controls more stringent than needed to protect the existing or potential aquatic life community for a specific water body. EPA recognizes that there is a growing need to more precisely tailor use descriptions and criteria to match site-specific conditions, ensuring that uses and criteria provide an appropriate level of protection, which, to the extent possible, are not overprotective. EPA is engaged in an ongoing evaluation of its regulations in this area through the ANPRM effort. At the same time, EPA continues to encourage States and Tribes to review the applicability of the designated uses and associated criteria using existing provisions in the water quality standards regulation.

**2. Total Maximum Daily Loads and Analysis To Determine the Need for Water Quality-Based Limitations**

The development and implementation of total maximum daily loads (TMDLs) provide a link between water quality standards and effluent limitations. CWA section 303(d) requires States to develop TMDLs to provide more stringent water quality-based controls when technology-based controls are inadequate to achieve applicable water quality standards. A TMDL is the sum of the individual wasteload allocations for point sources and load allocations for nonpoint sources, with consideration for natural background conditions. A TMDL quantifies the maximum allowable loading of a pollutant to a water body and allocates this maximum load to contributing point and nonpoint sources so that water quality criteria will not be exceeded and designated uses will be protected. A TMDL also includes a margin of safety to account for uncertainty about the relationship between pollutant loads and water quality.

Today's final rule refers to TMDLs in several provisions. For the purpose of today's rule, EPA relies on the component of the TMDL that evaluates existing conditions and allocates loads. For discharges to waters that are not impaired and for which a TMDL has not been developed, today's rule also refers to an “equivalent analysis.” The discussion that follows uses the term “TMDL” for both.

Under revised §122.26(a)(9)(i)(C), the permitting authority may designate ***68790** storm water discharges that require NPDES permits based on TMDLs that address the pollutants of concern. For storm water discharges associated with small construction activity, §122.26(b)(15)(i)(B) provides a waiver provision where it may be determined that storm water controls are not needed based on TMDLs that address sediment and any other pollutants of concern. The NPDES permitting authority may waive requirements under the program for certain small MS4s within urbanized areas serving less than 1,000 persons provided that, if the small MS4 discharges any pollutant that has been identified as a cause of impairment of a water body into which it discharges, the discharge is in compliance with a wasteload allocation in a TMDL for the pollutant of concern. The permitting authority may also waive requirements for MS4s in urbanized areas serving between 1,000 and 10,000 persons, if the permitting authority determines that storm water controls are not needed, as provided in §123.35(d)(2). See §122.32(c).

Under CWA section 303(d), States identify which of their water bodies need TMDLs and rank them in order of priority. Generally, once a TMDL has been completed for one or more pollutants in a water body, a wasteload allocation for each point source discharging the pollutant(s) is implemented as an enforceable condition in the NPDES permit. Regulated small MS4s are essentially like other point source discharges for purposes of the TMDL process.

A TMDL and the resulting wasteload allocations for pollutant(s) of concern in a water body may not be available because the water body is not on the State's 303(d) list, the TMDL has not yet been completed, or the TMDL did not include specific

  

pollutants of concern. In these cases, the permitting authority must determine whether point sources discharge pollutant(s) in amounts that cause, have the reasonable potential to cause, or contribute to excursions above State water quality standards, including narrative water quality criteria. This so-called "reasonable potential" analysis is intended to determine whether and for what pollutants water quality based effluent limits are required. The analysis is, in effect, a substitute for a similar determination that would be made as part of a TMDL, where necessary. When "reasonable potential" exists, regulations at §122.44(d) require a water quality-based effluent limit for the pollutant(s) of concern in NPDES permits. The water quality-based effluent limits may be narrative requirements to implement BMPs or, where necessary, may be numeric pollutant effluent limitations.

Commenters, generally from the regulated community, objected that, due to references to the need to develop a program "to protect water quality" and to additional NPDES permit requirements beyond the minimum control measures based on TMDLs or their equivalent, regulated small MS4s will be subject to uncertain permit limitations beyond the six minimum control measures. Commenters also asserted that through the imposition of a wasteload allocation under a TMDL in impaired water bodies, there is a likelihood that unattainable, yet enforceable narrative and numeric standards will be imposed on regulated small MS4s.

As is discussed in the preceding section, NPDES permits must include any more stringent limitations when necessary to meet water quality standards. However, even if a regulated small MS4 is subject to water quality based effluent limits, such limits may be in the form of narrative effluent limitations that require the implementation of BMPs. As discussed earlier, EPA has adopted the Interim Permitting Policy and incorporated it in the development of today's rule to recognize the appropriateness of BMP-based limits developed on a case-by-case basis.

EPA formed a Federal Advisory Committee to provide advice to EPA on identifying water quality-limited water bodies, establishing TMDLs for them as appropriate, and developing appropriate watershed protection programs for these impaired waters in accordance with CWA section 303(d). Operating under the auspices of the National Advisory Council for Environmental Policy and Technology (NACEPT), the committee produced its Report of the Federal Advisory Committee on the Total Maximum Daily Load (TMDL) Program (July 1998). EPA recently published a proposed rule to implement the Report's recommendations (64 FR 46012, August 23, 1999).

**3. Anti-Backsliding**

In general, the term "anti-backsliding" refers to statutory provisions at CWA sections 303(d)(4) and 402(o) and regulatory provisions at 40 CFR 122.44(l). These provisions prohibit the renewal, reissuance, or modification of an existing NPDES permit that contain effluent limits, permit terms, limitations and conditions, or standards that are less stringent than those established in the previous permit. There are also exceptions to this prohibition known as "antibacksliding exceptions."

The issue of backsliding from prior permit limits, standards, or conditions is not expected to initially apply to most storm water dischargers designated under today's proposal because they generally have not been previously authorized by an NPDES permit. However, the backsliding prohibition would apply if a storm water discharge was previously covered under another NPDES permit. Also, the backsliding prohibition could apply when an NPDES storm water permit is reissued, renewed, or modified. In most cases, however, EPA does not believe that these provisions would restrict revisions to storm water NPDES permits.

One commenter questioned whether, if BMPs implemented by a regulated small MS4 operator fail to produce results in removal of pollutants and the permittee attempts to substitute a more effective BMP, the small MS4 operator could be accused of violating the anti-backsliding provisions and also be exposed to citizen lawsuits. In response, EPA notes that in such circumstances the MS4's permit has not changed and, therefore, the prohibition against backsliding is not applicable. Further, any change in the mix of BMPs that was intended to be more effective at controlling pollutants would not be considered backsliding, even if it did not include all of the previously implemented BMPs.

**4. Water Quality-Based Waivers and Designations**

  

Several sections of today's final rule refer to water quality standards in identifying those storm water discharges that are and are not required to be permitted under today's rule. As noted in §122.30 of today's rule, CWA section 402(p)(6) requires the designation of municipal storm water sources that need to be regulated to protect water quality and the establishment of a comprehensive storm water program to regulate these sources. Requirements applicable to certain municipal sources may be waived based on the absence of demonstrable water quality impacts. Section 122.32(c). The section 402(p)(6) mandate to protect water quality also provides the basis for regulating discharges associated with small construction. See also §122.26(b)(15)(i). Further, today's rule carries forward the existing authority for the permitting authority to designate sources of storm water discharges based upon water quality considerations. Section 122.26(a)(9)(i)(C) and (D).

As is discussed above in sections II.H.2.e (for small MS4s) and II.I.1.b.ii ***68791** (for small construction), the requirements of today's rule may be waived based on wasteload allocations that are part of "total maximum daily loads" (TMDLs) that address the pollutants of concern or, in the case of small construction and municipalities serving between 1,000 and 10,000 persons, the equivalents of TMDLs. One commenter stated that waivers would allow exemptions to the technology based requirements and would thus be inconsistent with the two-fold approach of the CWA (a technology based minimum and a water quality based overlay). EPA acknowledges that waivers are not allowed for other technology-based requirements under the CWA. A more flexible approach is allowed, however, for sources designated for regulation under 402(p)(6) to protect water quality. For such sources EPA may allow a waiver where it is demonstrated that an individual source does not present the threat to water quality that was the basis for EPA's designation.

**III. Cost-Benefit Analysis**

EPA has determined that the range of the rule's benefits exceeds the range of regulatory costs. The estimated rule costs range from $847.6 million to $981.3 million annually with corresponding estimated monetized annual benefits which range from $671.5 million to $1.628 billion, expected to exceed costs.

The rule's cost and benefit estimates are based on an annual comparison of costs and benefits for a representative year (1998) in which the rule is implemented. This differs from the approach used for the proposed rule which projected cost and benefits over three permit terms. EPA has chosen to use the current approach because it determined that the ratio of annual benefits and costs would not change significantly over time. Moreover, because there is not an initial outlay of capital costs with benefits accruing in the future (i.e., benefits and costs are almost immediately at a steady state), it is not necessary to discount costs in order to account for a time differential.

EPA developed detailed estimates of the costs and benefits of complying with each of the incremental requirements imposed by the rule. The Agency used two approaches, a national water quality model and national water quality assessment, to estimate the potential benefits of the rule. Both approaches show that the benefits are likely to exceed costs.

These estimates, including descriptions of the methodology and assumptions used, are described in detail in the Economic Analysis of the Final Phase II Rule, which is included in the record of this rule making. Exhibit 3 summarizes costs and benefits associated with the basic elements of today's rule.

**Exhibit 3.—Comparison of Annual Compliance Cost and Benefit Estimates** [1]

| Monetized benefits | National water quality model (millions of 1998 dollars) | National water quality assessment (millions of 1998 dollars) |
|---|---|---|
| Municipal Minimum Measures | ..... | $131.0-$410.2 |
| Controls for Construction Sites | ..... | $540.5-$686.0 |
| Total Annual Benefits | $1,628.5 | $671.5-$1,096.2 |

  

| Costs | Millions of 1998 dollars [2] |
|---|---|
| Municipal Minimum Measures | $297.3 |
| Controls/Waivers for Construction Sites | $545.0-$678.7 |
| Federal/State Administrative Costs | $5.3 |
| Total Annual Costs | $847.6-$981.31 |

***A. Costs***

**1. Municipal Costs**

Initially, to determine municipal costs for the proposed rule, EPA used anticipated expenditure data included in permit applications from a sample of 21 Phase I MS4s. Certain commenters criticized the Agency for using anticipated expenditures because they could be significantly different from the actual expenditures. These commenters suggested that the Agency use the actual cost incurred by the Phase I MS4s. Other comments stated that because the Phase I MS4s, in general, are large municipalities, they may not be representative of the Phase II MS4s for estimating regulatory costs. Finally, one commenter noted that the sample of 21 municipalities used to project cost was relatively small.

To address the concerns of the commenters, EPA utilized a National Association of Flood and Stormwater Management Agencies (NAFSMA) survey of the Phase II community to obtain incremental cost estimates for Phase II municipalities. Using the list of potential Phase II designees published in the Federal Register (63 FR 1616), NAFSMA contacted more than 1,600 jurisdictions. The goal of the survey was to solicit information from those communities about the proposed Phase II NPDES storm water program. Several of the survey questions corresponded directly to the minimum measures required by the Phase II rule. One hundred twenty-one surveys were returned to NAFSMA and were used to develop municipal costs.

Using the NAFSMA information, EPA estimated average annual per household program costs for automatically designated municipalities. EPA also estimated an average annual per household administrative cost for municipalities to address application, record keeping, and reporting requirements of the Rule. The total average per household cost of the rule is expected to $9.16 per household.

To determine potential national level costs for municipalities, EPA multiplied the number of households (32.5 million) by the per household cost ($9.16). EPA estimates the annual cost of the Phase II municipal program at $298 million.

As an alternative method, and point of comparison, to the NAFSMA-based approach, EPA reviewed actual expenditures reported from 35 Phase I MS4s. The Agency targeted these 35 Phase I MS4s because they had participated in the NPDES program for ***68792** nearly one permit term, were smaller in size and had detailed data reflecting their actual program implementation costs. Of the 35 MS4s, appropriate cost data was only available for 26 of those MS4s. EPA analyzed the expenditure data and identified the relevant expenditures, excluding costs presented in the annual reports unrelated to the requirements of the Rule. The cost range and annual per household program costs of $9.08 are similar to those found using the NAFSMA survey data.

**2. Construction Costs**

In order to estimate the rule's construction-related cost on a national level (the soil and erosion controls (SEC) requirements of the rule and the potential impacts of the post-construction municipal measure on construction), EPA estimated a per site cost for sites of one, three, and five acres and multiplied these costs by the total number of estimated Phase II construction starts across these size categories.

To estimate the percentage of starts subject to the soil and erosion control requirements between 1 and 5 acres, with respect to each category of building permits (residential, commercial, etc.), EPA initially used data from Prince George's County (PGC), Maryland, and applied these percentages to national totals. In the proposal, EPA recognized that the PGC data may not be representative of the entire country and requested data that could be used to develop better estimates of the number of construction sites between 1 and 5 acres. EPA did not receive any substantiated national data from commenters.

In view of the unavailability of national data from commenters, EPA made extensive efforts to collect construction site data around the country. The Agency contacted more than 75 municipalities. EPA determined that 14 of the contacted municipalities had useable construction site data. Using data from these 14 municipalities, EPA developed an estimate of the percentage of construction starts on one to five acres. EPA then multiplied this percentage by the number of building permits issued nationwide to determine the total number of construction starts occurring on one to five acres. Finally, to isolate the number of construction starts incrementally regulated by Phase II, EPA subtracted the number of activities regulated under equivalent programs (e.g., areas covered by the Coastal Zone Act Reauthorization Amendments of 1990, and areas covered by equivalent State level soil and erosion control requirements). Ultimately, EPA estimated that 110,223 construction starts would be incrementally covered by the rule annually.

EPA then used standard cost estimates from Building Construction Cost Data and Site Work Landscape Cost Data (R.S. Means, 1997a and 1997b) to estimate construction BMP costs for 27 model sites in a variety of typical site conditions across the United States. The model sites included three different site sizes (one, three and five acres), three slope variations (3%, 7%, and 12%), and three soil erosivity conditions (low, medium, and high). EPA chose BMP combinations appropriate to the model site conditions. Based on the assumption that any combination of site factors is equally likely to occur in a given site, EPA developed average cost of sediment and erosion control for all model sites. EPA estimated that, on average, BMPs for a 1 acre site will cost $1,206, for a 3 acre site $4,598 and for a 5 acre site $8,709.

EPA then estimated administrative costs per construction site for the following elements required under the rule: Submittal of a notice of intent for permit coverage; notification to municipalities; development of a storm water pollution prevention plan; record retention; and submittal of a notice of termination. EPA estimated the average total administrative cost per site to be $937.

EPA also considered the cost implications of NPDES permit authorities waiving the applicability of requirements to storm water discharges from small construction sites based on two different criteria involving water quality impact and low rainfall. EPA received comments stating that a waiver would require a significant investment in training or acquisition of a consultant. Based on comments received, EPA eliminated one of the waiver conditions involving low soil loss threshold because it necessitated use of the Revised Universal Soil Loss Equation which could require extensive technical expertise.

Based on the opinions of construction industry experts, EPA estimates that 15 percent of the construction sites that would otherwise be covered by today's rule will be eligible to receive waivers. Therefore, the Agency has excluded 15 percent of the construction sites when deriving costs of sediment and erosion control. The average cost for sites to qualify for the waiver is expected to be $34 per site. The construction cost analysis for the proposed rule did not include any costs for the preparation and submission of waiver applications because EPA believed those costs would be negligible. However, in response to public comments, EPA has estimated these potential costs.

EPA has also estimated the potential costs for construction site operators to implement the post-construction minimum measure. These are costs that may be incurred by construction site operators if the MS4 chooses to meet the post-construction minimum measure by requiring on-site structural, site-by-site control of post-construction runoff. Municipalities may select from an array of structural and non-structural options in implementing this measure, so the potential costs to construction operators is uncertain. Nonetheless, EPA developed average annual BMP costs for sites of one, three, five and seven acres. EPA's analysis accounted for varying levels of imperviousness that characterize residential, commercial, and institutional land uses. Nationwide, these costs are expected to range from $44 million to $178 million annually.

  

Finally, to establish national incremental annual costs for Phase II construction starts, EPA multiplied the total costs of compliance for the chosen site size categories by the total number of Phase II construction starts and added post-construction costs. EPA estimates the annual compliance cost to range from $545 million to $678.7 million.

***B. Quantitative Benefits***

In the Economic Analysis for the proposed rule, a "top-down" approach was used to estimate economic benefits. Under this approach, the combined economic benefits for wet weather programs were estimated first, and then were divided among various water programs on the basis of expert opinion. As a result, the benefits estimates for an individual program were rather uncertain. Moreover, this approach was inconsistent with the approach used to estimate the cost of the proposed storm water rule, which was developed using municipal-based and cost-based data to develop "bottom-up" costs. Therefore, EPA decided to use a "bottom-up" approach for estimating benefits of the Phase II rule. To adequately reflect the quantifiable benefits of the rule, EPA used two different methods: (1) National Water Quality Model and (2) National Water Quality Assessment.

To monetize benefits in both approaches, the Agency applied Carson and Mitchell's (1993) estimates of household willingness-to-pay (WTP) for water quality improvement to estimates of waters impaired by storm water discharges. Carson and Mitchell's 1993 study reports the results of their 1983 national survey of WTP for incremental ***68793** improvements in fresh water quality. Carson and Mitchell estimate the WTP for three minimum levels of fresh water quality: boatable, fishable, and sizable. EPA adjusted the WTP amounts to account for inflation, growth in real per capita income, and increased attitudes towards pollution control. The adjusted WTP amounts for improvements in fresh water quality are $210 for boatable, $158 for fishable, and $177 for sizable. A brief summary of the national water quality model and national water quality assessment approaches follow.

**1. National Water Quality Model**

One approach EPA used to estimate the benefits of the Phase II municipal and construction site controls was the National Water Pollution Control Assessment Model (NWPCAM). NWPCAM estimates benefits of the storm water program at the national level, including the impact on small streams. This model estimates water quality and the resultant use support for the 632,000 miles of rivers and streams in the USEPA Reach File Version 1 (RF1), which covers the continental United States. The model analyzes water quality changes by stream reach. The parameters modeled in the NWPCAM are biological oxygen demand (BOD), total suspended solids (TSS), dissolved oxygen (DO), and fecal coliforms (FC).

The model projects changes in water quality due to the Phase II municipal and construction site controls. To calculate the economic benefits of change in water quality, the number of households in the proximity of the stream reach are determined, by overlaying the model results on the 1990 Census of Populated Places and Minor Civil Divisions, and updating the population to 1998. Economic benefits are calculated using the Carson and Mitchell WTP values. The benefits are separately estimated for local and non-local waters on the basis of WTP values and proximity to water quality changes.

The value of the change in use support for local waters is greater than the value of the non-local waters because of the opportunity to use local waters by the local population. This model assumes that if improvement occurs in waters that are not close to population centers the economic value is lower. Therefore, benefits are estimated for local and non-local waters separately. This assumption is based on Carson and Mitchell's survey which asked respondents to apportion each of their stated WTP values between achieving the water quality goals in their own State and achieving those goals in the nation as a whole. On average, respondents allocated 67% of their values to achieving in-State water quality goals and the remainder to the nation as a whole. Carson and Mitchell argue that for valuing local water quality changes 67% is a reasonable upper bound for the local multiplier and 33% for the non-local water quality changes. For the purposes of this analysis, the locality is defined as urban sites and associated populations linked into the NWPCAM framework. Using this methodology, the total monetized benefits of Phase II control of urban and construction site runoff is estimated to be $1.628 billion per year. The local and non-local benefits due to Phase II controls are presented in Exhibit 4.

  

**Exhibit 4.—Local and Non-local Benefits Estimates Due to Phase II Controls National Water Quality Model Estimate**

| Use support | Local benefits ($million/yr) | Non-local benefits [1] ($million/yr) | Total benefits ($million/yr) |
|---|---|---|---|
| Swimming, Fishing, and Boating | 306.20 | 60.60 | 366.80 |
| Fishing and Boating | 395.10 | 51.90 | 447.00 |
| Boating | 700.10 | 114.60 | 814.70 |
| Total | 1401.40 | 227.10 | 1628.50 |

While the numbers of miles that are estimated to change their use support are small, the benefits estimates are quite significant. This is because urban runoff and, to a large extent, construction activity occurs where the people actually reside and the water quality changes mostly occur close to these population centers. NWPCAM indicates that changes in pollution loads have the most effect immediately downstream of pollution changes. As a result, the aggregate WTP is large because large numbers of households in these population centers are associated with the local waters that reflect improvement in designated use support.

**2. National Water Quality Assessment**

EPA also estimated benefits of the Phase II Storm Water program using the 1998 National Water Quality Inventory (305(b)) Report to Congress, rather than the NWPCAM as a basis for estimating impairment addressed by the rule. The Water Quality Assessment method separately estimates benefits associated with improvements to fresh water, marine water and construction site controls, and then aggregates these separate categories into an estimate of total annual benefits.

**a. Municipal Measures**

***i. Fresh Waters Benefits***

In order to develop estimates for the potential value of the municipal measures (except storm water runoff controls for construction sites), EPA applied Carson & Mitchell WTP values to estimated existing and projected future fresh water impairment. Carson & Mitchell did not evaluate marine waters, so only fresh water values were available from their research. Even though the Carson and Mitchell estimates apply to all fresh water, it is not clear how these values would be apportioned among rivers, lakes, and the Great Lakes. The 305(b) data indicate that lakes are the most impaired by urban runoff/storm sewers, followed closely by the Great Lakes, and then rivers. Therefore, EPA applied the WTP values to the categories separately and assumed that the higher resulting value for lakes represents the high end of the range (i.e., assuming that lake impairment is more indicative of national fresh water impairment) and that the lower resulting value for impaired rivers represents the low end of a value range for all fresh waters (i.e., assuming that river impairment is more indicative of national fresh water impairment). In addition, EPA estimated that the post-construction runoff ***68794** requirements of the municipal program might result in benefits of at least $16.8 million annually from avoided future runoff. The post-construction estimate significantly underestimates potential program benefits because it does not account for avoided hydrologic changes and resulting water quality impairment associated with increases in imperviousness from development and redevelopment. Summing the benefits across the water quality use support levels yields an estimate of benefits ranging from approximately $121.9 million to $378.2 million per year.

***ii. Marine Waters Benefits***

In addition to the fresh water benefits captured by the Carson and Mitchell study, EPA anticipates benefits as a result of improvements to marine waters. Sufficient methods have not been developed to quantify national-level benefits for commercial or recreational fishing. EPA used beach closure data and visitation estimates from its Beach Watch Program to estimate potential reductions in marine swimming visits due to storm water runoff contamination events in 1997. The estimated 86,100 trips that did not occur because of beach closures in coastal Phase II communities is a lower bound because it represents only those beaches that report both closures and visitation data. EPA estimates potential swimming benefits from the rule to be at least $2.1 million annually.

EPA developed an analysis of potential benefits associated with avoided health impacts from exposure to contaminants in storm sewer effluent. Based on a study of incremental illnesses found among people who swam within one yard of storm drains in Santa Monica Bay, EPA estimated a range of incremental illnesses (Haile et al., 1996). Depending on assumptions made about number of exposures to contaminants and contaminant concentrations, benefits ranged from $7.0 million to $29.9 million annually.

**b. Construction Benefits**

The major pollutant resulting from construction activities is sediment. However, in addition to sediment, construction activities also yield pollutants such as pesticides, petroleum products, and solvents. Because circumstances will vary considerably from site to site, data is not available with which to develop estimates of benefits for each site and aggregate to obtain a national-level estimate.

In the proposed rule, EPA estimated the combined benefits of all wet weather programs, and then used expert opinions to allocate them to different individual programs. To eliminate the possible overlap between the benefits of the soil and erosion control requirements, municipal measures, and other wet weather storm water programs, EPA chose to use an approach in today's final rule that directly estimates the benefits of soil and erosion requirements.

A survey of North Carolina residents (Paterson et al., 1993) indicated that households are willing to pay for erosion and sediment controls similar to those in today's rule. Based on income and other indicators, the values derived from the study are expected to be similar to values held in the rest of the country. Using the mean value of the willingness to pay of $25 per household, EPA projects annual benefits of the soil and erosion requirements to range from $540.5-$686 million.

**c. Summary of Benefits From the National Water Quality Assessment**

Total benefits from municipal measures and construction site controls are expected to range from $671.5 million to $1.1 billion per year, including benefits of approximately $13.7 million per year associated with small stream improvements. A summary of the potential benefits is presented in Exhibit 5.

As shown in Exhibit 5, it was not possible to monetize all categories of benefits using the WTP estimates. In particular, benefits for improving marine water quality such as fishing and passive use benefits are not included in the values used to estimate the potential benefits of the municipal minimum measures (excluding construction sites controls), and they are not estimated separately, because information is not currently available.

**Exhibit 5.—Potential Annual Benefits of the Phase II Storm Water Rule National Water Quality Assessment Estimate**

| Benefit category | Annual WTP |
|---|---|
| Municipal Minimum Measures [1] | |
| Fresh Water Use and Passive Use [2] | $121.9-$378.2 |

| | |
|---|---|
| Marine Recreational Swimming | $2.1 |
| Human Health (Marine Waters) | $7.0-$29.9 |
| Other Marine Use and Passive Use | + |
| Erosion and Sediment Controls for Construction Sites | |
| Fresh Water and Marine Use and Passive Use [3] | $540.5-$686 |
| Total Phase II Program | |
| Total Use & Passive Use (Fresh Water and Marine) | >$671.5->$1,096.2 |

***C. Qualitative Benefits***

There are additional benefits to storm water control that cannot be quantified or monetized. Thus, the current estimate of monetized benefits may understate the true value of storm water controls because it omits many ways in which society is likely to benefit from reduced storm water pollution, such as improved ***68795** aesthetic quality of waters, benefits to wildlife and to threatened and endangered species, cultural values, and biodiversity benefits.

A benefit that EPA did not monetize completely is the flood control benefits attributable to municipal storm water controls reducing downstream flooding, although flood control benefits associated with sediment and erosion control are already reflected to some extent in the construction benefits. Similarly, the Agency could not value the benefits from increased property value due to storm water controls reflected in the rule, even though a commenter suggested inclusion of these benefits in the estimates.

Moreover, while a number of commenters requested that EPA include ecological benefits, the Agency was not able to fully monetize these benefits. Urbanization usually increases the amount of sediment, nutrients, metals and other pollutants associated with land disturbance and development. Development usually not only results in a dramatic increase in the volume of water runoff, but also in a substantial decrease in that water's quality due to stream scour, runoff and dispersion of toxic pollutants, and oversiltation. These kinds of secondary benefits could not be fully reflected in the monetized benefits. EPA was able to only monetize the aquatic life support benefits for waters assumed to be impaired. Thus, only the aquatic life support benefits attributable to municipal controls, reflected through human satisfaction, are taken into account.

Reduced nutrient level is another benefit of the storm water control which is not fully captured by the economic analysis. High nutrient levels often lead to eutrophication of the aquatic system. The quality change in ecological sources as the result of storm water controls to reduce pollutants is not fully reflected in the present benefits.

***D. National Economic Impact***

Finally, the Agency determined that the rule will have minimal impacts on the economy or employment. This is because the final rule regulates small MS4s and construction sites under 5 acres, not the typical industrial plants or other non-construction activities that could directly impact production and thus those sectors of the economy.

Discussions with representatives within the construction industry indicate that construction costs will likely be passed on to buyers, thus not seriously affecting the housing industry directly. One commenter argued that the rule will have a negative employment effect because the builders will build fewer homes requiring less building materials as a result of the declining demand induced by the cost of the soil and erosion controls. EPA disagrees with this argument because the cost of the controls, as the percentage of the price of a median home, is negligible and will be passed on to final buyers.

  

Flexibility within the rule allows MS4s to tailor the storm water program requirements to their needs and financial position, minimizing impacts. For sedimentation and erosion controls on construction sites, the rule contemplates application of commonly used BMPs to reduce costs for the construction industry. Thus, the rule attempts to use existing practices to prevent pollution, which should minimize impacts on States, Tribes, municipalities and the construction industry.

Thus, EPA concludes that the effect of the rule, if any, on the national economy will be minimal. The benefits of today's rule more than offset any cost impacts on the national economy.

## IV. Regulatory Requirements

### *A. Paperwork Reduction Act*

The Office of Management and Budget (OMB) has approved some of the information collection requirements contained in this final rule (i.e. those found in 40 CFR 122.26(g) and 123.35(b)) under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. and has assigned OMB control number 2040-0211.

The burden and costs described below are for the information collection, reporting, and record keeping requirements for the three year period beginning with the effective date of today's rule. Additional information collection requirements for regulated small MS4s and small construction sites will occur after this initial three year period and will be counted in a subsequent information collection requirement. The total burden of the information collection requirements for the first three years of this rule is estimated at 56,369 hours with a corresponding cost of $2,151,305 million annually. This burden and cost is for industrial facilities to complete and submit the no exposure certification, for NPDES-authorized States to process and review the no exposure certification, and for the NPDES-authorized States to develop designation criteria and assess additional MS4s outside of urbanized areas. Compliance with the applicable information collection requirements imposed under this rule are mandatory, pursuant to CWA section 402.

Exhibit 6 presents average annual burden and cost estimates for Phase II respondents for the first three years. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust existing ways for complying with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

**Exhibit 6.—Average Annual Burden and Cost Estimates for Phase II Respondents**

| Information collection activity | A | B | (A)x(B)=C | D | (C)x(D)=E |
|---|---|---|---|---|---|
| | Respondents per year (projected) [1] | Burden hours per respondent per year (predicted) | Annual respondent burden hours (projected) | Respondent labor cost ($/hr) (1998 $) | Annual Cost ($) (projected) |
| Ind. No Expos. Facilities: [2] | | | | | |
| No Expos. Certification | 36,377 | 1.0 | 36,377 | 44.35 | 1,613,320 |
| Annual Subtotal | ..... | | 36,377 | ..... | 1,613,320 |

| | | | | | |
|---|---|---|---|---|---|
| NPDES-Authorized States: [3] | | | | | |
| Designation of Addit. MS4s [4] | 15 | 332.8 | 4,892 | 26.91 | 131,644 |
| No Exp. Cert. Proc. & Rev | 30,200 | 0.5 | 15,100 | 26.91 | 406,341 |
| Annual Subtotal | | | 19,992 | | 537,985 |
| Annual Totals | | | 56,369 | | 2,151,305 |

***68796** Given the requirements of today's regulation, EPA believes there will be no capital startup and no operation and maintenance costs associated with information collection requirements of the rule.

The government burden associated with today's rule will impact State, Tribal, and Territorial governments (NPDES-authorized governmental entities) that have storm water program authority, as well as the federal government (i.e., EPA), where it is the NPDES permitting authority. As of March 1999, 43 States and the Virgin Islands had NPDES authority.

The annual burden imposed upon authorized governmental entities (delegated States and the Virgin Islands) and the federal government for the next three years is estimated to be 19,992 hours ($537,985) and 4,087 hours ($115,948) respectively, for a total of 24,079 hours ($653,933). This estimate is based on the average time that governments will expend to carry out the following activities: designate additional MS4s (332.8 hours) and process and review “no exposure” certificates from industrial dischargers (0.5 hour).

Under the existing rule, storm water discharges from light industrial activities identified under §122.26(b)(14)(xi) were exempted from the permit application requirements if they were not exposed to storm water. Today's rule expands the applicability of the “no exposure” exclusion to include all industrial activity regulated under §122.26(b)(14) (except category (x), construction). The “no exposure” provision is applied through the use of a written certification process, thus representing a slight reporting burden increase for “light” industries with “no exposure'.

In addition to the information collection, reporting, and record keeping burden for the next three years, today's rule contains information collection requirements that will not begin until three years or more from the effective date of today's rule. These information collection requirements were not included in the information collection request approved by OMB. EPA will submit these burden estimates for OMB approval when it submits ICR 2040-0211 to OMB for renewal in three years. The rule burdens for regulated small MS4s and small construction sites that will be included in the ICR renewal fall into three areas: application for an NPDES permit or submittal of waiver information, record keeping of storm water management activities, and submittal of reports to the permitting authority. There will also be an additional burden for the permitting authority to review this information.

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR Part 9 and 48 CFR Chapter 15. EPA is amending the table in 40 CFR Part 9 of currently approved ICR control numbers issued by OMB for various regulations to list the first three years of information requirements contained in this final rule.

***B. Executive Order 12866***

  

Under Executive Order 12866, [58 FR 51,735 (October 4, 1993)] the Agency must determine whether the regulatory action is "significant" and therefore subject to OMB review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, it has been determined that this rule is a "significant regulatory action". As such, this action was submitted to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

***C. Unfunded Mandates Reform Act***

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a ***68797** written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted.

EPA has determined that today's rule contains a Federal mandate that may result in expenditures of $100 million or more in any one year for both State, local, and tribal governments, in the aggregate, and the private sector. Accordingly, EPA has prepared under section 202 of the UMRA a written statement which is summarized below.

**1. Summary of UMRA Section 202 Written Statement**

EPA promulgates today's storm water regulation pursuant to the specific mandate of Clean Water Act section 402(p)(6), as well as sections 301, 308, 402, and 501. (33 U.S.C. sections 1342(p)(6), 1311, 1318, 1342, 1361.) Section 402(p)(6) of the CWA requires that EPA designate sources to be regulated to protect water quality and establish a comprehensive program to regulate those sources.

In the Economic Analysis of the Final Phase II Rule (EA), EPA describes the qualitative and monetized benefits associated with today's rule and then compares the monetized benefits with the estimated costs for the rule. EPA developed detailed estimates of the costs and benefits of complying with each of the incremental requirements imposed by the rule. These estimates, including descriptions of the methodology and assumptions used, are described in detail in the EA. The Agency used two approaches, a national water quality model and national water quality assessment, to estimate the potential benefits of the rule. Both approaches

show that the benefits are likely to exceed costs. Exhibit 3 in section III of this preamble summarizes the costs and benefits associated with the basic elements of today's rule.

There are additional benefits to storm water control that cannot be quantified or monetized. Thus, the current estimate of monetized benefits may understate the true value of storm water controls because it omits many ways by which society is likely to benefit from reduced storm water pollution, such as improved aesthetic quality of waters, benefits to wildlife and to threatened and endangered species, cultural values, and biodiversity benefits.

Several commenters asserted that today's rule is an unfunded mandate and that, without funding, the monitoring of the already existing pollution control programs would suffer. In section II.D.3 of the preamble, EPA lists some of the programs that EPA anticipates may provide funds to help develop and, in limited circumstances, implement storm water management programs.

In the EA, EPA reviewed the expected effect of today's rule on the national economy. The Agency determined that the rule will have minimal impacts on the economy or employment. This is because the final rule regulates small MS4s and construction sites under 5 acres, not the typical industrial plants or other non-construction activities that could directly impact production and thus those sectors of the economy.

Discussions with representatives within the construction industry indicate that construction costs will likely be passed on to buyers, thus not seriously affecting the housing industry directly. Flexibility within the rule allows MS4s to tailor the storm water program requirements to their needs and financial position, minimizing impacts. For sedimentation and erosion controls on construction sites, the rule contemplates application of commonly used BMPs to reduce costs for the construction industry. Thus, the rule attempts to use existing practices to prevent pollution, which should minimize impacts on States, Tribes, municipalities and the construction industry.

Thus, EPA concludes that the effect of the rule, if any, on the national economy would be minimal. The benefits of today's rule more than offset any cost impacts on the national economy.

Consistent with the intergovernmental consultation provisions of section 204 of the UMRA and Executive Order 12875, "Enhancing the Intergovernmental Partnership," EPA consulted with the governmental entities affected by this rule.

First, EPA provided States, Tribal and local governments with the opportunity to comment on draft alternative approaches for the proposed rule through publishing a notice requesting information and public comment in the Federal Register on September 9, 1992 (57 FR 41344). This notice presented a full range of regulatory alternatives. At that time, EPA received more than 130 comments, including approximately 43 percent from municipalities and 24 percent from State or Federal agencies. These comments were the genesis of many of the provisions in the today's rule, including reliance on the NPDES program framework (including general permits), providing State and local governments flexibility in selecting additional sources requiring regulation, and focusing on high priority polluters. These comments helped to focus on pollution prevention, watershed-based concerns and BMPs. They also led to certain exemptions for facilities that do not pollute national waters.

In early 1993, EPA, in conjunction with the Rensselaerville Institute, held public and expert meetings to assist in developing and analyzing options for identifying unregulated storm water sources and possible controls. These meetings provided participants an additional opportunity to provide input into the CWA section 402(p)(6) program development process. The final rule addresses several of the key concerns identified in these groups, including provisions that provide flexibility to the States to select sources to be controlled and types of permits to be issued, and flexibility to MS4s in selecting BMPs.

EPA also conducted outreach with representatives of small entities, including small government representatives, in conjunction with the convening of a Small Business Advocacy Review Panel under SBREFA which is discussed in section IV.E. of the preamble.

  

In addition, EPA established the Urban Wet Weather Flows Advisory Committee under the Federal Advisory Committee Act (FACA). The Urban Wet Weather Flows Advisory Committee, in turn established the Storm Water Phase II Subcommittee. Consistent with FACA, the membership of the Committee and the Storm Water Phase II Subcommittee was balanced among EPA's various outside stakeholder interests, including representatives from State governments, municipal governments (both elected officials and appointed officials) and Tribal governments, as well as industrial and commercial sectors, agriculture, environmental and public interest groups.

In general, municipal and Tribal government representatives supported the NPDES approach in today's rule for the following reasons: It will be uniformly applied on a nationwide basis; it provides flexibility to allow incorporation of State and local programs; it resolves the problem of donut holes that cause water quality impacts in urbanized areas; and it allows co-permitting of small regulated ***68798** MS4s with those regulated under the existing storm water program.

In contrast, State representatives sought alternative approaches for State implementation of the storm water program for Phase II sources. State representatives asserted that a non-NPDES alternative approach best facilitated watershed management and avoided duplication and overlapping regulations. These representatives pointed out that there are a variety of State programs —not based on the CWA—implementing effective storm water controls, and that EPA should provide incentives for their implementation and improvement in performance. EPA continues to believe that an NPDES approach is the best approach in order to adequately protect water quality. However, EPA has worked with States on an alternative approach that provides flexibility within the NPDES framework. The final rule allows States with a watershed permitting approach to phase in permit coverage for MS4s in jurisdictions with a population less than 10,000 and provides two waivers from coverage for small MS4s. This issue is discussed in section II.C of the preamble, Program Framework: NPDES Approach.

Some municipal governments objected that the rule's minimum measures for small MS4s violate the Tenth Amendment insofar as they require the operators of MS4s to regulate third parties according to the “minimum measures” for municipal storm water management programs. EPA disagrees that today's rule is inconsistent with Tenth Amendment principles. Permits issued under today's rule will not compel political subdivisions of States to regulate in their sovereign capacities, but rather to effectively control discharges out of their storm sewer systems in their owner/operator capacities. For MS4s that do not accept this “default” minimum measures-based approach (to control discharges out of the storm sewer system by exercising local powers to control discharges into the storm sewer system), today's rule allows for alternative permits through individual permit applications. EPA made revisions to the rule to allow regulated small MS4s to opt out of the minimum measures approach and instead apply for an individual permit. This issue is discussed in section II.H.3.c.iii of the preamble, Alternative Permit Option/Tenth Amendment.

**2. Selection of the Least Costly, Most Cost-Effective or Least Burdensome Alternative That Achieves the Objectives of the Statute**

Today's rule evolved over time and incorporated aspects of alternatives that responded to concerns presented by the various stakeholders. A primary characteristic of today's rule is the flexibility it offers both the permitting authority and the regulated sources (small MS4s and small construction sites), by the use of general permits, implementation of BMPs suited to specific locations, and allowing MS4s to develop their own program goals.

In the administrative record supporting the proposed rule, EPA estimated ranges of costs associated with six different options, including a no action option, the proposed option, and four other options that considered various combinations of the following: Covering all the unregulated construction sites below 5 acres, all small MS4s, certain industrial and commercial activities, and all point sources. EPA developed detailed cost estimates for the incremental requirements imposed under the final regulation, and for each of the alternatives, and applied these estimates to the remaining unregulated point sources of storm water. The Agency compared the estimated annual range of costs imposed under today's rule and other major options considered. The range of values for each option included the costs for compliance, including paperwork requirements for the operators of small construction sites, industrial facilities, and MS4s and administrative costs for State and Federal NPDES permitting authorities.

Today's rule reflects the least costly option that achieves the objectives of the statute, thus meeting the requirements of section 205. EPA did not consider "no regulation" to be an "option" because it would not achieve the objectives of CWA section 402(p)(6). A portion of currently unregulated point sources of storm water need to reduce pollutants to protect water quality.

Today's rule is estimated to range in cost from $847.6 million to $981.3 million annually, although the cost estimate for the proposed rule was reported as a range of $138 to $869 million annually. That range reflected a unit cost range for the municipal minimum measures and a cost range per construction site for soil erosion control. EPA has since revised its cost analysis to allow it to report the current estimate, which is toward the high end of the original cost range. The four other regulatory options considered at proposal involved higher regulatory costs and, therefore, were not selected. These four options and their estimated costs are as follows:

(1) An option based on the August 7, 1995 direct final rule was estimated to cost between $2.2 billion and $78.9 billion per year.

(2) A "Plan B" option was estimated to cost between $0.6 billion and $3.2 billion per year.

(3) An option based on the September 30, 1996 draft proposed rule was estimated to cost between $0.2 billion and $3.7 billion per year.

(4) An option based on the February 13, 1997 draft proposed rule, was estimated to cost between $0.2 billion and $3.5 billion.

There are three reasons why the costs for these four options exceeded the estimated cost range for the proposed rule. The first two options regulated substantially more municipal governments. The first, third, and fourth options required industrial facilities to apply for permits. Finally, the first three options applied permit requirements to construction sites below 1 acre. Consequently, these options would be more costly than today's rule even with the revised analysis methods used to estimate costs.

**3. Effects on Small Governments**

Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements. EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments. Although today's rule expands the NPDES program (with modifications) to certain MS4s serving populations below 100,000 and although many MS4s are owned by small governments, EPA does not believe today's rule significantly or uniquely affects small governments. As explained in section IV.E. of the preamble, EPA today certifies that the rule will not have a significant impact on small governmental jurisdictions. In addition, the rule will not have a unique impact on small governments because the rule will affect small governments in ***68799** to the same extent as (or to a lesser extent than) larger governments that are already covered by the existing storm water rules. Thus, today's rule is not subject to the requirements of section 203 of UMRA.

Notwithstanding this finding, in developing today's rule, EPA provided notice of the requirements to potentially affected small governments; enabled officials of affected small governments to provide meaningful and timely input in the development of regulatory proposals; and informed, educated and advised small governments on compliance with the requirements.

Concerning notice, EPA provided States, local, and Tribal governments with the opportunity to comment on alternative approaches for an early draft of the proposed rule by publishing a notice requesting information and public comment in the Federal Register on September 9, 1992 (57 FR 41344). This notice presented a full range of regulatory alternatives. At that time, EPA received more than 130 comments, including approximately 43 percent from municipalities and 24 percent from State or Federal agencies.

  

The Agency also provided, through the SBREFA panel process and the FACA process, the opportunity for elected officials of small governments (and their representatives) to meaningfully participate in the development of the rule. Through such participation and exchange, EPA not only notified potentially affected small governments of requirements of the developing rule, but also allowed officials of affected small governments to have meaningful and timely input into the development of regulatory proposals.

In addition to involving municipalities in the development of the rule, EPA also continues to inform, educate, and advise small governments on compliance with the requirements of today's rule. For example, EPA supported 10 workshops, presented by the American Public Works Association from September 1998 through May 1999, designed to educate local governments on the implementation of the rule. The workshop curriculum included information on a variety of key issues such as anticipated regulatory requirements, agency reporting, best management practices, construction site controls, post construction management for new and redeveloped sites, public education and public involvement strategies, detection and control of illicit discharges, and good housekeeping practices. Moreover, EPA has prepared a series of fact sheets, available on the EPA website at www.epa.gov/owm/sw/toolbox, that explains the rule in detail.

Finally, to assist small governments in implementing the Phase II program, EPA is committed to the following: (1) developing a tool box of implementation strategies; (2) providing written technical assistance, including guidance on developing BMPs and measurable goals; and (3) compiling a comprehensive evaluation of the NPDES municipal storm water Phase II program over the next 13 years.

### *D. Executive Order 13132*

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government." Under Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. EPA also may not issue a regulation that has federalism implications and that preempts State law unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

If EPA complies by consulting, Executive Order 13132 requires EPA to provide to the Office of Management and Budget (OMB), in a separately identified section of the preamble to the rule, a federalism summary impact statement (FSIS). The FSIS must include a description of the extent of EPA's prior consultation with State and local officials, a summary of the nature of their concerns and the agency's position supporting the need to issue the regulation, and a statement of the extent to which the concerns of State and local officials have been met. For final rules subject to Executive Order 13132, EPA also must submit to OMB a statement from the agency's Federalism Official certifying that EPA has fulfilled the Executive Order's requirements.

EPA has concluded that this final rule may have federalism implications. As discussed above in section IV.C., the rule contains a Federal mandate that may result in the expenditure by State, local and tribal governments, in the aggregate, of $100 million or more in any one year. Accordingly, the rule may have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. Moreover, the rule will impose substantial direct compliance costs on State or local governments. Accordingly, EPA provides the following FSIS under section 6(b) of Executive Order 13132.

#### 1. Description of the Extent of the Agency's Prior Consultation with State and Local Governments

Although this rule was proposed long before the November 2, 1999 effective date of Executive Order 13132, EPA consulted extensively with affected State and local governments pursuant to the intergovernmental consultation provisions of Executive Order 12875, "Enhancing the Intergovernmental Partnership" (now revoked by Executive Order 13132) and section 204 of UMRA.

First, EPA provided State and local governments the opportunity to comment on draft alternative approaches for the proposed rule through publishing a notice requesting information and public comment in the Federal Register on September 9, 1992 (57 FR 41344). This notice presented a full range of regulatory alternatives. At that time, EPA received more than 130 comments, including approximately 43 percent from municipalities and 24 percent from State or Federal agencies. These comments were the genesis of many of the provisions in the today's rule, including reliance on the NPDES program framework (including general permits), providing State and local governments flexibility in selecting additional sources requiring regulation, and focusing on high priority polluters. These comments helped to focus on pollution prevention, watershed-based concerns and BMPs. They also led to certain exemptions for facilities that do not pollute national waters.

In early 1993, EPA, in conjunction with the Rensselaerville Institute, held public and expert meetings to assist in developing and analyzing options for identifying unregulated storm water sources and possible controls. These meetings provided participants an additional opportunity to provide input into the CWA section 402(p)(6) program ***68800** development process. The final rule addresses several of the key concerns identified in these groups, including provisions that provide flexibility to the States to select sources to be controlled and types of permits to be issued, and flexibility to MS4s in selecting BMPs.

EPA also conducted outreach with representatives of small entities, including small governments, in conjunction with the convening of a Small Business Advocacy Review Panel under SBREFA which is discussed in section III.F. of the preamble.

In addition, EPA established the Urban Wet Weather Flows Advisory Committee (FACA), which in turn established the Storm Water Phase II Subcommittee. Consistent with the Federal Advisory Committee Act, the membership of the Committee and the Storm Water Phase II Subcommittee was balanced among EPA's various outside stakeholder interests, including representatives from State governments, municipal governments (both elected officials and appointed officials) and Tribal governments, as well as industrial and commercial sectors, agriculture, environmental and public interest groups.

**2. Summary of Nature of State and Local Government Concerns, and Statement of the Extent to Which Those Concerns Have Been Met**

In general, municipal government representatives supported the NPDES approach in today's rule for the following reasons: it will be uniformly applied on a nationwide basis; it provides flexibility to allow incorporation of State and local programs; it resolves the problem of donut holes that cause water quality impacts in urbanized areas; and it allows co-permitting of small regulated MS4s with those regulated under the existing storm water program.

In contrast, State representatives sought alternative approaches for State implementation of the storm water program for Phase II sources. State representatives asserted that a non-NPDES alternative approach best facilitated watershed management and avoided duplication and overlapping regulations. These representatives pointed out that there are a variety of State programs —not based on the CWA—implementing effective storm water controls, and that EPA should provide incentives for their implementation and improvement in performance. EPA continues to believe that an NPDES approach is the best approach in order to adequately protect water quality. However, EPA has worked with States on an alternative approach that provides flexibility within the NPDES framework. The final rule allows States with a watershed permitting approach to phase in permit coverage for MS4s in jurisdictions with a population less than 10,000 and provides two waivers from coverage for small MS4s. This issue is discussed in section II.C of the preamble, Program Framework: NPDES Approach.

Some municipal governments objected that the rule's minimum measures for small MS4s violate the Tenth Amendment insofar as they require the operators of MS4s to regulate third parties according to the "minimum measures" for municipal storm water management programs. EPA disagrees that today's rule is inconsistent with Tenth Amendment principles. Permits issued under

today's rule will not compel political subdivisions of States to regulate in their sovereign capacities, but rather to effectively control discharges out of their storm sewer systems in their owner/operator capacities. For MS4s that do not accept this "default" minimum measures-based approach (to control discharges out of the storm sewer system by exercising local powers to control discharges into the storm sewer system), today's rule allows for alternative permits through individual permit applications. EPA made revisions to the rule to allow regulated small MS4s to opt out of the minimum measures approach and instead apply for an individual permit. This issue is discussed in section II.H.3.c.iii of the preamble, Alternative Permit Option/Tenth Amendment.

**3. Summary of the Agency's Position Supporting the Need To Issue the Regulation**

As discussed more fully in section I.B. above, today's rule is needed because uncontrolled storm water discharges from areas of urban development and construction activity have been shown to have negative impacts on receiving waters by changing the physical, biological, and chemical composition of the water, resulting in an unhealthy environment for aquatic organisms, wildlife, and people. As discussed in section II.C., the NPDES approach in today's rule is needed to ensure uniform application on a nationwide basis, to provide flexibility to allow incorporation of State and local programs, to resolve the problem of donut holes that cause water quality impacts in urbanized areas, and to allow co-permitting of small regulated MS4s with those regulated under the existing storm water program.

The draft final rule was transmitted to OMB on July 6, 1999. Because transmittal occurred before the November 2, 1999 effective date of Executive Order 13132, certification under section 8 of the Executive Order is not required.

***E. Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et seq.***

The RFA generally requires an Agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impact of today's rule on small entities, small entity is defined as: (1) a building contractor (SIC 15) with up to $17.0 million in annual revenue; (2) a small governmental jurisdiction that is a government of a city, county, town, school district, or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities.

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of this rule on small entities.

For purposes of evaluating the economic impact of this rule on small governmental jurisdictions, EPA compared annual compliance costs with annual government revenues obtained from the 1992 Census of Governments, using state-specific estimates of annual revenue per capita for municipalities in three population size categories (fewer than 10,000, 10,000-25,000, and 25,000-50,000).

In order to estimate the annual compliance cost for small governmental jurisdictions, EPA used the mean variable municipal cost of $8.93 per household as calculated in a 1998 study of 121 municipalities conducted by the national Association of Flood and Stormwater Management Agencies (NAFSMA). In addition, EPA used the estimated fixed administrative costs of $1,545 per municipality for reporting, ***68801** recordkeeping, and application requirements for today's rule.

  

In evaluating the economic impact of this rule on small governmental jurisdictions, EPA determined that compliance costs represent more than 1 percent of estimated revenues for only 10 percent of small governments and more than 3 percent of the revenue for 0.7 percent of these entities. In both absolute and relative terms, EPA does not consider this a significant economic impact on a substantial number of small entities.

EPA normally uses the “sales test” for determining the economic impact on small businesses. Under a sales test, annual compliance costs are compared with the small business's total annual sales. However, the direct application of the sales test is not suitable in this case, because of the uncertainty associated with estimating the number of units an “average” developer/ contractor develops or builds in a typical year. For this rule, EPA has approximated the sales test by estimating compliance costs for three sizes of construction sites and comparing them with a representative sale price for three building categories. Although EPA's analysis is not exactly a “sales test,” it is similar to the sales test, producing comparable results.

For small building contractors, EPA estimated administrative compliance costs of $870 per site for applying for coverage, reporting, record keeping, monitoring and preparing a storm water pollution prevention plan. EPA estimated compliance costs for installing soil and erosion controls as ranging from $1,206 to $8,709 per site. EPA compliance cost estimates are based on 27 theoretical model construction sites designed to mimic the mostly likely used best management practices around the country.

In evaluating the economic impact on small building contractors, EPA divided the revised compliance costs per construction start by the appropriate homes-to-site ratio for each of the three sizes of construction sites. The average compliance cost per home ranges from approximately $450 to $650. EPA concluded that compliance costs are roughly 0.22 to 0.43 percent of both the mean, $181,300, and median, $151,000, sale price of a home.

The absence of data to specifically assess annual compliance costs for building contractors as a percentage of annual sales (i.e., a very direct estimate of the impact on potentially affected small businesses) led EPA to perform additional market analysis to examine the ability of potentially affected firms to pass along regulatory costs to buyers for single-family homes constructed subject to today's rule. If the small building contractors covered by the rule are able to pass on the costs of compliance, either completely or partially, to their purchasers, then the rule's impact on these small business entities is significantly reduced. The market analysis shows that demand for homes is not overly sensitive to small changes in price, therefore builders should be able to pass on at least a significant fraction of the compliance costs to buyers.

EPA also assessed the effect of the building contractors' costs on average monthly mortgage rates and on the demand for new homes. Based on that screening analysis, EPA concludes that the costs to building contractors, and the potential changes in housing prices and monthly mortgage payments for single-family home buyers, are not expected to have a significant impact on the market for single-family houses. In both absolute and relative terms, EPA does not consider this a significant economic impact on a substantial number of small entities.

EPA also certified this rule at proposal. Even though the Agency was not required to, we convened a Small Business Advocacy Review Panel (“Panel”) in June 1997. A number of small entity representatives had already been actively involved with EPA through the FACA process, and were, therefore, broadly knowledgeable about the development of the proposed and final rules. Prior to convening the Panel, EPA consulted with the Small Business Administration to identify a group of small entity representatives to advise the Panel. The Agency distributed a briefing package describing its preliminary analysis under the RFA to the small entity representatives (as well as to representatives from OMB and SBA) and conducted two telephone conference calls and an all-day meeting at EPA Headquarters in May of 1997 with small entity representatives. With this preliminary work complete, in June 1997, EPA formally convened the SBREFA Panel, comprising representatives from OMB, SBA, EPA's Office of Water and EPA's Small Business Advocacy Chair. The Panel received written comments from small entity representatives based on their involvement in the earlier meetings, and invited additional comments.

Consistent with requirements of the RFA, the Panel evaluated the assembled materials and small-entity comments on issues related to: (1) a description and the number of small entities that would be regulated; (2) a description of the projected record

  

keeping, reporting and other compliance requirements applicable to small entities; (3) identification of other Federal rules that may duplicate, overlap, or conflict with the proposal to the final rule; and (4) regulatory alternatives that would minimize any significant economic impact of the rule on small entities while accomplishing the stated objectives of the CWA section 402(p)(6).

On August 7, 1997, the Panel provided a Final Report (hereinafter, "Report") to the EPA Administrator. A copy of the Report is included in the docket for the rule. The Panel acknowledged and commended EPA's efforts to work with stakeholders, including small entities, through the FACA process. The SBREFA Panel stated that, because of EPA's extensive outreach and responsiveness in addressing stakeholder concerns, commenters during the SBREFA process raised fewer concerns than might otherwise have been expected. Based on the advice and recommendations of the Panel, today's rule includes a number of provisions designed to minimize any significant impact on small entities. (See Appendix 5).

***F. National Technology Transfer And Advancement Act***

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law 104-113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standard bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This action does not mandate the use of any particular technical standards, although in designing appropriate BMPs regulated small MS4s and small construction sites are encouraged to use any voluntary consensus standards that may be applicable and appropriate. Because no specific technical standards are included in the rule, section 12(d) of the NTTAA is not applicable.

***G. Executive Order 13045***

Executive Order 13045: "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be "economically ***68802** significant" as defined under E.O. 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This final rule is not subject to E.O. 13045 because it does not concern an environmental health or safety risk that may have a disproportionate effect on children. The rule expands the scope of the existing NPDES permitting program to require small municipalities and small construction sites to regulate their storm water discharges. The rule does not itself, however, establish standards or criteria that would be included in permits for those sources. Such standards or criteria will be developed through other actions, for example, in the establishment of water quality standards or subsequently in the issuance of permits themselves. As such, today's action does not concern an environmental health or safety risk that may have a disproportionate effect on children. To the extent it does address a risk that may have a disproportionate effect on children, expanding the scope of the permitting program will have a corresponding disproportionate benefit to children to protect them from such risk.

***H. Executive Order 13084***

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the Tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected Tribal governments, a summary of the nature of their concerns, and a

statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian Tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities."

Today's rule does not significantly or uniquely affect the communities of Indian Tribal governments. Even though the Agency is not required to address Tribes under the Regulatory Flexibility Act, EPA used the same revenue test that was used for municipalities to assess the impact of the rule on communities of Tribal governments and determine that they will not be significantly affected. In addition, the rule will not have a unique impact on the communities of Tribal governments because small municipal governments are also covered by this rule and larger municipal governments are already covered by the existing storm water rules. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule.

***I. Congressional Review Act***

The Congressional Review Act, 5 U.S.C. section 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the Federal Register. A major rule cannot take effect until 60 days after it is published in the Federal Register. This rule is a "major rule" as defined by 5 U.S.C. 804(2). This rule will be effective on February 7, 2000.

**List of Subjects**

***40 CFR Part 9***

Environmental protection, Reporting and recordkeeping requirements.

***40 CFR Part 122***

Administrative practice and procedure, Confidential business information, Environmental protection, Hazardous substances, Incorporation by reference, Reporting and recordkeeping requirements, Sewage disposal, Waste treatment and disposal, Water pollution control.

***40 CFR Part 123***

Administrative practice and procedure, Confidential business information, Hazardous materials, Indians—lands, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Sewage disposal, Waste treatment and disposal, Water pollution control, Penalties.

***40 CFR Part 124***

Administrative practice and procedure, Air pollution control, Hazardous waste, Indians—lands, Reporting and recordkeeping requirements, Water pollution control, Water supply.

Dated: October 29, 1999.

Carol M. Browner,

Administrator.

  

**Appendices to the Preamble**

**Appendix 1 to Preamble—Federally-Recognized American Indian Areas Located Fully or Partially in Bureau of the Census Urbanized Areas**

**[Based on 1990 Census data]**

| State | American Indian Area | Urbanized Area |
|---|---|---|
| AZ | Pascua Yacqui Reservation (pt.): Pascua Yacqui Tribe of Arizona | Tucson, AZ (Phase I). |
| AZ | Salt River Reservation (pt.): Salt River Pima-Maricopa Indian Community of the Salt River Reservation, California | Phoenix, AZ (Phase I). |
| AZ | San Xavier Reservation (pt.): Tohono O'odham Nation of Arizona (formerly known as the Papago Tribe of the Sells, Gila Bend & San Xavier Reservation) | Tucson, AZ (Phase I). |
| CA | Augustine Reservation: Augustine Band of Cahuilla Mission of Indians of the Augustine Reservation, CA | Indio- Coachella, CA (Phase I). |
| CA | Cabazon Reservation: Cabazon Band of Cahuilla Mission Indians of the Cabazon Reservation, CA | Indio- Coachella, CA (Phase I). |
| CA | Fort Yuma (Quechan) (pt.): Quechan Tribe of the Fort Yuma Indian Reservation, California & Arizona | Yuma, AZ-CA. |
| CA | Redding Rancheria: Redding Rancheria of California | Redding, CA. |
| FL | Hollywood Reservation: Seminole Tribe | Fort Lauderdale, FL (Phase I). |
| FL | Seminole Trust Lands: Seminole Tribe of Florida, Dania, Big Cypress & Brighton Reservations | Fort Lauderdale, FL (Phase I). |
| ID | Fort Hall Reservation and Trust Lands: Shosone-Bannock Tribes of the Fort Hall Reservation of Idaho | Pocatello, ID. |
| ME | Penobscot Reservation and Trust Lands (pt.): Penobscot Tribe of Maine | Bangor, ME. |
| MN | Shakopee Community: Shakopee Mdewakanton Sioux Community of Minnesota (Prior Lake) | Minneapolis-St. Paul, MN (Phase I). |
| NM | Sandia Pueblo (pt.): Pueblo of Sandia, New Mexico | Albuquerque, NM (Phase I). |
| NV | Las Vegas Colony: Las Vegas Tribe of Paiute Indians of the Las Vegas Indian Colony, Nevada | Las Vegas, NV (Phase I). |
| NV | Reno-Sparks Colony: Reno-Sparks Indian Colony, Nevada | Reno, NV (Phase I). |
| OK | Osage Reservation (pt.): Osage Nation of Oklahoma | Tulsa, OK (Phase I). |

  

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|---|---|---|
| OK | Absentee Shawnee-Citizens Band of Potawatomi TJSA (pt.): Absentee-Shawnee Tribe of Indians of Oklahoma; Citizen Potawatomi Nation, Oklahoma | Oklahoma City, OK (Phase I). |
| OK | Cherokee TJSA 9 (pt.): Cherokee Nation of Oklahoma; United Keetoowah Band of Cherokee Indians of Oklahoma | Ft. Smith, AR-OK; Tulsa, OK (Phase I). |
| OK | Cheyenne-Arapaho TJSA (pt.): Cheyenne-Arapaho Tribes of Oklahoma | Oklahoma City, OK (Phase I). |
| OK | Choctaw TJSA (pt.): Choctaw Nation of Oklahoma | Ft. Smith, AR-OK (Phase I). |
| OK | Creek TJSA (pt.): Alabama-Quassarte Tribal Town of the Creek Nation of Oklahoma; Kialegee Tribal Town of the Creek Indian Nation of Oklahoma; Muscogee (Creek) Nation of Oklahoma; Thlopthlocco Tribal Town of the Creek Nation of Oklahoma | Tulsa, OK (Phase I). |
| OK | Kiowa-Comanche-Apache-Ft. Sill Apache: Apache Tribe of Oklahoma; Comanche Indian Tribe, Oklahoma; Fort Sill Apache Tribe of Oklahoma; Kiowa Indian Tribe of Oklahoma | Lawton, OK. |
| TX | Ysleta del Sur Reservation: Ysleta Del Sur Pueblo of Texas | El Paso, TX-NM (Phase I). |
| WA | Muckleshoot Reservation and Trust Lands (pt.): Muckleshoot Indian Tribe of the Muckleshoot Reservation | Seattle, WA (Phase I). |
| WA | Puyallup Reservation and Trust Lands (pt.): Puyallup Tribe of the Puyallup Reservation, WA | Tacoma, WA (Phase I). |
| WA | Yakima Reservation (pt.): Confederated Tribes and Bands of the Yakama Indian Nation of the Yakama Reservation, WA | Yakima, WA. |
| WI | Oneida (West) (pt.): Oneida Tribe of Wisconsin | Green Bay, WI. |

***68803 Please Note**

"(pt.)" indicates that the American Indian Area (AIA) listed is only partially located within the referenced urbanized area.

The first line under "American Indian Area" is the name of the federally-recognized reservation/colony/rancheria or trust land as it appears in the Bureau of the Census data. After this first line, the names of the tribes included in the AIA are listed as they appear in the Bureau of Indian Affairs' list of Federally Recognized Indian Tribes. [Federal Register: Nov. 13, 1996, Vol. 66, No. 220, pgs. 58211-58216]

"TJSAs" are Tribal Jurisdiction Statistical Areas in Oklahoma that are defined in conjunction with the federally-recognized tribes in Oklahoma who have definite land areas under their jurisdiction, but do not have reservation status.

"(Phase I)" indicates that the referenced urbanized area includes a medium or large MS4 currently regulated under the existing NPDES storm water program (i.e., Phase I). Any Tribally operated MS4 within these such urban areas would not automatically have been covered under Phase I, however.

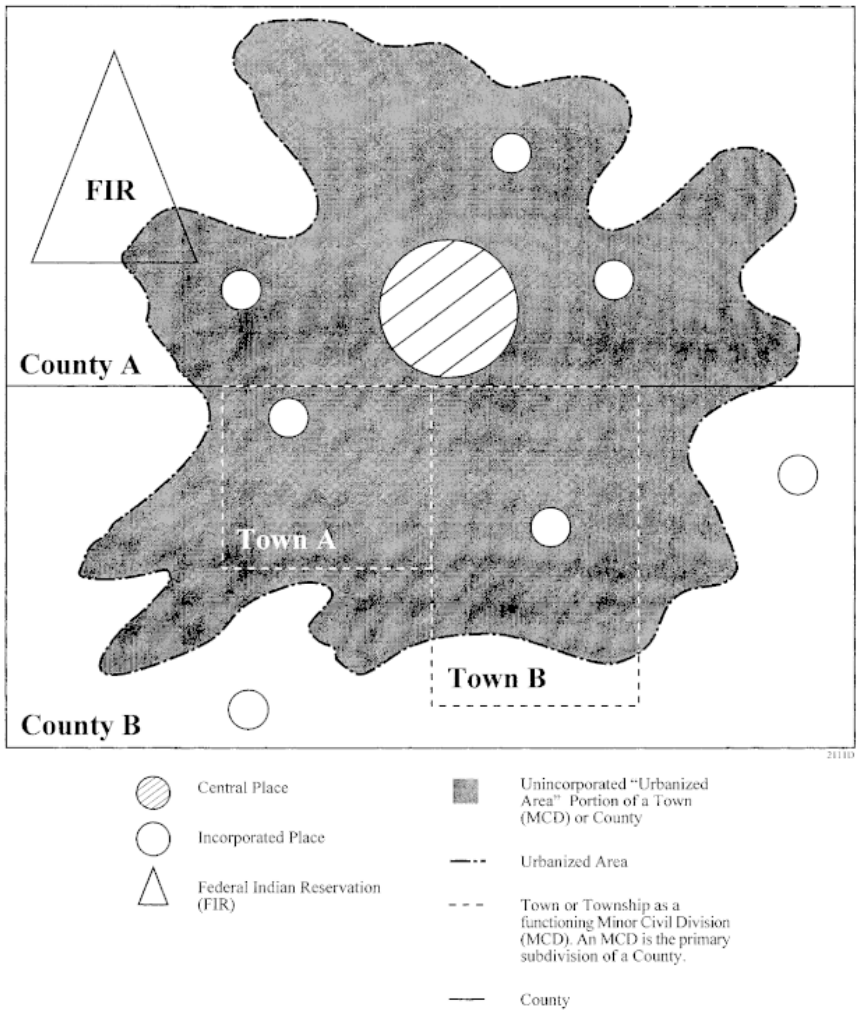
**Sources**

Michael Ratcliffe, Geographic Concepts Division, Bureau of the Census, U.S. Department of Commerce.

1990 Census of Population and Housing, Summary Population and Housing Characteristics, United States. Tables 9 & 10. [1990 CPH-1-1]. Bureau of the Census, U.S. Department of Commerce.

BILLING CODE 6560-50-P

APPENDIX 2 TO PREAMBLE—URBANIZED AREA ILLUSTRATION




BILLING CODE 6560-50-C

***68805 Appendix 3 to the Preamble—Urbanized Areas of the United States and Puerto Rico**

**(Source: 1990 Census of Population and Housing, U.S. Bureau of the Census—This list is subject to change with the Decennial Census)**

**Alabama**

Anniston

Auburn-Opelika

Birmingham

Columbus, GA-AL

Decatur

Dothan

Florence

Gadsden

Huntsville

Mobile

Montgomery

Tuscaloosa

**Alaska**

Anchorage

**Arizona**

Phoenix

Tucson

Yuma, AZ-CA

**Arkansas**

Fayetteville-Springdale

Fort Smith, AR-OK

Little Rock-North Little Rock

Memphis, TN-AR-MS

Pine Bluff

Texarkana, AR-TX

**California**

Antioch-Pittsburgh

Bakersfield

Chico

Davis

Fairfield

Fresno

Hemet-San Jacinto

Hesperia-Apple Valley-Victorville

Indio-Coachella

Lancaster-Palmdale

Lodi

Lompoc

Los Angeles

Merced

Modesto

Napa

Oxnard-Ventura

Palm Springs

Redding

Riverside-San Bernardino

Sacramento

Salinas

San Diego

San Francisco-Oakland

San Jose

San Luis Obispo

Santa Barbara

Santa Cruz

Santa Maria

Santa Rosa

Seaside-Monterey

Simi Valley

Stockton

Vacaville

Visalia

Watsonville

Yuba City

Yuma

**Colorado**

Boulder

Colorado Springs

Denver

Fort Collins

Grand Junction

Greeley

Longmont

Pueblo

**Connecticut**

Bridgeport-Milford

Bristol

Danbury, CT-NY

Hartford-Middletown

New Britain

New Haven-Meriden

New London-Norwich

Norwalk

Springfield, MA-CT

Stamford, CT-NY

Waterbury

Worcester, MA-CT

**Delaware**

Dover

Wilmington, DE-NJ-MD-PA

**District of Columbia**

Washington, DC-MD-VA

**Florida**

Daytona Beach

Deltona

Fort Lauderdale-Hollywood-Pompano Beach

Fort Myers-Cape Coral

Fort Pierce

Fort Walton Beach

Gainesville

Jacksonville

Kissimmee

Lakeland

Melbourne-Palm Bay

Miami-Hialeah

Naples

Ocala

Orlando

Panama City

Pensacola

Punta Gorda

Sarasota-Bradenton

Spring Hill

Stuart

Tallahassee

Tampa-St. Petersburg-Clearwater

Titusville

Vero Beach

West Palm Beach-Boca Raton-Delray Beach

Winter Haven

**Georgia**

Albany

Athens

Atlanta

Augusta

Brunswick

Chattanooga

Columbus

Macon

Rome

Savannah

Warner Robins

**Hawaii**

Honolulu

Kailua

**Idaho**

Boise City

Idaho Falls

Pocatello

**Illinois**

Alton

Aurora

Beloit, WI-IL

Bloomington-Normal

Champaign-Urbana

Chicago, IL-Northwestern IN

Crystal Lake

Davenport-Rock Island-Moline, IA-IL

Decatur

Dubuque

Elgin

Joliet

Kankakee

Peoria

Rockford

Round Lake Beach-McHenry, IL-WI

St. Louis, MO-IL

Springfield

**Indiana**

Anderson

Bloomington

Chicago, IL-Northwestern IN

Elkhart-Goshen

Evansville, IN-KY

Fort Wayne

Indianapolis

Kokomo

Lafayette-West Lafayette

Louisville, KY-IN

Muncie

South Bend-Mishawaka, IN-MI

Terre Haute

**Iowa**

Cedar Rapids

Davenport-Rock Island-Moline, IA-IL

Des Moines

Dubuque, IA-IL-WI

Iowa City

Omaha, NE-IA

Sioux City, IA-NE-SD

Waterloo-Cedar Falls

**Kansas**

Kansas City, MO-KS

Lawrence

St. Joseph, MO-KS

Topeka

Wichita

**Kentucky**

Cincinnati, OH-KY

Clarksville, TN-KY

Evansville, IN-KY

Huntington-Ashland, WV-KY-OH

Lexington-Fayette

Louisville, KY-IN

Owensboro

**Louisiana**

Alexandria

Baton Rouge

Houma

Lafayette

Lake Charles

Monroe

New Orleans

Shreveport ***68806**

Slidell

**Maine**

Bangor

Lewiston-Auburn

Portland

Portsmouth-Dover-Rochester, NH-ME

**Maryland**

Annapolis

Baltimore

Cumberland

Frederick

Hagerstown, MD-PA-WV

Washington, DC-MD-VA

Wilmington, DE-NJ-MD-PA

**Massachusetts**

Boston

Brockton

Fall River, MA-RI

Fitchburg-Leominster

Hyannis

Lawrence-Haverhill, MA-NH

Lowell, MA-NH

New Bedford

Pittsfield

Providence-Pawtucket, RI-MA

Springfield, MA-CT

Taunton

Worcester, MA-CT

**Michigan**

Ann Arbor

Battle Creek

Bay City

Benton Harbor

Detroit

Flint

Grand Rapids

Holland

Jackson

Kalamazoo

Lansing-East Lansing

Muskegon

Port Huron

Saginaw

South Bend-Mishawaka, IN-MI

Toledo, OH-MI

**Minnesota**

Duluth, MN-WI

Fargo-Moorhead, ND-MN

Grand Forks, ND-MN

La Crosse, WI-MN

Minneapolis-St.Paul

Rochester

St. Cloud

**Mississippi**

Biloxi-Gulfport

Hattiesburg

Jackson

Memphis, TN-AR-MS

Pascagoula

**Missouri**

Columbia

Joplin

Kansas City, MO-KS

St. Joseph, MO-KS

St. Louis, MO-IL

Springfield

**Montana**

Billings

Great Falls

Missoula

**Nebraska**

Lincoln

Omaha, NE-IA

Sioux City, IA-NE-SD

**Nevada**

Las Vegas

Reno

**New Hampshire**

Lawrence-Haverhill, MA-NH

Lowell, MA-NH

Manchester

Nashua

Portsmouth-Dover-Rochester, NH-ME

**New Jersey**

Allentown-Bethlehem-Easton, PA-NJ

Atlantic City

New York, NY-Northeastern NJ

Philadelphia, PA-NJ

Trenton, NJ-PA

Vineland-Millville

Wilmington, DE-NJ-MD-PA

**New Mexico**

Albuquerque

El Paso

Las Cruces

Santa Fe

**New York**

Albany-Schenectady-Troy

Binghamton

Buffalo-Niagara Falls

Danbury, CT-NY

Elmira

Glens Falls

Ithaca

Newburgh

New York, NY-Northeastern NJ

Poughkeepsie

Rochester

Stamford, CT-NY

Syracuse

Utica-Rome

**North Carolina**

Asheville

Burlington

Charlotte

Durham

Fayetteville

Gastonia

Goldsboro

Greensboro

Greenville

Hickory

High Point

Jacksonville

Kannapolis

Raleigh

Rocky Mount

Wilmington

Winston-Salem

**North Dakota**

Bismark

Fargo-Moorhead, ND-MN

Grand Forks, ND-MN

**Ohio**

Akron

Canton

Cincinnati, OH-KY

Cleveland

Columbus

Dayton

Hamilton

Huntington-Ashland, WV-KY-OH

Lima

Lorain-Elyria

Mansfield

Middletown

Newark

Parkersburg, WV-OH

Sharon, PA-OH

Springfield

Steubenville-Weirton, OH-WV-PA

Toledo, OH-MI

Wheeling, WV-OH

Youngstown-Warren

**Oklahoma**

Fort Smith, AR-OK

Lawton

Oklahoma City

Tulsa

**Oregon**

Eugene-Springfield

Longview

Medford

Portland-Vancouver, OR-WA

Salem

**Pennsylvania**

Allentown-Bethlehem-Easton, PA-NJ

Altoona

Erie

Hagerstown, MD-PA-WV

Harrisburg

Johnstown

Lancaster

Monessen

Philadelphia, PA-NJ

Pittsburgh

Pottstown

Reading

Scranton-Wilkes-Barre

Sharon, PA-OH

State College

Steubenville-Weirton, OH-WV-PA

Trenton, NJ-PA

Williamsport

Wilmington, DE-NJ-MD-PA

York

**Rhode Island**

Fall River, MA-RI

Newport

Providence-Pawtucket, RI-MA

**South Carolina**

Anderson

Augusta, GA-SC

Charleston

Columbia

Florence

Greenville

Myrtle Beach

Rock Hill

Spartanburg

Sumter

**South Dakota**

Rapid City

Sioux City, IA-NE-SD

Sioux Falls

**Tennessee**

Bristol, TN-Bristol, VA ***68807**

Chattanooga, TN-GA

Clarksville, TN-KY

Jackson

Johnson City

Kingsport, TN-VA

Knoxville

Memphis, TN-AR-MS

Nashville

**Texas**

Abilene

Amarillo

Austin

Beaumont

Brownsville

Bryan-College Station

Corpus Christi

Dallas-Fort Worth

Denton

El Paso, TX-NM

Galveston

Harlingen

Houston

Killeen

Laredo

Lewisville

Longview

Lubbock

McAllen-Edinburg-Mission

Midland

Odessa

Port Arthur

San Angelo

San Antonio

Sherman-Denison

Temple

Texarkana, TX-Texarkana, AR

Texas City

Tyler

Victoria

Waco

Wichita Falls

**Utah**

Logan

Ogden

Provo-Orem

Salt Lake City

**Vermont**

Burlington

**Virginia**

Bristol, TN-Bristol, VA

Charlottesville

Danville

Fredericksburg

Kingsport, TN-VA

Lynchburg

Norfolk-Virginia Beach-Newport News

Petersburg

Richmond

Roanoke

Washington, DC-MD-VA

**Washington**

Bellingham

Bremerton

Longview, WA-OR

Olympia

Portland-Vancouver, OR-WA

Richland-Kennewick-Pasco

Seattle

Spokane

Tacoma

Yakima

**West Virginia**

Charleston

Cumberland, MD-WV

Hagerstown, MD-PA-WV

Huntington-Ashland, WV-KY-OH

Parkersburg, WV-OH

Steubenville-Weirton, OH-WV-PA

Wheeling, WV-OH

**Wisconsin**

Appleton-Neenah

Beloit, WI-IL

Duluth, MN-WI

Eau Claire

Green Bay

Janesville

Kenosha

La Crosse, WI-MN

Madison

Milwaukee

Oshkosh

Racine

Round Lake Beach-McHenry, IL-WI

Sheboygan

Wausau

**Wyoming**

Casper

Cheyenne

**Puerto Rico**

Aquadilla

Arecibo

Caguas

Cayey

Humacao

Mayaguez

Ponce

San Juan

Vega Baja-Manati
BILLING CODE 6560-50-P

***68808 Appendix 4 to the Preamble—No Exposure Certification Form**

NPDES FORM 3510-11

EPA

United States Environmental Protection Agency
Washington, DC 20460

Form Approved
OMB No. 2040-0211

## NO EXPOSURE CERTIFICATION for Exclusion from NPDES Storm Water Permitting

Submission of this No Exposure Certification constitutes notice that the entity identified in Section A does not require permit authorization for its storm water discharges associated with industrial activity in the State identified in Section B under EPA's Storm Water Multi-Sector General Permit due to the existence of a condition of no exposure.

A condition of no exposure exists at an industrial facility when all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product. A storm resistant shelter is not required for the following industrial materials and activities:

- drums, barrels, tanks, and similar containers that are tightly sealed, provided those containers are not deteriorated and do not leak. "Sealed" means banded or otherwise secured and without operational taps or valves;
- adequately maintained vehicles used in material handling; and
- final products, other than products that would be mobilized in storm water discharges (e.g., rock salt).

A No Exposure Certification must be provided for each facility qualifying for the no exposure exclusion. In addition, the exclusion from NPDES permitting is available on a facility-wide basis only, not for individual outfalls. If any industrial activities or materials are or will be exposed to precipitation, the facility is not eligible for the no exposure exclusion.

By signing and submitting this No Exposure Certification form, the entity in Section A is certifying that a condition of no exposure exists at its facility or site, and is obligated to comply with the terms and conditions of 40 CFR 122.26(g).

ALL INFORMATION MUST BE PROVIDED ON THIS FORM.

**Detailed instructions for completing this form and obtaining the no exposure exclusion are provided on pages 3 and 4.**

### A. Facility Operator Information

1. Name: _____ 2. Phone: _____
3. Mailing Address: a. Street: _____
   b. City: _____ c. State: ____ d. Zip Code: _____

### B. Facility/Site Location Information

1. Facility Name: _____
2. a. Street Address: _____
   b. City: _____ c. County: _____
   d. State: ____ e. Zip Code: _____
3. Is the facility located on Indian Lands? Yes ☐ No ☐
4. Is this a Federal facility? Yes ☐ No ☐
5. a. Latitude: ____ ° ____ ' ____ " b. Longitude: ____ ° ____ ' ____ "
6. a. Was the facility or site previously covered under an NPDES storm water permit? Yes ☐ No ☐
   b. If yes, enter NPDES permit number: _____
7. SIC/Activity Codes: Primary: ____ Secondary (if applicable): ____
8. Total size of site associated with industrial activity: _____ acres
9. a. Have you paved or roofed over a formerly exposed, pervious area in order to qualify for the no exposure exclusion? Yes ☐ No ☐
   b. If yes, please indicate approximately how much area was paved or roofed over. Completing this question does not disqualify you for the no exposure exclusion. However, your permitting authority may use this information in considering whether storm water discharges from your site are likely to have an adverse impact on water quality, in which case you could be required to obtain permit coverage.

   Less than one acre ☐ One to five acres ☐ More than five acres ☐

EPA Form 3510-11 (10-99) Page 1 of 4

NPDES FORM 3510-11 | EPA

**NO EXPOSURE CERTIFICATION for Exclusion from NPDES Storm Water Permitting**

Form Approved OMB No. 2040-0211

**C. Exposure Checklist**

Are any of the following materials or activities exposed to precipitation, now or in the foreseeable future? (Please check either "Yes" or "No" in the appropriate box.) **If you answer "Yes" to any of these questions (1) through (11), you are not eligible for the no exposure exclusion.**

| | Yes | No |
|---|---|---|
| 1. Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed to storm water | ☐ | ☐ |
| 2. Materials or residuals on the ground or in storm water inlets from spills/leaks | ☐ | ☐ |
| 3. Materials or products from past industrial activity | ☐ | ☐ |
| 4. Material handling equipment (except adequately maintained vehicles) | ☐ | ☐ |
| 5. Materials or products during loading/unloading or transporting activities | ☐ | ☐ |
| 6. Materials or products stored outdoors (except final products intended for outside use [e.g., new cars] where exposure to storm water does not result in the discharge of pollutants) | ☐ | ☐ |
| 7. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers | ☐ | ☐ |
| 8. Materials or products handled/stored on roads or railways owned or maintained by the discharger | ☐ | ☐ |
| 9. Waste material (except waste in covered, non-leaking containers [e.g., dumpsters]) | ☐ | ☐ |
| 10. Application or disposal of process wastewater (unless otherwise permitted) | ☐ | ☐ |
| 11. Particulate matter or visible deposits of residuals from roof stacks and/or vents not otherwise regulated (i.e., under an air quality control permit) and evident in the storm water outflow | ☐ | ☐ |

**D. Certification Statement**

I certify under penalty of law that I have read and understand the eligibility requirements for claiming a condition of "no exposure" and obtaining an exclusion from NPDES storm water permitting.

I certify under penalty of law that there are no discharges of storm water contaminated by exposure to industrial activities or materials from the industrial facility or site identified in this document (except as allowed under 40 CFR 122.26(g)(2)).

I understand that I am obligated to submit a no exposure certification form once every five years to the NPDES permitting authority and, if requested, to the operator of the local municipal separate storm sewer system (MS4) into which the facility discharges (where applicable). I understand that I must allow the NPDES permitting authority, or MS4 operator where the discharge is into the local MS4, to perform inspections to confirm the condition of no exposure and to make such inspection reports publicly available upon request. I understand that I must obtain coverage under an NPDES permit prior to any point source discharge of storm water from the facility.

Additionally, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name: _____

Print Title: _____

Signature: _____

Date: _____

EPA Form 3510-11 (10-99) Page 2 of 4

NPDES FORM 3510-11

EPA

## Instructions for the NO EXPOSURE CERTIFICATION for Exclusion from NPDES Storm Water Permitting

Form Approved OMB No. 2040-0211

### Who May File a No Exposure Certification

Federal law at 40 CFR Part 122.26 prohibits point source discharges of storm water associated with industrial activity to waters of the U.S. without a National Pollutant Discharge Elimination System (NPDES) permit. However, NPDES permit coverage is not required for discharges of storm water associated with industrial activities identified at 40 CFR 122.26(b)(14)(i)-(ix) and (xi) if the discharger can certify that a condition of "no exposure" exists at the industrial facility or site.

Storm water discharges from construction activities identified in 40 CFR 122.26(b)(14)(x) and (b)(15) are not eligible for the no exposure exclusion.

### Obtaining and Maintaining the No Exposure Exclusion

This form is used to certify that a condition of no exposure exists at the industrial facility or site described herein. This certification is only applicable in jurisdictions where EPA is the NPDES permitting authority and must be re-submitted at least once every five years.

The industrial facility operator must maintain a condition of no exposure at its facility or site in order for the no exposure exclusion to remain applicable. If conditions change resulting in the exposure of materials and activities to storm water, the facility operator must obtain coverage under an NPDES storm water permit immediately.

### Where to File the No Exposure Certification Form

Mail the completed no exposure certification form to:

Storm Water No Exposure Certification (4203)
USEPA
401 M Street, SW
Washington, D.C. 20460

### Completing the Form

You must type or print, using uppercase letters, in appropriate areas only. Enter only one character per space (i.e., between the marks). Abbreviate if necessary to stay within the number of characters allowed for each item. Use one space for breaks between words. One form must be completed for each facility or site for which you are seeking to certify a condition of no exposure. Additional guidance on completing this form can be accessed through EPA's web site at www.epa.gov/owm/sw. Please make sure you have addressed all applicable questions and have made a photocopy for your records before sending the completed form to the above address.

### Section A. Facility Operator Information

1. Provide the legal name of the person, firm, public organization, or any other entity that operates the facility or site described in this certification. The name of the operator may or may not be the same as the name of the facility. The operator is the legal entity that controls the facility's operation, rather than the plant or site manager.
2. Provide the telephone number of the facility operator.
3. Provide the mailing address of the operator (P.O. Box numbers may be used). Include the city, state, and zip code. All correspondence will be sent to this address.

### Section B. Facility/Site Location Information

1. Enter the official or legal name of the facility or site.
2. Enter the complete street address (if no street address exists, provide a geographic description (e.g., Intersection of Routes 9 and 55)), city, county, state, and zip code. Do not use a P.O. Box number.
3. Indicate whether the facility is located on Indian Lands.
4. Indicate whether the industrial facility is operated by a department or agency of the Federal Government (see also Section 313 of the Clean Water Act).
5. Enter the latitude and longitude of the approximate center of the facility or site in degrees/minutes/seconds. Latitude and longitude can be obtained from United States Geological Survey (USGS) quadrangle or topographic maps, by calling 1-(888) ASK-USGS, or by accessing EPA's web site at http://www.epa.gov/owm/sw/industry/index.htm and selecting Latitude and Longitude Finders under the Resources/Permit section.

   Latitude and longitude for a facility in decimal form must be converted to degrees (°), minutes ('), and seconds (") for proper entry on the certification form. To convert decimal latitude or longitude to degrees/minutes/seconds, follow the steps in the following example.

   Example: Convert decimal latitude 45.1234567 to degrees (°), minutes ('), and seconds (").

   a) The numbers to the left of the decimal point are the degrees: 45°.

   b) To obtain minutes, multiply the first four numbers to the right of the decimal point by 0.006: 1234 x 0.006 = 7.404.

   c) The numbers to the left of the decimal point in the result obtained in (b) are the minutes: 7'.

   d) To obtain seconds, multiply the remaining three numbers to the right of the decimal from the result obtained in (b) by 0.06: 404 x 0.06 = 24.24. Since the numbers to the right of the decimal point are not used, the result is 24".

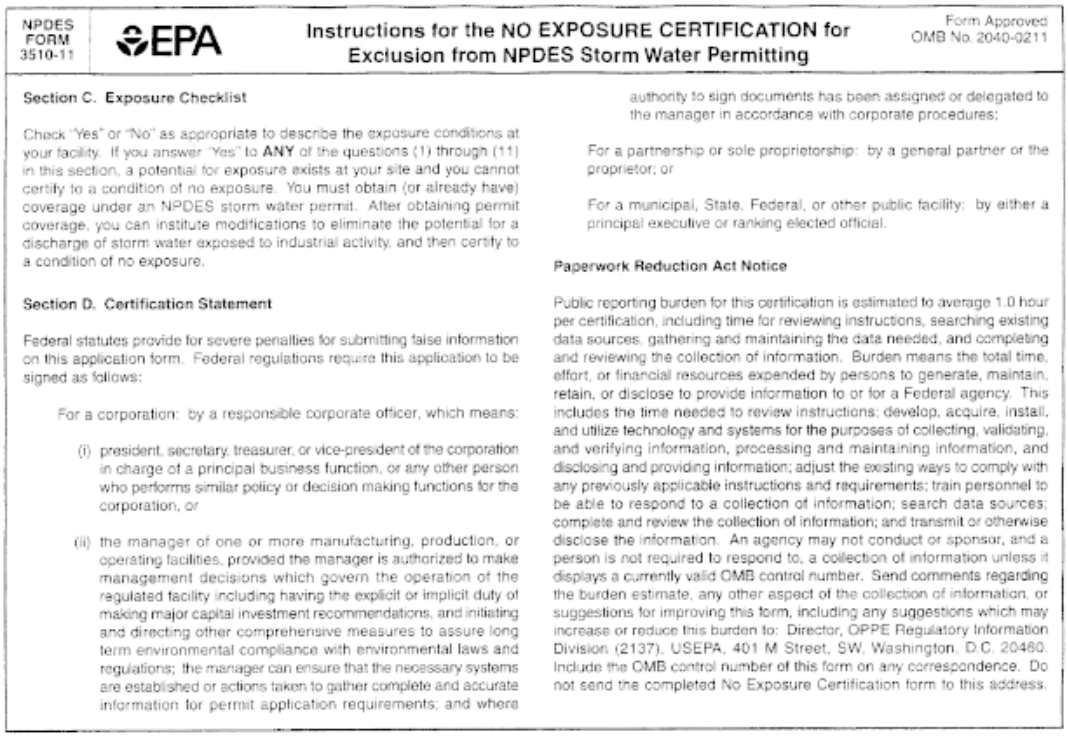
   e) The conversion for 45.1234567 = 45° 7' 24".
6. Indicate whether the facility was previously covered under an NPDES storm water permit. If so, include the permit number.
7. Enter the 4-digit SIC code which identifies the facility's primary activity, and second 4-digit SIC code identifying the facility's secondary activity, if applicable. SIC codes can be obtained from the Standard Industrial Classification Manual, 1987.
8. Enter the total size of the site associated with industrial activity in acres. Acreage may be determined by dividing square footage by 43,560, as demonstrated in the following example.

   Example: Convert 54,450 $ft^2$ to acres

   Divide 54,450 $ft^2$ by 43,560 square feet per acre:
   54,450 $ft^2$ ÷ 43,560 $ft^2$/acre = 1.25 acres.
9. Check "Yes" or "No" as appropriate to indicate whether you have paved or roofed over a formerly exposed, pervious area (i.e., lawn, meadow, dirt or gravel road/parking lot) in order to quality for no exposure. If yes, also indicate approximately how much area was paved or roofed over and is now impervious area.

EPA Form 3510-11 (10-99)

Page 3 of 4



NPDES FORM 3510-11 | EPA | Instructions for the NO EXPOSURE CERTIFICATION for Exclusion from NPDES Storm Water Permitting | Form Approved OMB No. 2040-0211

**Section C. Exposure Checklist**

Check "Yes" or "No" as appropriate to describe the exposure conditions at your facility. If you answer "Yes" to **ANY** of the questions (1) through (11) in this section, a potential for exposure exists at your site and you cannot certify to a condition of no exposure. You must obtain (or already have) coverage under an NPDES storm water permit. After obtaining permit coverage, you can institute modifications to eliminate the potential for a discharge of storm water exposed to industrial activity, and then certify to a condition of no exposure.

**Section D. Certification Statement**

Federal statutes provide for severe penalties for submitting false information on this application form. Federal regulations require this application to be signed as follows:

For a corporation: by a responsible corporate officer, which means:

(i) president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or

(ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

For a partnership or sole proprietorship: by a general partner or the proprietor; or

For a municipal, State, Federal, or other public facility: by either a principal executive or ranking elected official.

**Paperwork Reduction Act Notice**

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BILLING CODE 6560-50-C

***68811 Appendix 5 to Preamble—Regulatory Flexibility for Small Entities**

**A. Regulatory Flexibility for Small Municipal Storm Sewer Systems (MS4s)**

***Different Compliance, Reporting, or Timetables That Are Responsive to Resources of Small Entities***

NPDES permitting authorities can issue general permits instead of requiring individual permits. This flexibility avoids the high application costs and administrative burden associated with individual permits.

NPDES permitting authorities can specify a time period of up to five years for small MS4s to fully develop and implement their program

Analytic monitoring is not required.

After the first permit term and subsequent permit terms, submittal of a summary report is only required in years two and four (Phase I municipalities are currently required to submit a detailed report each year).

A brief reporting format is encouraged to facilitate compiling and analyzing data from submitted reports. EPA intends to develop a model form for this purpose.

NPDES Permitting Authorities can phase in permit coverage for small MS4s serving jurisdictions with a population under 10,000 on a schedule consistent with a State watershed permitting approach.

***Clarifying, Consolidating, or Simplifying Compliance and Reporting Requirements***

The rule avoids duplication in permit requirements by allowing NPDES permitting authorities to include permit conditions that direct an MS4 to follow the requirements of a qualifying local program rather than the requirements of a minimum measure. Compliance with these programs is considered compliance with the NPDES general permit.

The rule allows NPDES permitting authorities to recognize existing responsibilities among different municipal entities to satisfy obligations for the minimum control measures.

A further alternative allows a small MS4 to satisfy its NPDES permit obligations if another governmental entity is already implementing a minimum control measure in the jurisdiction of the small MS4. The following conditions must be met:

1. The other entity is implementing the control measure,

2. The particular control measure (or component thereof) is at least as stringent as the corrersponding NPDES permit requirement, and

3. The other entity agrees to implement the control measure on your behalf.

The rule allows a covered small MS4 to "piggy-back" on to the storm water management program of an adjoining Phase I MS4. A small MS4 is waived from the application requirements of §122.26(d)(1)(iii), (iv) and (d)(2)(iii) [discharge characterization] and may satisfy the requirements of §122.26(d)(1)(v) and (d)(2)(iv) [identifying a management plan] by referencing the adjoining Phase I MS4's storm water management plan.

The rule accommodates the use of the watershed approach through NPDES general permits that could be issued on a watershed basis. The small MS4 can develop measures that are tailored to meet their watershed requirements. The small MS4's storm water management program can tie into watershed-wide plans.

***Performance Rather Than Design Standards for Small Entities***

Small governmental jurisdictions whose MS4s are covered by this rule are allowed to choose the best management practices (BMPs) to be implemented and the measurable goals for each of the minimum control measures:

1. Public education and outreach on storm water impacts

2. Public Involvement/Participation

3. Illicit discharge detection and elimination ***68812**

4. Construction site storm water runoff control

5. Post-construction storm water management in new development and redevelopment

6. Pollution prevention/good housekeeping for municipal operations

EPA will provide guidance and recommend, but not mandate, certain BMPs for some of the minimum control measures listed above. States can provide guidance to supplement or supplant EPA guidance.

Small MS4s can identify the measurable goals for each of the minimum control measures listed above. In their reports to the NPDES permitting authority, the small MS4s must evaluate their progress towards achievement of their identified measurable goals.

  

***Waivers for Small Entities From Coverage***

The rule allows permitting authorities to waive from coverage MS4s operated by small governmental jurisdictions located within an urbanized area and serving a population less than 1,000 people where the permitting authority has determined the MS4 is not contributing substantially to the pollutant loadings of an interconnected MS4 and, if the MS4 discharges pollutants that have been identified as a cause of impairment in the receiving water of the MS4 then the permitting authority has determined that storm water controls are not needed based on a TMDL that addresses the pollutants of concern.

The rule allows the permitting authority to waive from coverage MS4s serving a population under 10,000 where the permitting authority has evaluated all waters that receive a discharge from the MS4 and the permitting authority has determined that storm water controls are not needed based on a TMDL that addresses the pollutants of concern and future discharges do not have the potential to result in exceedances of water quality standards.

**B. Regulatory Flexibility for Small Construction Activities**

***Different Compliance, Reporting, or Timetables That Are Responsive to Resources of Small Entities***

The rule gives NPDES permitting authorities discretion not to require the submittal of a notice of intent (NOI) for coverage under a NPDES general permit, thereby reducing administrative and financial burden. All construction sites disturbing greater than 5 acres must submit an NOI.

***Clarifying, Consolidating, or Simplifying Compliance and Reporting Requirements***

The rule avoids duplication by allowing the NPDES permitting authority to incorporate by reference State, Tribal, or local programs under a NPDES general permit. Compliance with these programs is considered compliance with the NPDES general permit.

***Performance Rather Than Design Standards for Small Entities***

The operator of a covered construction activity selects and implement the BMPs most appropriate for the construction site based on the operator's storm water pollution prevention plan.

***Waivers for Small Entities From Coverage***

Waivers could be granted based on the use of a rainfall erosivity factor or a comprehensive analysis of water quality impacts.

(A) Low rainfall waiver: When the rainfall erosivity factor (“R” from Revised Universal Soil Loss Equation) is less than 5 during the period of construction activity, a permit is not required.

(B) Determination based on Water Quality Analysis: The NPDES permitting authority can waive from coverage construction activities disturbing from 1 acre up to 5 acres of land where storm water controls are not needed based on:

1. A TMDL approved or established by EPA that addresses the pollutants of concern, or

2. For non-impaired waters, an equivalent analysis that determines that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety.

**C. Regulatory Flexibility for Industrial/Commercial Facilities**

  

***Waivers for Small Entities From Coverage***

The rule provides a "no-exposure" waiver provision for Phase I industrial/commercial facilities. Qualifying facilities seeking this provision simply need to complete a self-certification form indicating that no industrial materials or activities are exposed to rain, snow, snow melt and/or runoff.

**Appendix 6 of Preamble—Governmental Entities Located Fully or Partially Within an Urbanized Area**

(This is a reference list only, not a list of all operators of small MS4s subject to §§122.32-122.36. For example, a listed governmental entity is only regulated if it operates a small MS4 within an "urbanized area" boundary as determined by the Bureau of the Census. Furthermore, entities such as military bases, large hospitals, prison complexes, universities, sewer districts, and highway departments that operate a small MS4 within an urbanized area are also subject to the permitting regulations but are not individually listed here. See §122.26(b)(16) for the definition of a small MS4 and §122.32(a) for the definition of a regulated small MS4.)

(Source: 1990 Census of Population and Housing, U.S. Bureau of the Census. This list is subject to change with the Decennial Census)

AL Anniston city

AL Attalla city

AL Auburn city

AL Autauga County

AL Blue Mountain town

AL Calhoun County

AL Colbert County

AL Dale County

AL Decatur city

AL Dothan city

AL Elmore County

AL Etowah County

AL Flint City town

AL Florence city

AL Gadsden city

AL Glencoe city

AL Grimes town

AL Hartselle city

  

AL Hobson City town

AL Hokes Bluff city

AL Houston County

AL Kinsey town

AL Lauderdale County

AL Lee County

AL Limestone County

AL Madison County

AL Midland City town

AL Montgomery County

AL Morgan County

AL Muscle Shoals city

AL Napier Field town

AL Northport city

AL Opelika city

AL Oxford city

AL Phenix City city

AL Prattville city

AL Priceville town

AL Rainbow City city

AL Russell County

AL Sheffield city

AL Southside city

AL Sylvan Springs town

AL Talladega County

AL Tuscaloosa city

AL Tuscaloosa County

AL Tuscumbia city

  

AL Weaver city

AR Alexander town

AR Barling city

AR Benton County

AR Cammack Village city

AR Crawford County

AR Crittenden County

AR Farmington city

AR Fayetteville city

AR Fort Smith city

AR Greenland town

AR Jacksonville city

AR Jefferson County

AR Johnson city

AR Marion city

AR Miller County

AR North Little Rock city

AR Pine Bluff city

AR Pulaski County

AR Saline County

AR Sebastian County

AR Shannon Hills city

AR Sherwood city

AR Springdale city

AR Sunset town

AR Texarkana city

AR Van Buren city

AR Washington County

  

AR West Memphis city

AR White Hall city

AZ Apache Junction city

AZ Chandler city

AZ El Mirage town

AZ Gilbert town

AZ Guadalupe town

AZ Maricopa County

AZ Oro Valley town

AZ Paradise Valley town

AZ Peoria city

AZ Pinal County ***68813**

AZ South Tucson city

AZ Surprise town

AZ Tolleson city

AZ Youngtown town

AZ Yuma city

AZ Yuma County

CA Apple Valley town

CA Belvedere city

CA Benicia city

CA Brentwood city

CA Butte County

CA Capitola city

CA Carmel-by-the-Sea city

CA Carpinteria city

CA Ceres city

CA Chico city

  

CA Compton city

CA Corte Madera town

CA Cotati city

CA Davis city

CA Del Rey Oaks city

CA Fairfax town

CA Hesperia city

CA Imperial County

CA Lakewood city

CA Lancaster city

CA Larkspur city

CA Lodi city

CA Lompoc city

CA Marin County

CA Marina city

CA Marysville city

CA Merced city

CA Merced County

CA Mill Valley city

CA Monterey city

CA Monterey County

CA Morgan Hill city

CA Napa city

CA Napa County

CA Novato city

CA Pacific Grove city

CA Palm Desert city

CA Palmdale city

  

CA Piedmont city

CA Placer County

CA Redding city

CA Rocklin city

CA Rohnert Park city

CA Roseville city

CA Ross town

CA San Anselmo town

CA San Buenaventura (Ventura) city

CA San Francisco city

CA San Joaquin County

CA San Luis Obispo city

CA San Luis Obispo County

CA San Rafael city

CA Sand City city

CA Santa Barbara city

CA Santa Barbara County

CA Santa Cruz city

CA Santa Cruz County

CA Santa Maria city

CA Sausalito city

CA Scotts Valley city

CA Seaside city

CA Shasta County

CA Solano County

CA Sonoma County

CA Stanislaus County

CA Suisun City city

  

CA Sutter County

CA Tiburon town

CA Tulare County

CA Vacaville city

CA Victorville city

CA Villa Park city

CA Visalia city

CA Watsonville city

CA West Sacramento city

CA Yolo County

CA Yuba City city

CA Yuba County

CO Adams County

CO Arvada city

CO Boulder city

CO Boulder County

CO Bow Mar town

CO Broomfield city

CO Cherry Hills Village city

CO Columbine Valley town

CO Commerce City city

CO Douglas County

CO Edgewater city

CO El Paso County

CO Englewood city

CO Evans city

CO Federal Heights city

CO Fort Collins city

  

CO Fountain city

CO Garden City town

CO Glendale city

CO Golden city

CO Grand Junction city

CO Greeley city

CO Greenwood Village city

CO Jefferson County

CO La Salle town

CO Lakeside town

CO Larimer County

CO Littleton city

CO Longmont city

CO Manitou Springs city

CO Mesa County

CO Mountain View town

CO Northglenn city

CO Pueblo city

CO Pueblo County

CO Sheridan city

CO Thornton city

CO Weld County

CO Westminster city

CO Wheat Ridge city

CT Ansonia city

CT Avon town

CT Beacon Falls town

CT Berlin town

  

CT Bethel town

CT Bloomfield town

CT Bozrah town

CT Branford town

CT Bridgeport city

CT Bristol city

CT Brookfield town

CT Burlington town

CT Cheshire town

CT Cromwell town

CT Danbury city

CT Darien town

CT Derby city

CT Durham town

CT East Granby town

CT East Hartford town

CT East Haven town

CT East Lyme town

CT East Windsor town

CT Easton town

CT Ellington town

CT Enfield town

CT Fairfield County

CT Fairfield town

CT Farmington town

CT Franklin town

CT Glastonbury town

CT Greenwich town

  

CT Groton city

CT Groton town

CT Guilford town

CT Hamden town

CT Hartford city

CT Hartford County

CT Ledyard town

CT Lisbon town

CT Litchfield County

CT Manchester town

CT Meriden city

CT Middlebury town

CT Middlefield town

CT Middlesex County

CT Middletown city

CT Milford city (remainder)

CT Monroe town

CT Montville town

CT Naugatuck borough

CT New Britain city

CT New Canaan town

CT New Fairfield town

CT New Haven city

CT New Haven County

CT New London city

CT New London County

CT New Milford town

CT Newington town

  

CT Newtown town

CT North Branford town

CT North Haven town

CT Norwalk city

CT Norwich city

CT Orange town

CT Oxford town

CT Plainville town

CT Plymouth town

CT Portland town

CT Preston town

CT Prospect town

CT Rocky Hill town

CT Seymour town

CT Shelton city

CT Sherman town

CT Somers town

CT South Windsor town

CT Southington town

CT Sprague town

CT Stonington town

CT Stratford town

CT Suffield town

CT Thomaston town

CT Thompson town

CT Tolland County

CT Tolland town

CT Trumbull town

  

CT Vernon town

CT Wallingford town

CT Waterbury city

CT Waterford town

CT Watertown town

CT West Hartford town

CT West Haven city

CT Weston town

CT Westport town

CT Wethersfield town

CT Wilton town

CT Windham County

CT Windsor Locks town

CT Windsor town

CT Wolcott town

CT Woodbridge town ***68814**

CT Woodmont borough

DE Camden town

DE Dover city

DE Kent County

DE Newark city

DE Wyoming town

FL Alachua County

FL Baldwin town

FL Bay County

FL Belleair Shore town

FL Biscayne Park village

FL Brevard County

  

FL Callaway city

FL Cape Canaveral city

FL Cedar Grove town

FL Charlotte County

FL Cinco Bayou town

FL Clay County

FL Cocoa Beach city

FL Cocoa city

FL Collier County

FL Daytona Beach city

FL Daytona Beach Shores city

FL Destin city

FL Edgewater city

FL El Portal village

FL Florida City city

FL Fort Pierce city

FL Fort Walton Beach city

FL Gainesville city

FL Gulf Breeze city

FL Hernando County

FL Hillsboro Beach town

FL Holly Hill city

FL Indialantic town

FL Indian Harbour Beach city

FL Indian River County

FL Indian River Shores town

FL Indian Shores town

FL Kissimmee city

  

FL Lazy Lake village

FL Lynn Haven city

FL Malabar town

FL Marion County

FL Martin County

FL Mary Esther city

FL Melbourne Beach town

FL Melbourne city

FL Melbourne Village town

FL Naples city

FL New Smyrna Beach city

FL Niceville city

FL Ocala city

FL Ocean Breeze Park town

FL Okaloosa County

FL Orange Park town

FL Ormond Beach city

FL Osceola County

FL Palm Bay city

FL Panama City city

FL Parker city

FL Ponce Inlet town

FL Port Orange city

FL Port St. Lucie city

FL Punta Gorda city

FL Rockledge city

FL Santa Rosa County

FL Satellite Beach city

  

FL Sewall's Point town

FL Shalimar town

FL South Daytona city

FL Springfield city

FL St. Johns County

FL St. Lucie County

FL St. Lucie village

FL Stuart city

FL Sweetwater city

FL Titusville city

FL Valparaiso city

FL Vero Beach city

FL Virginia Gardens village

FL Volusia County

FL Walton County

FL Weeki Wachee city

FL West Melbourne city

FL Windermere town

GA Albany city

GA Athens city

GA Bartow County

GA Brunswick city

GA Catoosa County

GA Centerville city

GA Chattahoochee County

GA Cherokee County

GA Chickamauga city

GA Clarke County

  

GA Columbia County

GA Conyers city

GA Dade County

GA Dougherty County

GA Douglas County

GA Douglasville city

GA Fayette County

GA Floyd County

GA Fort Oglethorpe city

GA Glynn County

GA Grovetown city

GA Henry County

GA Houston County

GA Jones County

GA Lee County

GA Lookout Mountain city

GA Mountain Park city

GA Oconee County

GA Payne city

GA Rockdale County

GA Rome city

GA Rossville city

GA Stockbridge city

GA Vernonburg town

GA Walker County

GA Warner Robins city

GA Winterville city

GA Woodstock city

  

IA Altoona city

IA Asbury city

IA Bettendorf city

IA Black Hawk County

IA Buffalo city

IA Carter Lake city

IA Cedar Falls city

IA Clive city

IA Coralville city

IA Council Bluffs city

IA Dallas County

IA Dubuque city

IA Dubuque County

IA Elk Run Heights city

IA Evansdale city

IA Hiawatha city

IA Iowa City city

IA Johnson County

IA Johnston city

IA Le Claire city

IA Linn County

IA Marion city

IA Norwalk city

IA Panorama Park city

IA Pleasant Hill city

IA Polk County

IA Pottawattamie County

IA Raymond city

  

IA Riverdale city

IA Robins city

IA Scott County

IA Sergeant Bluff city

IA Sioux City city

IA University Heights city

IA Urbandale city

IA Warren County

IA Waterloo city

IA West Des Moines city

IA Windsor Heights city

IA Woodbury County

ID Ada County

ID Ammon city

ID Bannock County

ID Bonneville County

ID Chubbuck city

ID Idaho Falls city

ID Iona city

ID Pocatello city

ID Power County

IL Addison township

IL Addison village

IL Algonquin township

IL Algonquin village

IL Alorton village

IL Alsip village

IL Alton city

  

IL Antioch township

IL Antioch village

IL Arlington Heights village

IL Aroma Park village

IL Aroma township

IL Aurora city

IL Aurora township

IL Avon township

IL Ball township

IL Bannockburn village

IL Barrington township

IL Barrington village

IL Bartlett village

IL Bartonville village

IL Batavia city

IL Batavia township

IL Beach Park village

IL Bedford Park village

IL Belleville city

IL Bellevue village

IL Bellwood village

IL Bensenville village

IL Benton township

IL Berkeley village

IL Berwyn city

IL Bethalto village

IL Blackhawk township

IL Bloom township

  

IL Bloomingdale township

IL Bloomingdale village

IL Bloomington city

IL Bloomington township

IL Blue Island city

IL Bolingbrook village

IL Bourbonnais township

IL Bourbonnais village

IL Bowling township

IL Bradley village

IL Bremen township

IL Bridgeview village

IL Bristol township

IL Broadview village

IL Brookfield village

IL Brooklyn village

IL Buffalo Grove village

IL Burbank city

IL Burnham village

IL Burr Ridge village ***68815**

IL Burritt township

IL Burton township

IL Cahokia village

IL Calumet City city

IL Calumet Park village

IL Calumet township

IL Canteen township

IL Capital township

  

IL Carbon Cliff village

IL Carol Stream village

IL Carpentersville Village

IL Cary village

IL Caseyville township

IL Caseyville village

IL Centreville city

IL Centreville township

IL Champaign city

IL Champaign County

IL Champaign township

IL Channahon township

IL Cherry Valley township

IL Cherry Valley village

IL Chicago city

IL Chicago Heights city

IL Chicago Ridge village

IL Chouteau township

IL Cicero town

IL Cincinnati township

IL Clarendon Hills village

IL Coal Valley township

IL Coal Valley village

IL Collinsville city

IL Collinsville township

IL Colona township

IL Colona village

IL Columbia city

  

IL Country Club Hills city

IL Countryside city

IL Crest Hill city

IL Crestwood village

IL Crete township

IL Crete village

IL Creve Coeur village

IL Crystal Lake city

IL Cuba township

IL Curran township

IL Darien city

IL Decatur city

IL Decatur township

IL Deer Park village

IL Deerfield township

IL Deerfield village

IL Des Plaines city

IL Dixmoor village

IL Dolton village

IL Dorr township

IL Downers Grove township

IL Downers Grove village

IL Dry Grove township

IL Du Page township

IL Dundee township

IL Dunleith township

IL Dupo village

IL East Alton village

  

IL East Dubuque city

IL East Dundee village

IL East Hazel Crest village

IL East Moline city

IL East Peoria city

IL East St. Louis city

IL Edwardsville city

IL Edwardsville township

IL Ela township

IL Elgin city

IL Elgin township

IL Elk Grove township

IL Elk Grove Village village

IL Elm Grove township

IL Elmhurst city

IL Elmwood Park village

IL Evanston city

IL Evergreen Park village

IL Fairmont City village

IL Fairview Heights city

IL Flossmoor village

IL Fondulac township

IL Ford Heights village

IL Forest Park village

IL Forest View village

IL Forsyth village

IL Fort Russell township

IL Foster township

  

IL Fox Lake village

IL Fox River Grove village

IL Frankfort township

IL Frankfort village

IL Franklin Park village

IL Fremont township

IL Gardner township

IL Geneva city

IL Geneva township

IL Gilberts village

IL Glen Carbon village

IL Glen Ellyn village

IL Glencoe village

IL Glendale Heights village

IL Glenview village

IL Glenwood village

IL Godfrey township

IL Golf village

IL Grafton township

IL Grandview village

IL Granite City city

IL Grant township

IL Grayslake village

IL Green Oaks village

IL Green Rock city

IL Groveland township

IL Gurnee village

IL Hainesville village

  

IL Hampton township

IL Hampton village

IL Hanna township

IL Hanover Park village

IL Hanover township

IL Harlem township

IL Harristown township

IL Harristown village

IL Hartford village

IL Harvey city

IL Harwood Heights village

IL Hawthorn Woods village

IL Hazel Crest village

IL Henry County

IL Hensley township

IL Hickory Hills city

IL Hickory Point township

IL Highland Park city

IL Highwood city

IL Hillside village

IL Hinsdale village

IL Hodgkins village

IL Hoffman Estates village

IL Hollis township

IL Homer township

IL Hometown city

IL Homewood village

IL Indian Creek village

  

IL Indian Head Park village

IL Inverness village

IL Itasca village

IL Jarvis township

IL Jerome village

IL Jo Daviess County

IL Joliet city

IL Joliet township

IL Justice village

IL Kane County

IL Kankakee city

IL Kankakee County

IL Kankakee township

IL Kendall County

IL Kenilworth village

IL Kickapoo township

IL Kildeer village

IL La Grange Park village

IL La Grange village

IL Lake Barrington village

IL Lake Bluff village

IL Lake Forest city

IL Lake in the Hills village

IL Lake Villa township

IL Lake Villa village

IL Lake Zurich village

IL Lakemoor village

IL Lakewood village

  

IL Lansing village

IL Leland Grove city

IL Lemont township

IL Leyden township

IL Libertyville township

IL Libertyville village

IL Limestone township

IL Lincolnshire village

IL Lincolnwood village

IL Lindenhurst village

IL Lisle township

IL Lisle village

IL Lockport city

IL Lockport township

IL Lombard village

IL Long Creek township

IL Long Grove village

IL Loves Park city

IL Lynwood village

IL Lyons township

IL Lyons village

IL Machesney Park village

IL Macon County

IL Madison city

IL Madison County

IL Maine township

IL Markham city

IL Marquette Heights city

  

IL Maryville village

IL Matteson village

IL Maywood village

IL McCook village

IL McCullom Lake village

IL McHenry city

IL McHenry County

IL McHenry township

IL McLean County

IL Medina township

IL Melrose Park village

IL Merrionette Park village

IL Midlothian village

IL Milan village

IL Milton township

IL Moline city

IL Moline township

IL Monee township

IL Monroe County

IL Montgomery village

IL Moro township

IL Morton Grove village

IL Morton township

IL Morton village ***68816**

IL Mount Prospect village

IL Mount Zion township

IL Mount Zion village

IL Mundelein village

  

IL Nameoki township

IL Naperville city

IL Naperville township

IL National City village

IL New Lenox township

IL New Lenox village

IL New Millford village

IL New Trier township

IL Newport township

IL Niles township

IL Niles village

IL Normal town

IL Normal township

IL Norridge village

IL North Aurora village

IL North Barrington village

IL North Chicago city

IL North Pekin village

IL North Riverside village

IL Northbrook village

IL Northfield township

IL Northfield village

IL Northlake city

IL Norwood Park township

IL Norwood village

IL Nunda township

IL Oak Brook village

IL Oak Forest city

  

IL Oak Grove village

IL Oak Lawn village

IL Oak Park village

IL Oakbrook Terrace city

IL Oakley township

IL Oakwood Hills village

IL O'Fallon city

IL O'Fallon township

IL Olympia Fields village

IL Orland Hills village

IL Orland Park village

IL Orland township

IL Oswego township

IL Oswego village

IL Otto township

IL Owen township

IL Palatine township

IL Palatine village

IL Palos Heights city

IL Palos Hills city

IL Palos Park village

IL Palos township

IL Park City city

IL Park Forest village

IL Park Ridge city

IL Pekin city

IL Pekin township

IL Peoria city

  

IL Peoria County

IL Peoria Heights village

IL Phoenix village

IL Pin Oak township

IL Plainfield township

IL Plainfield village

IL Pontoon Beach village

IL Posen village

IL Precinct 10

IL Prospect Heights city

IL Proviso township

IL Rich township

IL Richton Park village

IL Richwoods township

IL River Forest village

IL River Grove village

IL Riverdale village

IL Riverside township

IL Riverside village

IL Riverwoods village

IL Robbins village

IL Rochester township

IL Rock Island city

IL Rock Island County

IL Rock Island township

IL Rockdale village

IL Rockford township

IL Rockton township

  

IL Rockton village

IL Rolling Meadows city

IL Romeoville village

IL Roscoe township

IL Roscoe village

IL Roselle village

IL Rosemont village

IL Round Lake Beach village

IL Round Lake Heights village

IL Round Lake Park village

IL Round Lake village

IL Roxana village

IL Rutland township

IL Sangamon County

IL Sauget village

IL Sauk Village village

IL Savoy village

IL Schaumburg township

IL Schaumburg village

IL Schiller Park village

IL Shields township

IL Shiloh Valley township

IL Shiloh village

IL Shorewood village

IL Silvis city

IL Skokie village

IL Sleepy Hollow village

IL Somer township

  

IL South Beloit city

IL South Chicago Heights village

IL South Elgin village

IL South Holland village

IL South Moline township

IL South Rock Island township

IL South Roxana village

IL South Wheatland township

IL Southern View village

IL Spring Bay township

IL Springfield city

IL Springfield township

IL St. Charles city

IL St. Charles township

IL St. Clair County

IL St. Clair township

IL Steger village

IL Stickney township

IL Stickney village

IL Stites township

IL Stone Park village

IL Stookey township

IL Streamwood village

IL Sugar Grove township

IL Sugar Loaf township

IL Summit village

IL Sunnyside village

IL Swansea village

  

IL Tazewell County

IL Thornton township

IL Thornton village

IL Tinley Park village

IL Tolono township

IL Tower Lakes village

IL Tremont township

IL Troy city

IL Troy township

IL University Park village

IL Urbana city

IL Urbana township

IL Venice city

IL Venice township

IL Vernon Hills village

IL Vernon township

IL Villa Park village

IL Warren township

IL Warrenville city

IL Washington city

IL Washington Park village

IL Washington township

IL Wauconda township

IL Waukegan city

IL Waukegan township

IL Wayne township

IL West Chicago city

IL West Deerfield township

  

IL West Dundee village

IL West Peoria township

IL Westchester village

IL Western Springs village

IL Westmont village

IL Wheatland township

IL Wheaton city

IL Wheeling township

IL Wheeling village

IL Whitmore township

IL Will County

IL Willow Springs village

IL Willowbrook village

IL Wilmette village

IL Winfield township

IL Winfield village

IL Winnebago County

IL Winnetka village

IL Winthrop Harbor village

IL Wood Dale city

IL Wood River city

IL Wood River township

IL Woodford County

IL Woodridge village

IL Woodside township

IL Worth township

IL Worth village

IL York township

  

IL Zion city

IN Aboite township

IN Adams township

IN Allen County

IN Anderson city

IN Anderson township

IN Baugo township

IN Beech Grove city

IN Bloomington city

IN Bloomington township

IN Boone County

IN Buck Creek township

IN Calumet township

IN Carmel city

IN Castleton town

IN Cedar Creek township

IN Center township

IN Centre township

IN Chesterfield town

IN Chesterton town

IN Clark County

IN Clarksville town

IN Clay township

IN Clermont town

IN Cleveland township

IN Concord township

IN Country Club Heights town ***68817**

IN Crown Point city

  

IN Crows Nest town

IN Cumberland town

IN Daleville town

IN Delaware County

IN Delaware township

IN Dyer town

IN Eagle township

IN East Chicago city

IN Edgewood town

IN Elkhart city

IN Elkhart County

IN Elkhart township

IN Evansville city

IN Fairfield township

IN Fall Creek township

IN Fishers town

IN Floyd County

IN Fort Wayne city

IN Franklin township

IN Gary city

IN German township

IN Goshen city

IN Greenwood city

IN Griffith town

IN Hamilton County

IN Hamilton township

IN Hammond city

IN Hancock County

  

IN Hanover township

IN Harris township

IN Harrison township

IN Hendricks County

IN Highland town

IN Hobart city

IN Hobart township

IN Homecroft town

IN Honey Creek township

IN Howard County

IN Howard township

IN Indian Village town

IN Jackson township

IN Jefferson township

IN Jeffersonville city

IN Jeffersonville township

IN Johnson County

IN Knight township

IN Kokomo city

IN Lafayette city

IN Lafayette township

IN Lake County

IN Lake Station city

IN Lawrence city

IN Lawrence township

IN Liberty township

IN Lincoln township

IN Lost Creek township

  

IN Madison County

IN Meridian Hills town

IN Merrillville town

IN Mishawaka city

IN Monroe County

IN Mount Pleasant township

IN Muncie city

IN Munster town

IN New Albany city

IN New Albany township

IN New Chicago town

IN New Haven city

IN New Whiteland town

IN Newburgh town

IN North Crows Nest town

IN North township

IN Ogden Dunes town

IN Ohio township

IN Osceola town

IN Osolo township

IN Otter Creek township

IN Penn township

IN Perry township

IN Pigeon township

IN Pike township

IN Pleasant township

IN Portage city

IN Portage township

  

IN Porter County

IN Porter town

IN Richland township

IN Riley township

IN River Forest town

IN Rocky Ripple town

IN Roseland town

IN Ross township

IN Salem township

IN Schererville town

IN Seelyville town

IN Sellersburg town

IN Selma town

IN Silver Creek township

IN South Bend city

IN Southport city

IN Speedway town

IN Spring Hill town

IN St. John town

IN St. John township

IN St. Joseph County

IN St. Joseph township

IN Sugar Creek township

IN Taylor township

IN Terre Haute city

IN Tippecanoe County

IN Tippecanoe township

IN Union township

  

IN Utica township

IN Van Buren township

IN Vanderburgh County

IN Vigo County

IN Wabash township

IN Warren Park town

IN Warren township

IN Warrick County

IN Washington township

IN Wayne township

IN Wea township

IN West Lafayette city

IN West Terre Haute town

IN Westchester township

IN Westfield town

IN White River township

IN Whiteland town

IN Whiting city

IN Williams Creek town

IN Woodlawn Heights town

IN Wynnedale town

IN Yorktown town

IN Zionsville town

KS Attica township

KS Bel Aire city

KS Countryside city

KS Delano township

KS Doniphan County

  

KS Douglas County

KS Eastborough city

KS Elwood city

KS Fairway city

KS Gypsum township

KS Haysville city

KS Johnson County

KS Kechi city

KS Kechi township

KS Lake Quivira city

KS Lawrence city

KS Leawood city

KS Lenexa city

KS Merriam city

KS Minneha township

KS Mission city

KS Mission Hills city

KS Mission township

KS Mission Woods city

KS Monticello township

KS Ohio township

KS Olathe city

KS Olathe township

KS Park City city

KS Park township

KS Prairie Village city

KS Riverside township

KS Roeland Park city

  

KS Salem township

KS Sedgwick County

KS Shawnee city

KS Shawnee County

KS Shawnee township

KS Soldier township

KS Tecumseh township

KS Topeka township

KS Waco township

KS Wakarusa township

KS Washington township

KS Westwood city

KS Westwood Hills city

KS Williamsport township

KS Wyandotte County

KY Alexandria city

KY Ashland city

KY Bellefonte city

KY Bellevue city

KY Boone County

KY Boyd County

KY Bromley city

KY Bullitt County

KY Campbell County

KY Catlettsburg city

KY Christian County

KY Covington city

KY Crescent Park city

  

KY Crescent Springs city

KY Crestview city

KY Crestview Hills city

KY Daviess County

KY Dayton city

KY Edgewood city

KY Elsmere city

KY Erlanger city

KY Fairview city

KY Flatwoods city

KY Florence city

KY Forest Hills city

KY Fort Mitchell city

KY Fort Thomas city

KY Fort Wright city

KY Fox Chase city

KY Greenup County

KY Hebron Estates city

KY Henderson city

KY Henderson County

KY Highland Heights city

KY Hillview city

KY Hunters Hollow city

KY Independence city

KY Jessamine County

KY Kenton County

KY Kenton Vale city

KY Lakeside Park city

  

KY Latonia Lakes city

KY Ludlow city

KY Melbourne city ***68818**

KY Newport city

KY Oak Grove city

KY Owensboro city

KY Park Hills city

KY Pioneer Village city

KY Raceland city

KY Russell city

KY Silver Grove city

KY Southgate city

KY Taylor Mill city

KY Villa Hills city

KY Wilder city

KY Woodlawn city

KY Wurtland city

LA Alexandria city

LA Baker city

LA Ball town

LA Bossier City city

LA Bossier Parish

LA Broussard town

LA Caddo Parish

LA Calcasieu Parish

LA Carencro city

LA Denham Springs city

LA Houma city

  

LA Lafayette city

LA Lafayette Parish

LA Lafourche Parish

LA Lake Charles city

LA Livingston Parish

LA Monroe city

LA Ouachita Parish

LA Pineville city

LA Plaquemines Parish

LA Port Allen city

LA Rapides Parish

LA Richwood town

LA Scott town

LA Slidell city

LA St. Bernard Parish

LA St. Charles Parish

LA St. Tammany Parish

LA Sulphur city

LA Terrebonne Parish

LA West Baton Rouge Parish

LA West Monroe city

LA Westlake city

LA Zachary city

MA Abington town

MA Acton town

MA Acushnet town

MA Agawam town

MA Amesbury town

  

MA Andover town

MA Arlington town

MA Ashland town

MA Attleboro city

MA Auburn town

MA Avon town

MA Barnstable County

MA Barnstable town

MA Bedford town

MA Bellingham town

MA Belmont town

MA Berkshire County

MA Beverly city

MA Billerica town

MA Blackstone town

MA Boxborough town

MA Boylston town

MA Braintree town

MA Bridgewater town

MA Bristol County

MA Brockton city

MA Brookline town

MA Burlington town

MA Cambridge city

MA Canton town

MA Charlton town

MA Chelmsford town

MA Chelsea city

  

MA Chicopee city

MA Cohasset town

MA Concord town

MA Dalton town

MA Danvers town

MA Dartmouth town

MA Dedham town

MA Dennis town

MA Dighton town

MA Dover town

MA Dracut town

MA Dudley town

MA East Bridgewater town

MA East Longmeadow town

MA Easthampton town

MA Easton town

MA Essex County

MA Essex town

MA Everett city

MA Fairhaven town

MA Fall River city

MA Fitchburg city

MA Foxborough town

MA Framingham town

MA Franklin town

MA Freetown town

MA Georgetown town

MA Gloucester city

  

MA Grafton town

MA Granby town

MA Groton town

MA Groveland town

MA Hadley town

MA Halifax town

MA Hamilton town

MA Hampden County

MA Hampden town

MA Hampshire County

MA Hanover town

MA Hanson town

MA Haverhill city

MA Hingham town

MA Hinsdale town

MA Holbrook town

MA Holden town

MA Holliston town

MA Holyoke city

MA Hudson town

MA Hull town

MA Lanesborough town

MA Lawrence city

MA Leicester town

MA Leominster city

MA Lexington town

MA Lincoln town

MA Littleton town

  

MA Longmeadow town

MA Lowell city

MA Ludlow town

MA Lunenburg town

MA Lynn city

MA Lynnfield town

MA Malden city

MA Manchester town

MA Mansfield town

MA Marblehead town

MA Marlborough city

MA Mashpee town

MA Maynard town

MA Medfield town

MA Medford city

MA Medway town

MA Melrose city

MA Merrimac town

MA Methuen town

MA Middlesex County

MA Middleton town

MA Millbury town

MA Millis town

MA Millville town

MA Milton town

MA Nahant town

MA Natick town

MA Needham town

  

MA New Bedford city

MA Newton city

MA Norfolk town

MA North Andover town

MA North Attleborough town

MA North Reading town

MA Northampton city

MA Northborough town

MA Northbridge town

MA Norton town

MA Norwell town

MA Norwood town

MA Oxford town

MA Paxton town

MA Peabody city

MA Pembroke town

MA Pittsfield city

MA Plainville town

MA Plymouth County

MA Quincy city

MA Randolph town

MA Raynham town

MA Reading town

MA Rehoboth town

MA Revere city

MA Rockland town

MA Rockport town

MA Salem city

  

MA Sandwich town

MA Saugus town

MA Scituate town

MA Seekonk town

MA Sharon town

MA Shrewsbury town

MA Somerset town

MA Somerville city

MA South Hadley town

MA Southampton town

MA Southborough town

MA Southwick town

MA Springfield city

MA Stoneham town

MA Stoughton town

MA Stow town

MA Sudbury town

MA Sutton town

MA Swampscott town

MA Swansea town

MA Taunton city

MA Tewksbury town

MA Tyngsborough town

MA Uxbridge town

MA Wakefield town

MA Walpole town

MA Waltham city

MA Watertown town

  

MA Wayland town

MA Webster town

MA Wellesley town

MA Wenham town

MA West Boylston town

MA West Bridgewater town

MA West Springfield town ***68819**

MA Westborough town

MA Westfield city

MA Westford town

MA Westminster town

MA Weston town

MA Westport town

MA Westwood town

MA Weymouth town

MA Whitman town

MA Wilbraham town

MA Williamsburg town

MA Wilmington town

MA Winchester town

MA Winthrop town

MA Woburn city

MA Worcester County

MA Wrentham town

MA Yarmouth town

MD Allegany County

MD Annapolis city

MD Bel Air town

  

MD Berwyn Heights town

MD Bladensburg town

MD Bowie city

MD Brentwood town

MD Brookeville town

MD Capitol Heights town

MD Cecil County

MD Cheverly town

MD Chevy Chase Section Five village

MD Chevy Chase Section Three village

MD Chevy Chase town

MD Chevy Chase Village town

MD College Park city

MD Colmar Manor town

MD Cottage City town

MD Cumberland city

MD District Heights city

MD Edmonston town

MD Elkton town

MD Fairmount Heights town

MD Forest Heights town

MD Frederick city

MD Frostburg city

MD Funkstown town

MD Gaithersburg city

MD Garrett Park town

MD Glen Echo town

MD Glenarden town

  

MD Greenbelt city

MD Hagerstown city

MD Highland Beach town

MD Hyattsville city

MD Kensington town

MD Landover Hills town

MD Laurel city

MD Martin's Additions village

MD Morningside town

MD Mount Rainier city

MD New Carrollton city

MD North Brentwood town

MD Riverdale town

MD Rockville city

MD Seat Pleasant city

MD Smithsburg town

MD Somerset town

MD Takoma Park city

MD University Park town

MD Walkersville town

MD Washington Grove town

MD Williamsport town

ME Androscoggin County

ME Auburn city

ME Bangor city

ME Berwick town

ME Brewer city

ME Cape Elizabeth town

  

ME Cumberland County

ME Eliot town

ME Falmouth town

ME Gorham town

ME Kittery town

ME Lebanon town

ME Lewiston city

ME Lisbon town

ME Old Town city

ME Orono town

ME Penobscot County

ME Penobscot Indian Island Reservation

ME Portland city

ME Sabattus town

ME Scarborough town

ME South Berwick town

ME South Portland city

ME Veazie town

ME Westbrook city

ME York County

MI Ada township

MI Allegan County

MI Allen Park city

MI Alpine township

MI Ann Arbor township

MI Auburn Hills city

MI Bangor township

MI Bath township

  

MI Battle Creek city

MI Bay City city

MI Bay County

MI Bedford township

MI Belleville city

MI Benton Charter township

MI Benton Harbor city

MI Berkley city

MI Berlin township

MI Berrien County

MI Beverly Hills village

MI Bingham Farms village

MI Birmingham city

MI Blackman township

MI Bloomfield Hills city

MI Bloomfield township

MI Bridgeport township

MI Brownstown township

MI Buena Vista Charter township

MI Burtchville township

MI Burton city

MI Byron township

MI Calhoun County

MI Canton township

MI Carrollton township

MI Cascade township

MI Cass County

MI Center Line city

  

MI Chesterfield township

MI Clarkston village

MI Clawson city

MI Clay township

MI Clayton township

MI Clinton County

MI Clinton township

MI Clio city

MI Clyde township

MI Commerce township

MI Comstock township

MI Cooper township

MI Dalton township

MI Davison city

MI Davison township

MI De Witt township

MI Dearborn city

MI Dearborn Heights city

MI Delhi Charter township

MI Delta township

MI Detroit city

MI East China township

MI East Detroit city

MI East Grand Rapids city

MI East Lansing city

MI Eaton County

MI Ecorse city

MI Emmett township

  

MI Erie township

MI Essexville city

MI Farmington city

MI Farmington Hills city

MI Ferndale city

MI Fillmore township

MI Flat Rock city

MI Flint township

MI Flushing city

MI Flushing township

MI Fort Gratiot township

MI Frankenlust township

MI Franklin village

MI Fraser city

MI Fruitport township

MI Gaines township

MI Garden City city

MI Genesee County

MI Genesee township

MI Georgetown township

MI Gibraltar city

MI Grand Blanc city

MI Grand Blanc township

MI Grand Rapids Charter township

MI Grandville city

MI Grosse Ile township

MI Grosse Pointe city

MI Grosse Pointe Farms city

  

MI Grosse Pointe Park city

MI Grosse Pointe Shores village

MI Grosse Pointe Woods city

MI Hampton township

MI Hamtramck city

MI Harper Woods city

MI Harrison township

MI Hazel Park city

MI Highland Park city

MI Highland township

MI Holland city

MI Holland township

MI Howard township

MI Hudsonville city

MI Huntington Woods city

MI Huron township

MI Independence township

MI Ingham County

MI Inkster city

MI Ira township

MI Jackson city

MI Jackson County

MI James township

MI Kalamazoo city

MI Kalamazoo County

MI Kalamazoo township

MI Keego Harbor city

MI Kent County

  

MI Kentwood city

MI Kimball township

MI Kochville township

MI Lake Angelus city

MI Laketon township

MI Laketown township

MI Lansing city

MI Lansing township

MI Lathrup Village city

MI Leoni township

MI Lincoln Park city ***68820**

MI Lincoln township

MI Livonia city

MI Macomb County

MI Macomb township

MI Madison Heights city

MI Marysville city

MI Melvindale city

MI Meridian township

MI Milford township

MI Milton township

MI Monitor township

MI Monroe County

MI Mount Clemens city

MI Mount Morris city

MI Mount Morris township

MI Mundy township

MI Muskegon city

  

MI Muskegon County

MI Muskegon Heights city

MI Muskegon township

MI New Baltimore city

MI Niles city

MI Niles township

MI North Muskegon city

MI Northville city

MI Northville township

MI Norton Shores city

MI Novi city

MI Novi township

MI Oak Park city

MI Oakland Charter township

MI Oakland County

MI Orchard Lake Village city

MI Orion township

MI Oshtemo township

MI Ottawa County

MI Parchment city

MI Park township

MI Pavilion township

MI Pennfield township

MI Pittsfield township

MI Plainfield township

MI Pleasant Ridge city

MI Plymouth city

MI Plymouth township

  

MI Pontiac city

MI Port Huron city

MI Port Huron township

MI Portage city

MI Portsmouth township

MI Redford township

MI Richfield township

MI River Rouge city

MI Riverview city

MI Rochester city

MI Rochester Hills city

MI Rockwood city

MI Romulus city

MI Roosevelt Park city

MI Roseville city

MI Ross township

MI Royal Oak city

MI Royal Oak township

MI Saginaw city

MI Saginaw County

MI Saginaw township

MI Schoolcraft township

MI Scio township

MI Shelby township

MI Shoreham village

MI Sodus township

MI South Rockwood village

MI Southfield city

  

MI Southfield township

MI Southgate city

MI Spaulding township

MI Spring Arbor township

MI Springfield city

MI Springfield township

MI St. Clair city

MI St. Clair County

MI St. Clair Shores city

MI St. Clair township

MI St. Joseph Charter township

MI St. Joseph city

MI Stevensville village

MI Sullivan township

MI Summit township

MI Sumpter township

MI Superior township

MI Swartz Creek city

MI Sylvan Lake city

MI Taylor city

MI Texas township

MI Thetford township

MI Thomas township

MI Trenton city

MI Troy city

MI Utica city

MI Van Buren township

MI Vienna township

  

MI Walker city

MI Walled Lake city

MI Washington township

MI Washtenaw County

MI Waterford township

MI Wayne city

MI West Bloomfield township

MI Westland city

MI White Lake township

MI Whiteford township

MI Williamstown township

MI Wixom city

MI Wolverine Lake village

MI Woodhaven city

MI Wyandotte city

MI Wyoming city

MI Ypsilanti city

MI Ypsilanti township

MI Zeeland city

MI Zilwaukee city

MN Andover city

MN Anoka city

MN Anoka County

MN Apple Valley city

MN Arden Hills city

MN Benton County

MN Birchwood Village city

MN Blaine city

  

MN Bloomington city

MN Brooklyn Center city

MN Brooklyn Park city

MN Burnsville city

MN Carver County

MN Cascade township

MN Champlin city

MN Chanhassen city

MN Circle Pines city

MN Clay County

MN Coon Rapids city

MN Cottage Grove city

MN Credit River township

MN Crystal city

MN Dakota County

MN Dayton city

MN Deephaven city

MN Dilworth city

MN Duluth city

MN Eagan city

MN East Grand Forks city

MN Eden Prairie city

MN Excelsior city

MN Falcon Heights city

MN Farmington city

MN Fort Snelling unorg.

MN Fridley city

MN Gem Lake city

  

MN Golden Valley city

MN Grant township

MN Greenwood city

MN Ham Lake city

MN Haven township

MN Hennepin County

MN Hermantown city

MN Hilltop city

MN Hopkins city

MN Houston County

MN Inver Grove Heights city

MN La Crescent city

MN La Crescent township

MN Lake Elmo city

MN Lakeville city

MN Landfall city

MN Lauderdale city

MN Le Sauk township

MN Lexington city

MN Lilydale city

MN Lino Lakes city

MN Little Canada city

MN Long Lake city

MN Loretto city

MN Mahtomedi city

MN Maple Grove city

MN Maple Plain city

MN Maplewood city

  

MN Marion township

MN Medicine Lake city

MN Medina city

MN Mendota city

MN Mendota Heights city

MN Midway township

MN Minden township

MN Minnetonka Beach city

MN Minnetonka city

MN Minnetrista city

MN Moorhead city

MN Moorhead township

MN Mound city

MN Mounds View city

MN New Brighton city

MN New Hope city

MN Newport city

MN North Oaks city

MN North St. Paul city

MN Oakdale city

MN Oakport township

MN Olmsted County

MN Orono city

MN Osseo city

MN Plymouth city

MN Polk County

MN Prior Lake city

MN Proctor city

  

MN Ramsey city

MN Robbinsdale city

MN Rochester city

MN Rochester township

MN Rosemount city

MN Roseville city

MN Sartell city

MN Sauk Rapids city

MN Sauk Rapids township

MN Savage city

MN Scott County

MN Sherburne County

MN Shoreview city

MN Shorewood city

MN South St. Paul city ***68821**

MN Spring Lake Park city

MN Spring Park city

MN St. Anthony city

MN St. Cloud city

MN St. Cloud township

MN St. Louis County

MN St. Paul Park city

MN Stearns County

MN Sunfish Lake city

MN Tonka Bay city

MN Vadnais Heights city

MN Victoria city

MN Waite Park city

  

MN Washington County

MN Wayzata city

MN West St. Paul city

MN White Bear Lake city

MN White Bear township

MN Willernie city

MN Woodbury city

MN Woodland city

MN Wright County

MO Airport Drive village

MO Airport township

MO Andrew County

MO Arnold city

MO Avondale city

MO Ballwin city

MO Battlefield town

MO Bella Villa city

MO Bellefontaine Neighbors city

MO Bellerive village

MO Bel-Nor village

MO Bel-Ridge village

MO Belton city

MO Berkeley city

MO Beverly Hills city

MO Big Creek township

MO Birmingham village

MO Black Jack city

MO Blanchette township

  

MO Blue Springs city

MO Blue township

MO Bonhomme township

MO Boone County

MO Boone township

MO Breckenridge Hills village

MO Brentwood city

MO Bridgeton city

MO Brooking township

MO Buchanan County

MO Calverton Park village

MO Campbell No. 1 township

MO Campbell No. 2 township

MO Carl Junction city

MO Carroll township

MO Carterville city

MO Cass County

MO Cedar township

MO Center township

MO Charlack city

MO Chesterfield city

MO Chouteau township

MO Christian County

MO Clarkson Valley city

MO Clay County

MO Clay township

MO Claycomd village

MO Clayton city

  

MO Clayton township

MO Cliff Village village

MO Columbia city

MO Columbia township

MO Concord township

MO Cool Valley city

MO Cottleville town

MO Cottleville township

MO Country Club Hills city

MO Country Club village

MO Country Life Acres village

MO Crestwood city

MO Creve Coeur city

MO Creve Coeur township

MO Crystal Lake Park city

MO Dardenne township

MO Dellwood city

MO Dennis Acres village

MO Des Peres city

MO Duquesne village

MO Edmundson village

MO Ellisville city

MO Fenton city

MO Ferguson city

MO Ferguson township

MO Flordell Hills city

MO Florissant city

MO Florissant township

  

MO Fox township

MO Friedens township

MO Frontenac city

MO Galena township

MO Gallatin township

MO Gladstone city

MO Glen Echo Park village

MO Glenaire village

MO Glendale city

MO Grandview city

MO Grantwood Village town

MO Gravois township

MO Greendale city

MO Greene County

MO Hadley township

MO Hanley Hills village

MO Harvester township

MO Hazelwood city

MO High Ridge township

MO Hillsdale village

MO Houston Lake city

MO Huntleigh city

MO Imperial township

MO Iron Gates village

MO Jackson County

MO Jasper County

MO Jefferson County

MO Jefferson township

  

MO Jennings city

MO Joplin city

MO Joplin township

MO Kickapoo township

MO Kimmswick city

MO Kinloch city

MO Kirkwood city

MO Ladue city

MO Lake St. Louis city

MO Lake Tapawingo city

MO Lake Waukomis city

MO Lakeshire city

MO Leawood village

MO Lee's Summit city

MO Lemay township

MO Lewis and Clark township

MO Liberty city

MO Liberty township

MO Mac Kenzie village

MO Manchester city

MO Maplewood city

MO Marlborough village

MO Maryland Heights city

MO May township

MO Meramec township

MO Midland township

MO Mineral township

MO Missouri River township

  

MO Missouri township

MO Moline Acres city

MO Mount Pleasant township

MO Newton County

MO Normandy city

MO Normandy township

MO North Campbell No. 1 township

MO North Campbell No. 2 township

MO North Campbell No. 3 township

MO North Kansas City city

MO North View township

MO Northmoor city

MO Northwest township

MO Northwoods city

MO Norwood Court town

MO Oakland city

MO Oakland Park village

MO Oaks village

MO Oakview village

MO Oakwood Park village

MO Oakwood village

MO O'Fallon city

MO O'Fallon township

MO Olivette city

MO Overland city

MO Pagedale city

MO Parkdale town

MO Parkville city

  

MO Pasadena Hills city

MO Pasadena Park village

MO Pettis township

MO Pine Lawn city

MO Platte County

MO Platte township

MO Platte Woods city

MO Pleasant Valley city

MO Prairie township

MO Queeny township

MO Randolph village

MO Raymore city

MO Raymore township

MO Raytown city

MO Redings Mill village

MO Richmond Heights city

MO Rivers township

MO Riverside city

MO Riverview village

MO Rock Hill city

MO Rock township

MO Rocky Fork township

MO Saginaw village

MO Shoal Creek Drive village

MO Shoal Creek township

MO Shrewsbury city

MO Silver Creek village

MO Sioux township

  

MO Sni-A-Bar township

MO Spanish Lake township

MO Spencer Creek township

MO St. Ann city

MO St. Charles city

MO St. Ferdinand township

MO St. George city

MO St. John city

MO St. Joseph city

MO St. Louis city

MO St. Peters city

MO St. Peters township

MO Sugar Creek city

MO Sunset Hills city

MO Sycamore Hills village

MO Town and Country city

MO Twin Groves township

MO Twin Oaks village

MO Unity Village village ***68822**

MO University City city

MO Uplands Park village

MO Valley Park city

MO Velda Village city

MO Velda Village Hills village

MO Vinita Park city

MO Vinita Terrace village

MO Warson Woods city

MO Washington township

  

MO Wayne township

MO Weatherby Lake city

MO Webb City city

MO Webster Groves city

MO Wellston city

MO Wentzville township

MO Westwood village

MO Wilbur Park village

MO Wilson township

MO Winchester city

MO Windsor township

MO Woodson Terrace city

MO Zumbehl township

MS Bay St. Louis city

MS Biloxi city

MS Brandon city

MS Clinton city

MS DeSoto County

MS D'Iberville city

MS Flowood town

MS Forrest County

MS Gautier city

MS Gulfport city

MS Hancock County

MS Harrison County

MS Hattiesburg city

MS Hinds County

MS Horn Lake city

  

MS Jackson County

MS Lamar County

MS Long Beach city

MS Madison city

MS Madison County

MS Moss Point city

MS Ocean Springs city

MS Pascagoula city

MS Pass Christian city

MS Pearl city

MS Petal city

MS Rankin County

MS Richland city

MS Ridgeland city

MS Southaven city

MS Waveland city

MT Billings city

MT Cascade County

MT Great Falls city

MT Missoula city

MT Missoula County

MT Yellowstone County

NC Alamance County

NC Apex town

NC Archdale city

NC Asheville city

NC Belmont city

NC Belville town

  

NC Bessemer City city

NC Biltmore Forest town

NC Black Mountain town

NC Brookford town

NC Brunswick County

NC Buncombe County

NC Burke County

NC Burlington city

NC Cabarrus County

NC Carrboro town

NC Cary town

NC Catawba County

NC Chapel Hill town

NC China Grove town

NC Clemmons village

NC Concord city

NC Conover city

NC Cramerton town

NC Dallas town

NC Davidson County

NC Durham County

NC Edgecombe County

NC Elon College town

NC Fletcher town

NC Forsyth County

NC Garner town

NC Gaston County

NC Gastonia city

  

NC Gibsonville town

NC Goldsboro city

NC Graham city

NC Greenville city

NC Guilford County

NC Harnett County

NC Haw River town

NC Henderson County

NC Hickory city

NC High Point city

NC Hildebran town

NC Hope Mills town

NC Indian Trail town

NC Jacksonville city

NC Jamestown town

NC Kannapolis city

NC Landis town

NC Leland town

NC Long View town

NC Lowell city

NC Matthews town

NC McAdenville town

NC Mebane city

NC Mecklenburg County

NC Mint Hill town

NC Montreat town

NC Mount Holly city

NC Nash County

  

NC New Hanover County

NC Newton city

NC Onslow County

NC Orange County

NC Pineville town

NC Pitt County

NC Randolph County

NC Ranlo town

NC Rocky Mount city

NC Rowan County

NC Rural Hall town

NC Spring Lake town

NC Stallings town

NC Thomasville city

NC Union County

NC Wake County

NC Walkertown town

NC Wayne County

NC Weaverville town

NC Wilmington city

NC Winterville town

NC Woodfin town

NC Wrightsville Beach town

ND Barnes township

ND Bismarck city

ND Bismarck unorg.

ND Burleigh County

ND Captain's Landing township

  

ND Cass County

ND Fargo city

ND Grand Forks city

ND Grand Forks County

ND Grand Forks township

ND Hay Creek township

ND Lincoln city

ND Mandan city

ND Mandan unorg.

ND Morton County

ND Reed township

ND West Fargo city

NE Bellevue city

NE Bellevue No. 2 precinct

NE Benson precinct

NE Boys Town village

NE Chicago precinct

NE Covington precinct

NE Dakota County

NE Douglas County

NE Douglas precinct

NE Florence precinct

NE Garfield precinct

NE Gilmore No. 1 precinct

NE Gilmore No. 2 precinct

NE Gilmore No. 3 precinct

NE Grant precinct

NE Highland No. 1 precinct

  

NE Highland No. 2 precinct

NE Jefferson precinct

NE La Platte precinct

NE La Vista city

NE Lancaster County

NE Lancaster precinct

NE McArdle precinct

NE Millard precinct

NE Papillion city

NE Papillion No. 2 precinct

NE Pawnee precinct

NE Ralston city

NE Richland No. 1 precinct

NE Richland No. 2 precinct

NE Richland No. 3 precinct

NE Sarpy County

NE South Sioux City city

NE Union precinct

NE Yankee Hill precinct

NH Amherst town

NH Auburn town

NH Bedford town

NH Dover city

NH Durham town

NH Goffstown town

NH Hillsborough County

NH Hollis town

NH Hooksett town

  

NH Hudson town

NH Litchfield town

NH Londonderry town

NH Madbury town

NH Manchester city

NH Merrimack County

NH Merrimack town

NH Nashua city

NH New Castle town

NH Newington town

NH Pelham town

NH Plaistow town

NH Portsmouth city

NH Rochester city

NH Rockingham County

NH Rollinsford town

NH Rye town

NH Salem town

NH Somersworth city

NH Strafford County

NH Windham town

NJ Aberdeen township

NJ Absecon city ***68823**

NJ Allendale borough

NJ Allenhurst borough

NJ Alpha borough

NJ Alpine borough

NJ Asbury Park city

  

NJ Atlantic City city

NJ Atlantic County

NJ Atlantic Highlands borough

NJ Audubon borough

NJ Audubon Park borough

NJ Avon-by-the-Sea borough

NJ Barrington borough

NJ Bay Head borough

NJ Bayonne city

NJ Beachwood borough

NJ Bedminster township

NJ Belleville township

NJ Bellmawr borough

NJ Belmar borough

NJ Bergenfield borough

NJ Berkeley Heights township

NJ Berkeley township

NJ Berlin borough

NJ Berlin township

NJ Bernards township

NJ Bernardsville borough

NJ Beverly city

NJ Bloomfield township

NJ Bloomingdale borough

NJ Bogota borough

NJ Boonton town

NJ Boonton township

NJ Bordentown city

  

NJ Bordentown township

NJ Bound Brook borough

NJ Bradley Beach borough

NJ Branchburg township

NJ Brick township

NJ Bridgewater township

NJ Brielle borough

NJ Brigantine city

NJ Brooklawn borough

NJ Buena borough

NJ Buena Vista township

NJ Burlington city

NJ Burlington County

NJ Burlington township

NJ Butler borough

NJ Byram township

NJ Caldwell Borough township

NJ Camden city

NJ Cape May County

NJ Carlstadt borough

NJ Carneys Point township

NJ Carteret borough

NJ Cedar Grove township

NJ Chatham borough

NJ Chatham township

NJ Cherry Hill township

NJ Chesilhurst borough

NJ Chester township

  

NJ Chesterfield township

NJ Cinnaminson township

NJ City of Orange township

NJ Clark township

NJ Clayton borough

NJ Clementon borough

NJ Cliffside Park borough

NJ Clifton city

NJ Closter borough

NJ Collingswood borough

NJ Colts Neck township

NJ Commercial township

NJ Cranford township

NJ Cresskill borough

NJ Cumberland County

NJ Deal borough

NJ Delanco township

NJ Delran township

NJ Demarest borough

NJ Denville township

NJ Deptford township

NJ Dover town

NJ Dover township

NJ Dumont borough

NJ Dunellen borough

NJ East Brunswick township

NJ East Greenwich township

NJ East Hanover township

  

NJ East Newark borough

NJ East Orange city

NJ East Rutherford borough

NJ Eastampton township

NJ Eatontown borough

NJ Edgewater borough

NJ Edgewater Park township

NJ Edison township

NJ Egg Harbor township

NJ Elizabeth city

NJ Elk township

NJ Elmwood Park borough

NJ Emerson borough

NJ Englewood city

NJ Englewood Cliffs borough

NJ Englishtown borough

NJ Essex Fells township

NJ Evesham township

NJ Ewing township

NJ Fair Haven borough

NJ Fair Lawn borough

NJ Fairfield township

NJ Fairview borough

NJ Fanwood borough

NJ Fieldsboro borough

NJ Florence township

NJ Florham Park borough

NJ Fort Lee borough

  

NJ Franklin Lakes borough

NJ Franklin township

NJ Freehold borough

NJ Freehold township

NJ Galloway township

NJ Garfield city

NJ Garwood borough

NJ Gibbsboro borough

NJ Glassboro borough

NJ Glen Ridge Borough township

NJ Glen Rock borough

NJ Gloucester City city

NJ Gloucester County

NJ Gloucester township

NJ Green Brook township

NJ Greenwich township

NJ Guttenberg town

NJ Hackensack city

NJ Haddon Heights borough

NJ Haddon township

NJ Haddonfield borough

NJ Hainesport township

NJ Haledon borough

NJ Hamilton township

NJ Hanover township

NJ Harding township

NJ Harrington Park borough

NJ Harrison town

  

NJ Hasbrouck Heights borough

NJ Haworth borough

NJ Hawthorne borough

NJ Hazlet township

NJ Helmetta borough

NJ Highland Park borough

NJ Highlands borough

NJ Hillsborough township

NJ Hillsdale borough

NJ Hillside township

NJ Hi-Nella borough

NJ Hoboken city

NJ Ho-Ho-Kus borough

NJ Holmdel township

NJ Hopatcong borough

NJ Hopewell township

NJ Howell township

NJ Hunterdon County

NJ Interlaken borough

NJ Irvington township

NJ Island Heights borough

NJ Jackson township

NJ Jamesburg borough

NJ Jefferson township

NJ Jersey City city

NJ Keansburg borough

NJ Kearny town

NJ Kenilworth borough

  

NJ Keyport borough

NJ Kinnelon borough

NJ Lakehurst borough

NJ Lakewood township

NJ Laurel Springs borough

NJ Lavallette borough

NJ Lawnside borough

NJ Lawrence township

NJ Leonia borough

NJ Lincoln Park borough

NJ Linden city

NJ Lindenwold borough

NJ Linwood city

NJ Little Falls township

NJ Little Ferry borough

NJ Little Silver borough

NJ Livingston township

NJ Loch Arbour village

NJ Lodi borough

NJ Long Branch city

NJ Longport borough

NJ Lopatcong township

NJ Lumberton township

NJ Lyndhurst township

NJ Madison borough

NJ Magnolia borough

NJ Mahwah township

NJ Manalapan township

  

NJ Manasquan borough

NJ Manchester township

NJ Mantoloking borough

NJ Mantua township

NJ Manville borough

NJ Maple Shade township

NJ Maplewood township

NJ Margate City city

NJ Marlboro township

NJ Matawan borough

NJ Maywood borough

NJ Medford Lakes borough

NJ Medford township

NJ Mendham borough

NJ Mendham township

NJ Mercer County

NJ Merchantville borough

NJ Metuchen borough

NJ Middlesex borough

NJ Middlesex County

NJ Middletown township

NJ Midland Park borough

NJ Millburn township

NJ Millstone borough

NJ Milltown borough

NJ Millville city

NJ Mine Hill township ***68824**

NJ Monmouth Beach borough

  

NJ Monmouth County

NJ Monroe township

NJ Montclair township

NJ Montvale borough

NJ Montville township

NJ Moonachie borough

NJ Moorestown township

NJ Morris County

NJ Morris Plains borough

NJ Morris township

NJ Morristown town

NJ Mount Arlington borough

NJ Mount Ephraim borough

NJ Mount Holly township

NJ Mount Laurel township

NJ Mount Olive township

NJ Mountain Lakes borough

NJ Mountainside borough

NJ National Park borough

NJ Neptune City borough

NJ Neptune township

NJ Netcong borough

NJ New Brunswick city

NJ New Milford borough

NJ New Providence borough

NJ Newark city

NJ Newfield borough

NJ North Arlington borough

  

NJ North Bergen township

NJ North Brunswick township

NJ North Caldwell township

NJ North Haledon borough

NJ North Plainfield borough

NJ Northfield city

NJ Northvale borough

NJ Norwood borough

NJ Nutley township

NJ Oakland borough

NJ Oaklyn borough

NJ Ocean City city

NJ Ocean County

NJ Ocean Gate borough

NJ Ocean township

NJ Oceanport borough

NJ Old Bridge township

NJ Old Tappan borough

NJ Oradell borough

NJ Palisades Park borough

NJ Palmyra borough

NJ Paramus borough

NJ Park Ridge borough

NJ Parsippany-Troy Hills township

NJ Passaic city

NJ Passaic County

NJ Passaic township

NJ Paterson city

  

NJ Paulsboro borough

NJ Pennington borough

NJ Penns Grove borough

NJ Pennsauken township

NJ Pennsville township

NJ Pequannock township

NJ Perth Amboy city

NJ Phillipsburg town

NJ Pine Beach borough

NJ Pine Hill borough

NJ Pine Valley borough

NJ Piscataway township

NJ Pitman borough

NJ Pittsgrove township

NJ Plainfield city

NJ Pleasantville city

NJ Pohatcong township

NJ Point Pleasant Beach borough

NJ Point Pleasant borough

NJ Pompton Lakes borough

NJ Prospect Park borough

NJ Rahway city

NJ Ramsey borough

NJ Randolph township

NJ Raritan borough

NJ Readington township

NJ Red Bank borough

NJ Ridgefield borough

  

NJ Ridgefield Park village

NJ Ridgewood village

NJ Ringwood borough

NJ River Edge borough

NJ River Vale township

NJ Riverdale borough

NJ Riverside township

NJ Riverton borough

NJ Rochelle Park township

NJ Rockaway borough

NJ Rockaway township

NJ Rockleigh borough

NJ Roseland borough

NJ Roselle borough

NJ Roselle Park borough

NJ Roxbury township

NJ Rumson borough

NJ Runnemede borough

NJ Rutherford borough

NJ Saddle Brook township

NJ Saddle River borough

NJ Salem County

NJ Sayreville borough

NJ Scotch Plains township

NJ Sea Bright borough

NJ Sea Girt borough

NJ Seaside Heights borough

NJ Seaside Park borough

  

NJ Secaucus town

NJ Shamong township

NJ Shrewsbury borough

NJ Shrewsbury township

NJ Somerdale borough

NJ Somers Point city

NJ Somerset County

NJ Somerville borough

NJ South Amboy city

NJ South Belmar borough

NJ South Bound Brook borough

NJ South Brunswick township

NJ South Hackensack township

NJ South Orange Village township

NJ South Plainfield borough

NJ South River borough

NJ South Toms River borough

NJ Spotswood borough

NJ Spring Lake borough

NJ Spring Lake Heights borough

NJ Springfield township

NJ Stanhope borough

NJ Stratford borough

NJ Summit city

NJ Sussex County

NJ Tabernacle township

NJ Tavistock borough

NJ Teaneck township

  

NJ Tenafly borough

NJ Teterboro borough

NJ Tinton Falls borough

NJ Totowa borough

NJ Trenton city

NJ Union Beach borough

NJ Union City city

NJ Union township

NJ Upper Saddle River borough

NJ Upper township

NJ Ventnor City city

NJ Verona township

NJ Victory Gardens borough

NJ Vineland city

NJ Voorhees township

NJ Waldwick borough

NJ Wall township

NJ Wallington borough

NJ Wanaque borough

NJ Warren County

NJ Warren township

NJ Washington township

NJ Watchung borough

NJ Waterford township

NJ Wayne township

NJ Weehawken township

NJ Wenonah borough

NJ West Caldwell township

  

NJ West Deptford township

NJ West Long Branch borough

NJ West New York town

NJ West Orange township

NJ West Paterson borough

NJ Westampton township

NJ Westfield town

NJ Westville borough

NJ Westwood borough

NJ Wharton borough

NJ Willingboro township

NJ Winfield township

NJ Winslow township

NJ Woodbridge township

NJ Woodbury city

NJ Woodbury Heights borough

NJ Woodcliff Lake borough

NJ Woodlynne borough

NJ Wood-Ridge borough

NJ Wyckoff township

NM Bernalillo County

NM Corrales village

NM Dona Ana County

NM Las Cruces city

NM Los Ranchos de Albuquerque village

NM Mesilla town

NM Rio Rancho city

NM Sandoval County

  

NM Santa Fe city

NM Santa Fe County

NM Sunland Park city

NY Albany city

NY Albany County

NY Amherst town

NY Amityville village

NY Ardsley village

NY Ashland town

NY Atlantic Beach village

NY Babylon town

NY Babylon village

NY Baldwinsville village

NY Ballston town

NY Barker town

NY Baxter Estates village

NY Bayville village

NY Beacon city

NY Bedford town

NY Belle Terre village

NY Bellerose village

NY Bellport village

NY Bethlehem town

NY Big Flats town

NY Binghamton city

NY Binghamton town

NY Blasdell village

NY Boston town

  

NY Briarcliff Manor village

NY Brighton town

NY Brightwaters village ***68825**

NY Bronxville village

NY Brookhaven town

NY Brookville village

NY Broome County

NY Brunswick town

NY Buchanan village

NY Buffalo city

NY Camillus town

NY Camillus village

NY Carmel town

NY Cayuga Heights village

NY Cedarhurst village

NY Charlton town

NY Cheektowaga town

NY Chemung County

NY Chenango town

NY Chestnut Ridge village

NY Chili town

NY Cicero town

NY Clarence town

NY Clarkstown town

NY Clay town

NY Clayville village

NY Clifton Park town

NY Clinton village

  

NY Cohoes city

NY Colonie town

NY Colonie village

NY Conklin town

NY Cornwall on Hudson village

NY Cornwall town

NY Cortlandt town

NY Croton-on-Hudson village

NY De Witt town

NY Deerfield town

NY Depew village

NY Dickinson town

NY Dobbs Ferry village

NY Dryden town

NY Dutchess County

NY East Fishkill town

NY East Greenbush town

NY East Hills village

NY East Rochester village

NY East Rockaway village

NY East Syracuse village

NY East Williston village

NY Eastchester town

NY Elma town

NY Elmira city

NY Elmira Heights village

NY Elmira town

NY Elmsford village

  

NY Endicott village

NY Erie County

NY Evans town

NY Fairport village

NY Farmingdale village

NY Fayetteville village

NY Fenton town

NY Fishkill town

NY Fishkill village

NY Floral Park village

NY Flower Hill village

NY Floyd town

NY Fort Edward town

NY Fort Edward village

NY Frankfort town

NY Freeport village

NY Garden City village

NY Gates town

NY Geddes town

NY Glen Cove city

NY Glens Falls city

NY Glenville town

NY Grand Island town

NY Grand View-on-Hudson village

NY Great Neck Estates village

NY Great Neck Plaza village

NY Great Neck village

NY Greece town

  

NY Green Island village

NY Greenburgh town

NY Guilderland town

NY Halfmoon town

NY Hamburg town

NY Hamburg village

NY Harrison village

NY Hastings-on-Hudson village

NY Haverstraw town

NY Haverstraw village

NY Hempstead town

NY Hempstead village

NY Henrietta town

NY Herkimer County

NY Hewlett Bay Park village

NY Hewlett Harbor village

NY Hewlett Neck village

NY Hillburn village

NY Horseheads town

NY Horseheads village

NY Hudson Falls village

NY Huntington Bay village

NY Huntington town

NY Hyde Park town

NY Irondequoit town

NY Irvington village

NY Island Park village

NY Islandia village

  

NY Islip town

NY Ithaca city

NY Ithaca town

NY Johnson City village

NY Kenmore village

NY Kensington village

NY Kent town

NY Kings Point village

NY Kingsbury town

NY Kirkland town

NY Kirkwood town

NY La Grange town

NY Lackawanna city

NY LaFayette town

NY Lake Grove village

NY Lake Success village

NY Lancaster town

NY Lancaster village

NY Lansing town

NY Lansing village

NY Larchmont village

NY Lattingtown village

NY Lawrence village

NY Lee town

NY Lewiston town

NY Lewiston village

NY Lindenhurst village

NY Liverpool village

  

NY Lloyd Harbor village

NY Lloyd town

NY Long Beach city

NY Lynbrook village

NY Lysander town

NY Malta town

NY Malverne village

NY Mamaroneck town

NY Mamaroneck village

NY Manlius town

NY Manlius village

NY Manorhaven village

NY Marcy town

NY Massapequa Park village

NY Matinecock village

NY Menands village

NY Mill Neck village

NY Mineola village

NY Minoa village

NY Monroe County

NY Montebello village

NY Montgomery town

NY Moreau town

NY Mount Kisco village

NY Mount Pleasant town

NY Mount Vernon city

NY Munsey Park village

NY Muttontown village

  

NY New Castle town

NY New Hartford town

NY New Hartford village

NY New Hempstead village

NY New Hyde Park village

NY New Rochelle city

NY New Square village

NY New Windsor town

NY New York Mills village

NY Newburgh city

NY Newburgh town

NY Niagara County

NY Niagara Falls city

NY Niagara town

NY Niskayuna town

NY North Castle town

NY North Greenbush town

NY North Hempstead town

NY North Hills village

NY North Syracuse village

NY North Tarrytown village

NY North Tonawanda city

NY Northport village

NY Nyack village

NY Ogden town

NY Old Brookville village

NY Old Westbury village

NY Oneida County

  

NY Onondaga County

NY Onondaga town

NY Orange County

NY Orangetown town

NY Orchard Park town

NY Orchard Park village

NY Oriskany village

NY Ossining town

NY Ossining village

NY Oswego County

NY Owego town

NY Oyster Bay town

NY Paris town

NY Patchogue village

NY Patterson town

NY Peekskill city

NY Pelham Manor village

NY Pelham town

NY Pelham village

NY Pendleton town

NY Penfield town

NY Perinton town

NY Philipstown town

NY Phoenix village

NY Piermont village

NY Pittsford town

NY Pittsford village

NY Plandome Heights village

  

NY Plandome Manor village

NY Plandome village

NY Pleasant Valley town

NY Pleasantville village

NY Poestenkill town

NY Pomona village

NY Poospatuck Reservation ***68826**

NY Poquott village

NY Port Chester village

NY Port Dickinson village

NY Port Jefferson village

NY Port Washington North village

NY Poughkeepsie city

NY Poughkeepsie town

NY Pound Ridge town

NY Putnam County

NY Putnam Valley town

NY Queensbury town

NY Ramapo town

NY Rensselaer city

NY Rensselaer County

NY Riverhead town

NY Rochester city

NY Rockville Centre village

NY Rome city

NY Roslyn Estates village

NY Roslyn Harbor village

NY Roslyn village

  

NY Rotterdam town

NY Russell Gardens village

NY Rye Brook village

NY Rye city

NY Rye town

NY Saddle Rock village

NY Salina town

NY Sands Point village

NY Saratoga County

NY Scarsdale town

NY Scarsdale village

NY Schaghticoke town

NY Schenectady city

NY Schenectady County

NY Schodack town

NY Schroeppel town

NY Schuyler town

NY Scotia village

NY Sea Cliff village

NY Shoreham village

NY Sloan village

NY Sloatsburg village

NY Smithtown town

NY Solvay village

NY Somers town

NY South Floral Park village

NY South Glens Falls village

NY South Nyack village

  

NY Southampton town

NY Southport town

NY Spencerport village

NY Spring Valley village

NY Stewart Manor village

NY Stony Point town

NY Suffern village

NY Suffolk County

NY Syracuse city

NY Tarrytown village

NY Thomaston village

NY Tioga County

NY Tompkins County

NY Tonawanda city

NY Tonawanda town

NY Troy city

NY Tuckahoe village

NY Ulster County

NY Union town

NY Upper Brookville village

NY Upper Nyack village

NY Utica city

NY Valley Stream village

NY Van Buren town

NY Vestal town

NY Veteran town

NY Village of the Branch village

NY Wappinger town

  

NY Wappingers Falls village

NY Warren County

NY Washington County

NY Waterford town

NY Waterford village

NY Watervliet city

NY Webster town

NY Webster village

NY Wesley Hills village

NY West Haverstraw village

NY West Seneca town

NY Westbury village

NY Westchester County

NY Western town

NY Wheatfield town

NY White Plains city

NY Whitesboro village

NY Whitestown town

NY Williamsville village

NY Williston Park village

NY Woodsburgh village

NY Yonkers city

NY Yorktown town

NY Yorkville village

OH Addyston village

OH Allen County

OH Allen township

OH Amberley village

  

OH Amelia village

OH American township

OH Amherst city

OH Amherst township

OH Anderson township

OH Arlington Heights village

OH Auglaize County

OH Aurora city

OH Austintown township

OH Avon city

OH Avon Lake city

OH Bainbridge township

OH Barberton city

OH Batavia township

OH Bath township

OH Bay Village city

OH Beachwood city

OH Beaver township

OH Beavercreek city

OH Beavercreek township

OH Bedford city

OH Bedford Heights city

OH Bellaire city

OH Bellbrook city

OH Belmont County

OH Belpre city

OH Belpre township

OH Bentleyville village

  

OH Berea city

OH Bethel township

OH Bexley city

OH Blendon township

OH Blue Ash city

OH Boardman township

OH Brady Lake village

OH Bratenahl village

OH Brecksville city

OH Brice village

OH Bridgeport village

OH Brilliant village

OH Brimfield township

OH Broadview Heights city

OH Brook Park city

OH Brookfield township

OH Brooklyn city

OH Brooklyn Heights village

OH Brookside village

OH Brown township

OH Brownhelm township

OH Brunswick city

OH Brunswick Hills township

OH Butler County

OH Butler township

OH Campbell city

OH Canfield city

OH Canfield township

  

OH Canton city

OH Canton township

OH Carlisle township

OH Carlisle village

OH Centerville city

OH Chagrin Falls township

OH Chagrin Falls village

OH Champion township

OH Chesapeake village

OH Cheviot city

OH Chippewa township

OH Cincinnati city

OH Clark County

OH Clear Creek township

OH Clermont County

OH Cleveland city

OH Cleveland Heights city

OH Cleves village

OH Clinton township

OH Coal Grove village

OH Coitsville township

OH Colerain township

OH Columbia township

OH Concord township

OH Copley township

OH Coventry township

OH Cridersville village

OH Cross Creek township

  

OH Cuyahoga County

OH Cuyahoga Falls city

OH Cuyahoga Heights village

OH Deer Park city

OH Deerfield township

OH Delaware County

OH Delhi township

OH Doylestown village

OH Dublin city

OH Duchouquet township

OH East Cleveland city

OH Eastlake city

OH Eaton township

OH Elmwood Place village

OH Elyria city

OH Elyria township

OH Englewood city

OH Erie County

OH Etna township

OH Euclid city

OH Evendale village

OH Fairborn city

OH Fairfax village

OH Fairfield city

OH Fairfield County

OH Fairfield township

OH Fairlawn city

OH Fairport Harbor village

  

OH Fairview Park city

OH Fayette township

OH Forest Park city

OH Fort Shawnee village

OH Franklin city

OH Franklin County

OH Franklin township

OH Gahanna city

OH Garfield Heights city

OH Geauga County

OH Genoa township ***68827**

OH German township

OH Girard city

OH Glendale village

OH Glenwillow village

OH Golf Manor village

OH Goshen township

OH Grand River village

OH Grandview Heights city

OH Green township

OH Green village

OH Greene County

OH Greenhills village

OH Grove City city

OH Groveport village

OH Hamilton city

OH Hamilton County

OH Hamilton township

  

OH Hanging Rock village

OH Hanover township

OH Harbor View village

OH Harrison township

OH Hartville village

OH Heath city

OH Highland Heights city

OH Hilliard city

OH Hills and Dales village

OH Hinckley township

OH Holland village

OH Howland township

OH Hubbard city

OH Hubbard township

OH Huber Heights city

OH Hudson township

OH Hudson village

OH Independence city

OH Ironton city

OH Island Creek township

OH Jackson township

OH Jefferson County

OH Jefferson township

OH Jerome township

OH Kent city

OH Kettering city

OH Kirtland city

OH Lake County

  

OH Lake township

OH Lakeline village

OH Lakemore village

OH Lakewood city

OH Lawrence County

OH Lawrence township

OH Lemon township

OH Lexington village

OH Liberty township

OH Licking County

OH Licking township

OH Lima city

OH Lima township

OH Lincoln Heights city

OH Linndale village

OH Lockland village

OH Lorain city

OH Lorain County

OH Louisville city

OH Loveland city

OH Lowellville village

OH Lucas County

OH Lyndhurst city

OH Macedonia city

OH Mad River township

OH Madeira city

OH Madison township

OH Mahoning County

  

OH Maineville village

OH Mansfield city

OH Maple Heights city

OH Marble Cliff village

OH Mariemont village

OH Martins Ferry city

OH Mason city

OH Massillon city

OH Maumee city

OH Mayfield Heights city

OH Mayfield village

OH McDonald village

OH Mead township

OH Medina County

OH Mentor city

OH Mentor-on-the-Lake city

OH Meyers Lake village

OH Miami County

OH Miami township

OH Miamisburg city

OH Middleburg Heights city

OH Middletown city

OH Mifflin township

OH Milford city

OH Millbury village

OH Millville village

OH Minerva Park village

OH Mingo Junction city

  

OH Mogadore village

OH Monclova township

OH Monroe township

OH Monroe village

OH Montgomery city

OH Montgomery County

OH Moorefield township

OH Moraine city

OH Moreland Hills village

OH Mount Healthy city

OH Munroe Falls village

OH New Miami village

OH New Middletown village

OH New Rome village

OH Newark city

OH Newark township

OH Newburgh Heights village

OH Newton township

OH Newtown village

OH Niles city

OH Nimishillen township

OH North Bend village

OH North Canton city

OH North College Hill city

OH North Olmsted city

OH North Randall village

OH North Ridgeville city

OH North Royalton city

  

OH Northfield Center township

OH Northfield village

OH Northwood city

OH Norton city

OH Norwich township

OH Norwood city

OH Oakwood city

OH Oakwood village

OH Obetz village

OH Ohio township

OH Olmsted Falls city

OH Olmsted township

OH Ontario village

OH Orange township

OH Orange village

OH Oregon city

OH Ottawa County

OH Ottawa Hills village

OH Painesville city

OH Painesville township

OH Palmyra township

OH Parma city

OH Parma Heights city

OH Pease township

OH Pepper Pike city

OH Perry township

OH Perrysburg city

OH Perrysburg city

  

OH Perrysburg township

OH Pierce township

OH Plain township

OH Pleasant township

OH Poland township

OH Poland village

OH Portage County

OH Powell village

OH Prairie township

OH Proctorville village

OH Pultney township

OH Randolph township

OH Ravenna city

OH Ravenna township

OH Reading city

OH Reminderville village

OH Reynoldsburg city

OH Richfield township

OH Richfield village

OH Richland County

OH Richmond Heights city

OH Riveredge township

OH Riverlea village

OH Riverside village

OH Rocky River city

OH Rome township

OH Ross township

OH Rossford city

  

OH Russell township

OH Russia township

OH Sagamore Hills township

OH Seven Hills city

OH Shadyside village

OH Shaker Heights city

OH Sharon township

OH Sharonville city

OH Shawnee Hills village

OH Shawnee township

OH Sheffield Lake city

OH Sheffield township

OH Sheffield village

OH Silver Lake village

OH Silverton city

OH Solon city

OH South Amherst village

OH South Euclid city

OH South Point village

OH South Russell village

OH Springboro city

OH Springdale city

OH Springfield city

OH Springfield township

OH St. Bernard city

OH St. Clair township

OH Stark County

OH Steubenville city

  

OH Steubenville township

OH Stow city

OH Strongsville city

OH Struthers city

OH Suffield township

OH Sugar Bush Knolls village

OH Sugar Creek township

OH Summit County

OH Sycamore township

OH Sylvania city

OH Sylvania township

OH Symmes township

OH Tallmadge city

OH Terrace Park village

OH The Village of Indian Hill city ***68828**

OH Timberlake village

OH Trenton city

OH Trotwood city

OH Troy township

OH Trumbull County

OH Truro township

OH Turtle Creek township

OH Tuscarawas township

OH Twinsburg city

OH Twinsburg township

OH Union city

OH Union County

OH Union township

  

OH University Heights city

OH Upper Arlington city

OH Upper township

OH Urbancrest village

OH Valley View village

OH Valleyview village

OH Vandalia city

OH Vermilion city

OH Vermilion township

OH Violet township

OH Wadsworth city

OH Wadsworth township

OH Waite Hill village

OH Walbridge village

OH Walton Hills village

OH Warren city

OH Warren County

OH Warren township

OH Warrensville Heights city

OH Warrensville township

OH Washington County

OH Washington township

OH Wayne County

OH Wayne township

OH Weathersfield township

OH Wells township

OH West Carrollton City city

OH West Milton village

  

OH Westerville city

OH Westlake city

OH Whitehall city

OH Whitewater township

OH Wickliffe city

OH Willoughby city

OH Willoughby Hills city

OH Willowick city

OH Wintersville village

OH Wood County

OH Woodlawn village

OH Woodmere village

OH Worthington city

OH Wyoming city

OH Youngstown city

OK Arkoma town

OK Bethany city

OK Bixby city

OK Broken Arrow city

OK Canadian County

OK Catoosa city

OK Choctaw city

OK Cleveland County

OK Comanche County

OK Creek County

OK Del City city

OK Edmond city

OK Forest Park town

  

OK Hall Park town

OK Harrah town

OK Jenks city

OK Jones town

OK Lake Aluma town

OK Lawton city

OK Le Flore County

OK Logan County

OK Midwest City city

OK Moffett town

OK Moore city

OK Mustang city

OK Nichols Hills city

OK Nicoma Park city

OK Norman city

OK Oklahoma County

OK Osage County

OK Pottawatomie County

OK Rogers County

OK Sand Springs city

OK Sequoyah County

OK Smith Village town

OK Spencer city

OK The Village city

OK Tulsa County

OK Valley Brook town

OK Wagoner County

OK Warr Acres city

  

OK Woodlawn Park town

OK Yukon city

OR Central Point city

OR Columbia County

OR Durham city

OR Jackson County

OR Keizer city

OR King City city

OR Lane County

OR Marion County

OR Maywood Park city

OR Medford city

OR Phoenix city

OR Polk County

OR Rainier city

OR Springfield city

OR Troutdale city

OR Tualatin city

OR Wood Village city

PA Abington township

PA Adamsburg borough

PA Alburtis borough

PA Aldan borough

PA Aleppo township

PA Aliquippa city

PA Allegheny County

PA Allegheny township

PA Allen township

  

PA Allenport borough

PA Alsace township

PA Altoona city

PA Ambler borough

PA Ambridge borough

PA Amwell township

PA Antis township

PA Antrim township

PA Archbald borough

PA Arnold city

PA Ashley borough

PA Aspinwall borough

PA Aston township

PA Avalon borough

PA Avoca borough

PA Baden borough

PA Baldwin borough

PA Baldwin township

PA Beaver borough

PA Beaver County

PA Beaver Falls city

PA Bell Acres borough

PA Belle Vernon borough

PA Bellevue borough

PA Ben Avon borough

PA Ben Avon Heights borough

PA Bensalem township

PA Berks County

  

PA Bern township

PA Bethel Park borough

PA Bethel township

PA Bethlehem city

PA Bethlehem township

PA Big Beaver borough

PA Birdsboro borough

PA Birmingham township

PA Blair County

PA Blair township

PA Blakely borough

PA Blawnox borough

PA Boyertown borough

PA Brackenridge borough

PA Braddock borough

PA Braddock Hills borough

PA Bradfordwoods borough

PA Brentwood borough

PA Bridgeport borough

PA Bridgeville borough

PA Bridgewater borough

PA Brighton township

PA Bristol borough

PA Bristol township

PA Brookhaven borough

PA Brownstown borough

PA Brownsville borough

PA Brownsville township

  

PA Bryn Athyn borough

PA Buckingham township

PA Bucks County

PA California borough

PA Caln township

PA Cambria County

PA Camp Hill borough

PA Canonsburg borough

PA Canton township

PA Carbondale city

PA Carbondale township

PA Carnegie borough

PA Carroll township

PA Castle Shannon borough

PA Catasauqua borough

PA Cecil township

PA Center township

PA Centre County

PA Chalfant borough

PA Chalfont borough

PA Charleroi borough

PA Charlestown township

PA Chartiers township

PA Cheltenham township

PA Chester city

PA Chester County

PA Chester Heights borough

PA Chester township

  

PA Cheswick borough

PA Chippewa township

PA Churchill borough

PA Clairton city

PA Clarks Green borough

PA Clarks Summit borough

PA Clifton Heights borough

PA Coal Center borough

PA Coatesville city

PA Colebrookdale township

PA College township

PA Collegeville borough

PA Collier township

PA Collingdale borough

PA Columbia borough

PA Colwyn borough

PA Concord township

PA Conemaugh township

PA Conestoga township ***68829**

PA Conewago township

PA Conshohocken borough

PA Conway borough

PA Coplay borough

PA Coraopolis borough

PA Courtdale borough

PA Crafton borough

PA Crescent township

PA Cumberland County

  

PA Cumru township

PA Daisytown borough

PA Dale borough

PA Dallas borough

PA Dallas township

PA Dallastown borough

PA Darby borough

PA Darby township

PA Daugherty township

PA Dauphin County

PA Delaware County

PA Delmont borough

PA Derry township

PA Dickson City borough

PA Donora borough

PA Dormont borough

PA Douglass township

PA Dover borough

PA Dover township

PA Downingtown borough

PA Doylestown borough

PA Doylestown township

PA Dravosburg borough

PA Duboistown borough

PA Duncansville borough

PA Dunlevy borough

PA Dunmore borough

PA Dupont borough

  

PA Duquesne city

PA Duryea borough

PA East Allen township

PA East Bradford township

PA East Brandywine township

PA East Caln township

PA East Conemaugh borough

PA East Coventry township

PA East Deer township

PA East Fallowfield township

PA East Goshen township

PA East Hempfield township

PA East Lampeter township

PA East Lansdowne borough

PA East McKeesport borough

PA East Norriton township

PA East Pennsboro township

PA East Petersburg borough

PA East Pikeland township

PA East Pittsburgh borough

PA East Rochester borough

PA East Taylor township

PA East Vincent township

PA East Washington borough

PA East Whiteland township

PA Easton city

PA Easttown township

PA Eastvale borough

  

PA Economy borough

PA Eddystone borough

PA Edgewood borough

PA Edgeworth borough

PA Edgmont township

PA Edwardsville borough

PA Elco borough

PA Elizabeth borough

PA Elizabeth township

PA Ellport borough

PA Ellwood City borough

PA Emmaus borough

PA Emsworth borough

PA Erie city

PA Erie County

PA Etna borough

PA Exeter borough

PA Exeter township

PA Export borough

PA Fairfield township

PA Fairview township

PA Fallowfield township

PA Falls township

PA Fallston borough

PA Farrell city

PA Fayette City borough

PA Fayette County

PA Fell township

  

PA Ferguson township

PA Ferndale borough

PA Findlay township

PA Finleyville borough

PA Folcroft borough

PA Forest Hills borough

PA Forks township

PA Forty Fort borough

PA Forward township

PA Fountain Hill borough

PA Fox Chapel borough

PA Franconia township

PA Franklin borough

PA Franklin County

PA Franklin Park borough

PA Franklin township

PA Frankstown township

PA Frazer township

PA Freedom borough

PA Freemansburg borough

PA Geistown borough

PA Glassport borough

PA Glendon borough

PA Glenfield borough

PA Glenolden borough

PA Green Tree borough

PA Greensburg city

PA Hallam borough

  

PA Hampden township

PA Hampton township

PA Hanover township

PA Harborcreek township

PA Harmar township

PA Harmony township

PA Harris township

PA Harrisburg city

PA Harrison township

PA Harveys Lake borough

PA Hatboro borough

PA Hatfield borough

PA Hatfield township

PA Haverford township

PA Haysville borough

PA Heidelberg borough

PA Hellam township

PA Hellertown borough

PA Hempfield township

PA Hepburn township

PA Hermitage city

PA Highspire borough

PA Hilltown township

PA Hollidaysburg borough

PA Homestead borough

PA Homewood borough

PA Hopewell township

PA Horsham township

  

PA Houston borough

PA Hughestown borough

PA Hulmeville borough

PA Hummelstown borough

PA Hunker borough

PA Indiana township

PA Ingram borough

PA Irwin borough

PA Ivyland borough

PA Jackson township

PA Jacobus borough

PA Jeannette city

PA Jefferson borough

PA Jenkins township

PA Jenkintown borough

PA Jermyn borough

PA Jessup borough

PA Johnstown city

PA Juniata township

PA Kenhorst borough

PA Kennedy township

PA Kilbuck township

PA Kingston borough

PA Kingston township

PA Koppel borough

PA Lackawanna County

PA Laflin borough

PA Lancaster city

  

PA Lancaster County

PA Lancaster township

PA Langhorne borough

PA Langhorne Manor borough

PA Lansdale borough

PA Lansdowne borough

PA Larksville borough

PA Laurel Run borough

PA Laureldale borough

PA Lawrence County

PA Lawrence Park township

PA Lebanon County

PA Leesport borough

PA Leet township

PA Leetsdale borough

PA Lehigh County

PA Lehman township

PA Lemoyne borough

PA Liberty borough

PA Limerick township

PA Lincoln borough

PA Lititz borough

PA Logan township

PA Loganville borough

PA London Britain township

PA Londonderry township

PA Lorain borough

PA Lower Allen township

  

PA Lower Alsace township

PA Lower Burrell city

PA Lower Chichester township

PA Lower Frederick township

PA Lower Gwynedd township

PA Lower Heidelberg township

PA Lower Macungie township

PA Lower Makefield township

PA Lower Merion township

PA Lower Moreland township

PA Lower Nazareth township

PA Lower Paxton township

PA Lower Pottsgrove township

PA Lower Providence township

PA Lower Salford township

PA Lower Saucon township

PA Lower Southampton township

PA Lower Swatara township

PA Lower Yoder township

PA Loyalsock township

PA Luzerne borough

PA Luzerne County

PA Luzerne township ***68830**

PA Lycoming County

PA Lycoming township

PA Macungie borough

PA Madison borough

PA Maidencreek township

  

PA Malvern borough

PA Manchester township

PA Manheim township

PA Manor borough

PA Manor township

PA Marcus Hook borough

PA Marple township

PA Marshall township

PA Marysville borough

PA Mayfield borough

PA McCandless township

PA McKean township

PA McKees Rocks borough

PA McKeesport city

PA Mechanicsburg borough

PA Media borough

PA Mercer County

PA Middle Taylor township

PA Middletown borough

PA Middletown township

PA Millbourne borough

PA Millcreek township

PA Millersville borough

PA Millvale borough

PA Modena borough

PA Mohnton borough

PA Monaca borough

PA Monessen city

  

PA Monongahela city

PA Monroe township

PA Montgomery County

PA Montgomery township

PA Montoursville borough

PA Moon township

PA Moosic borough

PA Morrisville borough

PA Morton borough

PA Mount Lebanon township

PA Mount Oliver borough

PA Mount Penn borough

PA Mountville borough

PA Muhlenberg township

PA Munhall borough

PA Municipality of Monroeville borough

PA Municipality of Murrysville borough

PA Nanticoke city

PA Narberth borough

PA Nether Providence township

PA Neville township

PA New Brighton borough

PA New Britain borough

PA New Britain township

PA New Cumberland borough

PA New Eagle borough

PA New Galilee borough

PA New Garden township

  

PA New Hanover township

PA New Kensington city

PA New Sewickley township

PA New Stanton borough

PA Newell borough

PA Newport township

PA Newton township

PA Newtown borough

PA Newtown township

PA Norristown borough

PA North Belle Vernon borough

PA North Braddock borough

PA North Catasauqua borough

PA North Charleroi borough

PA North Coventry township

PA North Franklin township

PA North Huntingdon township

PA North Irwin borough

PA North Londonderry township

PA North Sewickley township

PA North Strabane township

PA North Versailles township

PA North Wales borough

PA North Whitehall township

PA North York borough

PA Northampton borough

PA Northampton County

PA Northampton township

  

PA Norwood borough

PA Oakmont borough

PA O'Hara township

PA Ohio township

PA Old Forge borough

PA Old Lycoming township

PA Olyphant borough

PA Ontelaunee township

PA Osborne borough

PA Paint borough

PA Paint township

PA Palmer township

PA Palmyra borough

PA Parkside borough

PA Patterson Heights borough

PA Patterson township

PA Patton township

PA Paxtang borough

PA Penbrook borough

PA Penn borough

PA Penn Hills township

PA Penn township

PA Penndel borough

PA Pennsbury Village borough

PA Pequea township

PA Perkiomen township

PA Perry County

PA Perry township

  

PA Peters township

PA Phoenixville borough

PA Pine township

PA Pitcairn borough

PA Pittsburgh city

PA Pittston city

PA Pittston township

PA Plains township

PA Pleasant Hills borough

PA Plum borough

PA Plymouth borough

PA Plymouth township

PA Port Vue borough

PA Potter township

PA Pottstown borough

PA Pringle borough

PA Prospect Park borough

PA Pulaski township

PA Radnor township

PA Rankin borough

PA Ransom township

PA Reading city

PA Red Lion borough

PA Reserve township

PA Richland township

PA Ridley Park borough

PA Ridley township

PA Robinson township

  

PA Rochester borough

PA Rochester township

PA Rockledge borough

PA Roscoe borough

PA Rose Valley borough

PA Ross township

PA Rosslyn Farms borough

PA Rostraver township

PA Royalton borough

PA Royersford borough

PA Rutledge borough

PA Salem township

PA Salisbury township

PA Scalp Level borough

PA Schuylkill township

PA Schwenksville borough

PA Scott township

PA Scranton city

PA Sewickley borough

PA Sewickley Heights borough

PA Sewickley Hills borough

PA Sewickley township

PA Shaler township

PA Sharon city

PA Sharon Hill borough

PA Sharpsburg borough

PA Sharpsville borough

PA Shenango township

  

PA Shillington borough

PA Shiremanstown borough

PA Silver Spring township

PA Sinking Spring borough

PA Skippack township

PA Somerset County

PA Souderton borough

PA South Abington township

PA South Coatesville borough

PA South Fayette township

PA South Greensburg borough

PA South Hanover township

PA South Heidelberg township

PA South Heights borough

PA South Huntingdon township

PA South Park township

PA South Pymatuning township

PA South Strabane township

PA South Whitehall township

PA South Williamsport borough

PA Southmont borough

PA Southwest Greensburg borough

PA Speers borough

PA Spring City borough

PA Spring Garden township

PA Spring township

PA Springdale borough

PA Springdale township

  

PA Springettsbury township

PA Springfield township

PA St. Lawrence borough

PA State College borough

PA Steelton borough

PA Stockdale borough

PA Stonycreek township

PA Stowe township

PA Sugar Notch borough

PA Summit township

PA Susquehanna township

PA Sutersville borough

PA Swarthmore borough

PA Swatara township

PA Swissvale borough

PA Swoyersville borough

PA Tarentum borough

PA Taylor borough

PA Telford borough

PA Temple borough

PA Thornburg borough

PA Thornbury township

PA Throop borough

PA Tinicum township

PA Towamencin township

PA Trafford borough

PA Trainer borough ***68831**

PA Trappe borough

  

PA Tredyffrin township

PA Tullytown borough

PA Turtle Creek borough

PA Union township

PA Upland borough

PA Upper Allen township

PA Upper Chichester township

PA Upper Darby township

PA Upper Dublin township

PA Upper Gwynedd township

PA Upper Leacock township

PA Upper Macungie township

PA Upper Makefield township

PA Upper Merion township

PA Upper Milford township

PA Upper Moreland township

PA Upper Pottsgrove township

PA Upper Providence township

PA Upper Saucon township

PA Upper Southampton township

PA Upper St. Clair township

PA Upper Yoder township

PA Uwchlan township

PA Valley township

PA Vanport township

PA Verona borough

PA Versailles borough

PA Wall borough

  

PA Warminster township

PA Warrington township

PA Warrior Run borough

PA Warwick township

PA Washington city

PA Washington County

PA Washington township

PA Wayne township

PA Wernersville borough

PA Wesleyville borough

PA West Bradford township

PA West Brownsville borough

PA West Chester borough

PA West Conshohocken borough

PA West Deer township

PA West Earl township

PA West Easton borough

PA West Elizabeth borough

PA West Fairview borough

PA West Goshen township

PA West Hanover township

PA West Hempfield township

PA West Homestead borough

PA West Lampeter township

PA West Lawn borough

PA West Manchester township

PA West Mayfield borough

PA West Middlesex borough

  

PA West Mifflin borough

PA West Newton borough

PA West Norriton township

PA West Pikeland township

PA West Pittston borough

PA West Pottsgrove township

PA West Reading borough

PA West Taylor township

PA West View borough

PA West Whiteland township

PA West Wyoming borough

PA West York borough

PA Westmont borough

PA Westmoreland County

PA Westtown township

PA Wheatland borough

PA Whitaker borough

PA White Oak borough

PA White township

PA Whitehall township

PA Whitemarsh township

PA Whitpain township

PA Wilkes-Barre city

PA Wilkes-Barre township

PA Wilkins township

PA Wilkinsburg borough

PA Williams township

PA Williamsport city

  

PA Willistown township

PA Wilmerding borough

PA Wilson borough

PA Windber borough

PA Windsor borough

PA Windsor township

PA Worcester township

PA Wormleysburg borough

PA Wrightsville borough

PA Wyoming borough

PA Wyomissing borough

PA Wyomissing Hills borough

PA Yardley borough

PA Yatesville borough

PA Yeadon borough

PA Yoe borough

PA York city

PA York County

PA York township

PA Youngwood borough

PR Aibonita

PR Anasco

PR Aquada

PR Aquadilla

PR Aquas Buenas

PR Arecibo

PR Bayamon

PR Cabo Rojo

  

PR Caguas

PR Camuy

PR Canovanas

PR Catano

PR Cayey

PR Cidra

PR Dorado

PR Guaynabo

PR Gurabo

PR Hatillo

PR Hormigueros

PR Humacao

PR Juncos

PR Las Piedras

PR Loiza

PR Manati

PR Mayaguez

PR Moca

PR Naguabo

PR Naranjito

PR Penuelas

PR Ponce

PR Rio Grande

PR San German

PR San Lorenzo

PR Toa Alta

PR Toa Baja

PR Trujillo Alto

  

PR Vega Alta

PR Vega Baja

PR Yabucao

RI Barrington town

RI Bristol town

RI Burrillville town

RI Central Falls city

RI Coventry town

RI Cranston city

RI Cumberland town

RI East Greenwich town

RI East Providence city

RI Glocester town

RI Jamestown town

RI Johnston town

RI Lincoln town

RI Middletown town

RI Newport city

RI Newport County

RI North Kingstown town

RI North Providence town

RI North Smithfield town

RI Pawtucket city

RI Portsmouth town

RI Providence city

RI Providence County

RI Scituate town

RI Smithfield town

  

RI Tiverton town

RI Warren town

RI Warwick city

RI Washington County

RI West Greenwich town

RI West Warwick town

RI Woonsocket city

SC Aiken city

SC Aiken County

SC Anderson city

SC Anderson County

SC Arcadia Lakes town

SC Berkeley County

SC Burnettown town

SC Cayce city

SC Charleston city

SC Charleston County

SC City View town

SC Columbia city

SC Cowpens town

SC Darlington County

SC Dorchester County

SC Edgefield County

SC Florence city

SC Florence County

SC Folly Beach city

SC Forest Acres city

SC Fort Mill town

  

SC Georgetown County

SC Goose Creek city

SC Hanahan city

SC Horry County

SC Irmo town

SC Isle of Palms city

SC Lexington County

SC Lincolnville town

SC Mount Pleasant town

SC Myrtle Beach city

SC North Augusta city

SC North Charleston city

SC Pickens County

SC Pineridge town

SC Quinby town

SC Rock Hill city

SC South Congaree town

SC Spartanburg city

SC Spartanburg County

SC Springdale town

SC Sullivan's Island town

SC Summerville town

SC Sumter city

SC Sumter County

SC Surfside Beach town

SC West Columbia city

SC York County

SD Big Sioux township

  

SD Central Pennington unorg.

SD Lincoln County

SD Mapleton township ***68832**

SD Minnehaha County

SD North Sioux City city

SD Pennington County

SD Rapid City city

SD Split Rock township

SD Union County

SD Wayne township

TN Alcoa city

TN Anderson County

TN Bartlett town

TN Belle Meade city

TN Berry Hill city

TN Blount County

TN Brentwood city

TN Bristol city

TN Carter County

TN Church Hill town

TN Clarksville city

TN Collegedale city

TN Davidson County

TN East Ridge city

TN Elizabethton city

TN Farragut town

TN Forest Hills city

TN Germantown city

  

TN Goodlettsville city

TN Hamilton County

TN Hawkins County

TN Hendersonville city

TN Jackson city

TN Johnson City city

TN Jonesborough town

TN Kingsport city

TN Knox County

TN Lakesite city

TN Lakewood city

TN Lookout Mountain town

TN Loudon County

TN Madison County

TN Maryville city

TN Montgomery County

TN Mount Carmel town

TN Mount Juliet city

TN Oak Hill city

TN Red Bank city

TN Ridgeside city

TN Rockford city

TN Shelby County

TN Signal Mountain town

TN Soddy-Daisy city

TN Sullivan County

TN Sumner County

TN Washington County

  

TN Williamson County

TN Wilson County

TX Addison city

TX Alamo city

TX Alamo Heights city

TX Allen city

TX Archer County

TX Azle city

TX Balch Springs city

TX Balcones Heights city

TX Bayou Vista village

TX Baytown city

TX Bedford city

TX Bell County

TX Bellaire city

TX Bellmead city

TX Belton city

TX Benbrook city

TX Beverly Hills city

TX Bexar County

TX Blue Mound city

TX Bowie County

TX Brazoria County

TX Brazos County

TX Brookside Village city

TX Brownsville city

TX Bryan city

TX Buckingham town

  

TX Bunker Hill Village city

TX Cameron County

TX Carrollton city

TX Castle Hills city

TX Cedar Hill city

TX Cedar Park city

TX Chambers County

TX Cibolo city

TX Clear Lake Shores city

TX Clint town

TX Cockrell Hill city

TX College Station city

TX Colleyville city

TX Collin County

TX Comal County

TX Combes town

TX Converse city

TX Copperas Cove city

TX Corinth town

TX Coryell County

TX Crowley city

TX Dallas County

TX Dalworthington Gardens city

TX Deer Park city

TX Denison city

TX Denton city

TX Denton County

TX DeSoto city

  

TX Dickinson city

TX Donna city

TX Double Oak town

TX Duncanville city

TX Ector County

TX Edgecliff village

TX Edinburg city

TX El Lago city

TX El Paso County

TX Ellis County

TX Euless city

TX Everman city

TX Farmers Branch city

TX Flower Mound town

TX Forest Hill city

TX Fort Bend County

TX Friendswood city

TX Galena Park city

TX Galveston city

TX Galveston County

TX Grand Prairie city

TX Grapevine city

TX Grayson County

TX Gregg County

TX Groves city

TX Guadalupe County

TX Haltom City city

TX Hardin County

  

TX Harker Heights city

TX Harlingen city

TX Harrison County

TX Hedwig Village city

TX Hewitt city

TX Hickory Creek town

TX Hidalgo County

TX Highland Park town

TX Highland Village city

TX Hill Country Village city

TX Hilshire Village city

TX Hitchcock city

TX Hollywood Park town

TX Howe town

TX Humble city

TX Hunters Creek Village city

TX Hurst city

TX Hutchins city

TX Impact town

TX Jacinto City city

TX Jefferson County

TX Jersey Village city

TX Johnson County

TX Jones County

TX Katy city

TX Kaufman County

TX Keller city

TX Kemah city

  

TX Kennedale city

TX Killeen city

TX Kirby city

TX Kleberg County

TX La Marque city

TX La Porte city

TX Lacy-Lakeview city

TX Lake Dallas city

TX Lake Worth city

TX Lakeside City town

TX Lakeside town

TX Lampasas County

TX Lancaster city

TX League City city

TX Leander city

TX Leon Valley city

TX Lewisville city

TX Live Oak city

TX Longview city

TX Lubbock County

TX Lumberton city

TX Martin County

TX McAllen city

TX McLennan County

TX Meadows city

TX Midland city

TX Midland County

TX Mission city

  

TX Missouri City city

TX Montgomery County

TX Morgan's Point city

TX Nash city

TX Nassau Bay city

TX Nederland city

TX Nolanville city

TX North Richland Hills city

TX Northcrest town

TX Nueces County

TX Odessa city

TX Olmos Park city

TX Palm Valley town

TX Palmview city

TX Pantego town

TX Parker County

TX Pearland city

TX Pflugerville city

TX Pharr city

TX Piney Point Village city

TX Port Arthur city

TX Port Neches city

TX Portland city

TX Potter County

TX Primera town

TX Randall County

TX Richardson city

TX Richland Hills city

  

TX River Oaks city

TX Robinson city

TX Rockwall city

TX Rockwall County

TX Rollingwood city

TX Rose Hill Acres city

TX Rowlett city ***68833**

TX Sachse city

TX Saginaw city

TX San Angelo city

TX San Benito city

TX San Juan city

TX San Patricio County

TX Sansom Park city

TX Santa Fe city

TX Schertz city

TX Seabrook city

TX Seagoville city

TX Selma city

TX Shavano Park city

TX Sherman city

TX Shoreacres city

TX Smith County

TX Socorro town

TX South Houston city

TX Southside Place city

TX Spring Valley city

TX Stafford town

  

TX Sugar Land city

TX Sunset Valley city

TX Tarrant County

TX Taylor County

TX Taylor Lake Village city

TX Temple city

TX Terrell Hills city

TX Texarkana city

TX Texas City city

TX Tom Green County

TX Travis County

TX Tye town

TX Tyler city

TX Universal City city

TX University Park city

TX Victoria city

TX Victoria County

TX Wake Village city

TX Waller County

TX Watauga city

TX Webb County

TX Webster city

TX Weslaco city

TX West Lake Hills city

TX West University Place city

TX Westover Hills town

TX Westworth village

TX White Oak city

  

TX White Settlement city

TX Wichita County

TX Wichita Falls city

TX Williamson County

TX Wilmer city

TX Windcrest city

TX Woodway city

UT American Fork city

UT Bluffdale city

UT Bountiful city

UT Cache County

UT Cedar Hills town

UT Centerville city

UT Clearfield city

UT Clinton city

UT Davis County

UT Draper city

UT Farmington city

UT Farr West city

UT Fruit Heights city

UT Harrisville city

UT Highland city

UT Hyde Park city

UT Kaysville city

UT Layton city

UT Lehi city

UT Lindon city

UT Logan city

  

UT Mapleton city

UT Midvale city

UT Millville city

UT Murray city

UT North Logan city

UT North Ogden city

UT North Salt Lake city

UT Ogden city

UT Orem city

UT Pleasant Grove city

UT Pleasant View city

UT Providence city

UT Provo city

UT River Heights city

UT Riverdale city

UT Riverton city

UT Roy city

UT Sandy city

UT Smithfield city

UT South Jordan city

UT South Ogden city

UT South Salt Lake city

UT South Weber city

UT Springville city

UT Sunset city

UT Syracuse city

UT Uintah town

UT Utah County

  

UT Washington Terrace city

UT Weber County

UT West Bountiful city

UT West Jordan city

UT West Point city

UT West Valley City city

UT Woods Cross city

VA Albemarle County

VA Alexandria city

VA Amherst County

VA Bedford County

VA Botetourt County

VA Bristol city

VA Campbell County

VA Charlottesville city

VA Colonial Heights city

VA Danville city

VA Dinwiddie County

VA Fairfax city

VA Falls Church city

VA Fredericksburg city

VA Gate City town

VA Gloucester County

VA Hanover County

VA Herndon town

VA Hopewell city

VA James City County

VA Loudoun County

  

VA Lynchburg city

VA Manassas city

VA Manassas Park city

VA Occoquan town

VA Petersburg city

VA Pittsylvania County

VA Poquoson city

VA Prince George County

VA Richmond city

VA Roanoke city

VA Roanoke County

VA Salem city

VA Scott County

VA Spotsylvania County

VA Stafford County

VA Suffolk city

VA Vienna town

VA Vinton town

VA Washington County

VA Weber City town

VA Williamsburg city

VA York County

VT Burlington city

VT Chittenden County

VT Colchester town

VT Essex Junction village

VT Essex town

VT Shelburne town

  

VT South Burlington city

VT Williston town

VT Winooski city

WA Algona city

WA Auburn city

WA Beaux Arts Village town

WA Bellevue city

WA Bellingham city

WA Benton County

WA Bonney Lake city

WA Bothell city

WA Bremerton city

WA Brier city

WA Clyde Hill town

WA Cowlitz County

WA Des Moines city

WA DuPont city

WA Edmonds city

WA Everett city

WA Fife city

WA Fircrest town

WA Franklin County

WA Gig Harbor city

WA Hunts Point town

WA Issaquah city

WA Kelso city

WA Kennewick city

WA Kent city

  

WA Kirkland city

WA Kitsap County

WA Lacey city

WA Lake Forest Park city

WA Longview city

WA Lynnwood city

WA Marysville city

WA Medina city

WA Mercer Island city

WA Mill Creek city

WA Millwood town

WA Milton city

WA Mountlake Terrace city

WA Mukilteo city

WA Normandy Park city

WA Olympia city

WA Pacific city

WA Pasco city

WA Port Orchard city

WA Puyallup city

WA Redmond city

WA Renton city

WA Richland city

WA Ruston town

WA Selah city

WA Steilacoom town

WA Sumner city

WA Thurston County

  

WA Tukwila city

WA Tumwater city

WA Union Gap city

WA Vancouver city

WA West Richland city

WA Whatcom County

WA Woodway city

WA Yakima city

WA Yakima County

WA Yarrow Point town

WI Algoma town ***68834**

WI Allouez village

WI Altoona city

WI Appleton city

WI Ashwaubenon village

WI Bayside village

WI Bellevue town

WI Beloit city

WI Beloit town

WI Big Bend village

WI Black Wolf town

WI Blooming Grove town

WI Brookfield city

WI Brookfield town

WI Brown County

WI Brown Deer village

WI Brunswick town

WI Buchanan town

  

WI Burke town

WI Butler village

WI Caledonia town

WI Calumet County

WI Campbell town

WI Cedarburg city

WI Cedarburg town

WI Chippewa County

WI Chippewa Falls city

WI Clayton town

WI Combined Locks village

WI Cudahy city

WI Dane County

WI De Pere city

WI De Pere town

WI Delafield town

WI Douglas County

WI Dunn town

WI Eagle Point town

WI Eau Claire city

WI Eau Claire County

WI Elm Grove village

WI Elmwood Park village

WI Fitchburg city

WI Fox Point village

WI Franklin city

WI Germantown town

WI Germantown village

  

WI Glendale city

WI Grafton town

WI Grafton village

WI Grand Chute town

WI Green Bay city

WI Greendale village

WI Greenfield city

WI Greenville town

WI Hales Corners village

WI Hallie town

WI Harmony town

WI Harrison town

WI Hobart town

WI Holmen village

WI Howard village

WI Janesville city

WI Janesville town

WI Kaukauna city

WI Kenosha city

WI Kenosha County

WI Kimberly village

WI Kohler village

WI La Crosse city

WI La Crosse County

WI La Prairie town

WI Lafayette town

WI Lannon village

WI Lima town

  

WI Lisbon town

WI Little Chute village

WI Madison town

WI Maple Bluff village

WI Marathon County

WI McFarland village

WI Medary town

WI Menasha city

WI Menasha town

WI Menomonee Falls village

WI Mequon city

WI Middleton city

WI Middleton town

WI Monona city

WI Mount Pleasant town

WI Muskego city

WI Neenah city

WI Neenah town

WI Nekimi town

WI New Berlin city

WI North Bay village

WI Norway town

WI Oak Creek city

WI Onalaska city

WI Onalaska town

WI Oshkosh city

WI Oshkosh town

WI Outagamie County

  

WI Ozaukee County

WI Pewaukee town

WI Pewaukee village

WI Pleasant Prairie town

WI Pleasant Prairie village

WI Racine city

WI Racine County

WI Rib Mountain town

WI River Hills village

WI Rock County

WI Rock town

WI Rothschild village

WI Salem town

WI Schofield city

WI Scott town

WI Sheboygan city

WI Sheboygan County

WI Sheboygan Falls city

WI Sheboygan Falls town

WI Sheboygan town

WI Shelby town

WI Shorewood Hills village

WI Shorewood village

WI Somers town

WI South Milwaukee city

WI St. Francis city

WI Stettin town

WI Sturtevant village

  

WI Superior city

WI Superior village

WI Sussex village

WI Thiensville village

WI Turtle town

WI Union town

WI Vandenbroek town

WI Vernon town

WI Washington County

WI Washington town

WI Waukesha city

WI Waukesha County

WI Waukesha town

WI Wausau city

WI Wauwatosa city

WI West Allis city

WI West Milwaukee village

WI Weston town

WI Westport town

WI Wheaton town

WI Whitefish Bay village

WI Wilson town

WI Wind Point village

WI Winnebago County

WV Bancroft town

WV Barboursville village

WV Belle town

WV Benwood city

  

WV Berkeley County

WV Bethlehem village

WV Brooke County

WV Cabell County

WV Cedar Grove town

WV Ceredo city

WV Charleston city

WV Chesapeake town

WV Clearview village

WV Dunbar city

WV East Bank town

WV Follansbee city

WV Glasgow town

WV Glen Dale city

WV Hancock County

WV Huntington city

WV Hurricane city

WV Kanawha County

WV Kenova city

WV Marmet city

WV Marshall County

WV McMechen city

WV Mineral County

WV Moundsville city

WV Nitro city

WV North Hills town

WV Ohio County

WV Parkersburg city

  

WV Poca town

WV Putnam County

WV Ridgeley town

WV South Charleston city

WV St. Albans city

WV Triadelphia town

WV Vienna city

WV Wayne County

WV Weirton city

WV Wheeling city

WV Wood County

WY Casper city

WY Cheyenne city

WY Evansville town

WY Laramie County

WY Mills town

WY Natrona County

***68835 Appendix 7 of Preamble—Governmental Entities (Located Outside of an Urbanized Area) That Must Be Examined By the NPDES Permitting Authority for Potential Designation Under §123.35(b)(2)**

(All listed entities have a population of at least 10,000 and a population density of at least 1,000. A listed entity would only be potentially designated if it operates a small MS4. See §122.26(b)(16) for the definition of a small MS4.)

(This list does not include all operators of small MS4s that may be designated by the NPDES permitting authority. Operators of small MS4s in areas with populations below 10,000 and densities below 1,000 may also be designated but examination of them is not required. Also, entities such as military bases, large hospitals, prison complexes, universities, sewer districts, and highway departments that operate a small MS4 in an area listed here, or in an area otherwise designated by the NPDES permitting authority, may be designated and become subject to permitting regulations.) (Source: 1990 Census of Population and Housing, U.S. Bureau of the Census. This list is subject to change with the Decennial Census)

AL Daphne city

AL Jacksonville city

AL Selma city

AR Arkadelphia city

  

AR Benton city

AR Blytheville city

AR Conway city

AR El Dorado city

AR Hot Springs city

AR Magnolia city

AR Rogers city

AR Searcy city

AR Stuttgart city

AZ Douglas city

CA Arcata city

CA Arroyo Grande city

CA Atwater city

CA Auburn city

CA Banning city

CA Brawley city

CA Calexico city

CA Clearlake city

CA Corcoran city

CA Delano city

CA Desert Hot Springs city

CA Dinuba city

CA Dixon city

CA El Centro city

CA El Paso de Robles (Paso Robles) city

CA Eureka city

CA Fillmore city

CA Gilroy city

  

CA Grover City city

CA Hanford city

CA Hollister city

CA Lemoore city

CA Los Banos city

CA Madera city

CA Manteca city

CA Oakdale city

CA Oroville city

CA Paradise town

CA Petaluma city

CA Porterville city

CA Red Bluff city

CA Reedley city

CA Ridgecrest city

CA Sanger city

CA Santa Paula city

CA Selma city

CA South Lake Tahoe city

CA Temecula city

CA Tracy city

CA Tulare city

CA Turlock city

CA Ukiah city

CA Wasco city

CA Woodland city

CO Canon City city

CO Durango city

  

CO Lafayette city

CO Louisville city

CO Loveland city

CO Sterling city

FL Bartow city

FL Belle Glade city

FL De Land city

FL Eustis city

FL Haines City city

FL Key West city

FL Leesburg city

FL Palatka city

FL Plant City city

FL St. Augustine city

FL St. Cloud city

GA Americus city

GA Carrollton city

GA Cordele city

GA Dalton city

GA Dublin city

GA Griffin city

GA Hinesville city

GA Moultrie city

GA Newnan city

GA Statesboro city

GA Thomasville city

GA Tifton city

GA Valdosta city

  

GA Waycross city

IA Ames city

IA Ankeny city

IA Boone city

IA Burlington city

IA Fort Dodge city

IA Fort Madison city

IA Indianola city

IA Keokuk city

IA Marshalltown city

IA Mason City city

IA Muscatine city

IA Newton city

IA Oskaloosa city

IA Ottumwa city

IA Spencer city

ID Caldwell city

ID Coeur d'Alene city

ID Lewiston city

ID Moscow city

ID Nampa city

ID Rexburg city

ID Twin Falls city

IL Belvidere city

IL Canton city

IL Carbondale city

IL Centralia city

IL Charleston city

  

IL Danville city

IL De Kalb city

IL Dixon city

IL Effingham city

IL Freeport city

IL Galesburg city

IL Jacksonville city

IL Macomb city

IL Mattoon city

IL Mount Vernon city

IL Ottawa city

IL Pontiac city

IL Quincy city

IL Rantoul village

IL Sterling city

IL Streator city

IL Taylorville city

IL Woodstock city

IN Bedford city

IN Columbus city

IN Crawfordsville city

IN Frankfort city

IN Franklin city

IN Greenfield city

IN Huntington city

IN Jasper city

IN La Porte city

IN Lebanon city

  

IN Logansport city

IN Madison city

IN Marion city

IN Martinsville city

IN Michigan City city

IN New Castle city

IN Noblesville city

IN Peru city

IN Plainfield town

IN Richmond city

IN Seymour city

IN Shelbyville city

IN Valparaiso city

IN Vincennes city

IN Wabash city

IN Warsaw city

IN Washington city

KS Arkansas City city

KS Atchison city

KS Coffeyville city

KS Derby city

KS Dodge City city

KS El Dorado city

KS Emporia city

KS Garden City city

KS Great Bend city

KS Hays city

KS Hutchinson city

  

KS Junction City city

KS Leavenworth city

KS Liberal city

KS Manhattan city

KS McPherson city

KS Newton city

KS Ottawa city

KS Parsons city

KS Pittsburg city

KS Salina city

KS Winfield city

KY Bowling Green city

KY Danville city

KY Frankfort city

KY Georgetown city

KY Glasgow city

KY Hopkinsville city

KY Madisonville city

KY Middlesborough city

KY Murray city

KY Nicholasville city

KY Paducah city

KY Radcliff city

KY Richmond city

KY Somerset city

KY Winchester city ***68836**

LA Abbeville city

LA Bastrop city

  

LA Bogalusa city

LA Crowley city

LA Eunice city

LA Hammond city

LA Jennings city

LA Minden city

LA Morgan City city

LA Natchitoches city

LA New Iberia city

LA Opelousas city

LA Ruston city

LA Thibodaux city

MA Amherst town

MA Clinton town

MA Milford town

MA Newburyport city

MD Aberdeen town

MD Cambridge city

MD Salisbury city

MD Westminster city

ME Waterville city

MI Adrian city

MI Albion city

MI Alpena city

MI Big Rapids city

MI Cadillac city

MI Escanaba city

MI Grand Haven city

  

MI Marquette city

MI Midland city

MI Monroe city

MI Mount Pleasant city

MI Owosso city

MI Sturgis city

MI Traverse City city

MN Albert Lea city

MN Austin city

MN Bemidji city

MN Brainerd city

MN Faribault city

MN Fergus Falls city

MN Hastings city

MN Hutchinson city

MN Mankato city

MN Marshall city

MN New Ulm city

MN North Mankato city

MN Northfield city

MN Owatonna city

MN Stillwater city

MN Willmar city

MN Winona city

MO Cape Girardeau city

MO Farmington city

MO Hannibal city

MO Jefferson City city

  

MO Kennett city

MO Kirksville city

MO Marshall city

MO Maryville city

MO Poplar Bluff city

MO Rolla city

MO Sedalia city

MO Sikeston city

MO Warrensburg city

MO Washington city

MS Brookhaven city

MS Canton city

MS Clarksdale city

MS Cleveland city

MS Columbus city

MS Greenville city

MS Greenwood city

MS Grenada city

MS Indianola city

MS Laurel city

MS McComb city

MS Meridian city

MS Natchez city

MS Starkville city

MS Vicksburg city

MS Yazoo City city

MT Bozeman city

MT Havre city

  

MT Helena city

MT Kalispell city

NC Albemarle city

NC Asheboro city

NC Boone town

NC Eden city

NC Elizabeth City city

NC Havelock city

NC Henderson city

NC Kernersville town

NC Kinston city

NC Laurinburg city

NC Lenoir city

NC Lexington city

NC Lumberton city

NC Monroe city

NC New Bern city

NC Reidsville city

NC Roanoke Rapids city

NC Salisbury city

NC Sanford city

NC Shelby city

NC Statesville city

NC Tarboro town

NC Wilson city

ND Dickinson city

ND Jamestown city

ND Minot city

  

ND Williston city

NE Beatrice city

NE Columbus city

NE Fremont city

NE Grand Island city

NE Hastings city

NE Kearney city

NE Norfolk city

NE North Platte city

NE Scottsbluff city

NJ East Windsor township

NJ Plainsboro township

NJ Bridgeton city

NJ Princeton borough

NM Alamogordo city

NM Artesia city

NM Clovis city

NM Deming city

NM Farmington city

NM Gallup city

NM Hobbs city

NM Las Vegas city

NM Portales city

NM Roswell city

NM Silver City town

NV Elko city

NY Amsterdam city

NY Auburn city

  

NY Batavia city

NY Canandaigua city

NY Corning city

NY Cortland city

NY Dunkirk city

NY Fredonia village

NY Fulton city

NY Geneva city

NY Gloversville city

NY Jamestown city

NY Kingston city

NY Lockport city

NY Massena village

NY Middletown city

NY Ogdensburg city

NY Olean city

NY Oneonta city

NY Oswego city

NY Plattsburgh city

NY Potsdam village

NY Watertown city

OH Alliance city

OH Ashland city

OH Ashtabula city

OH Athens city

OH Bellefontaine city

OH Bowling Green city

OH Bucyrus city

  

OH Cambridge city

OH Chillicothe city

OH Circleville city

OH Coshocton city

OH Defiance city

OH Delaware city

OH Dover city

OH East Liverpool city

OH Findlay city

OH Fostoria city

OH Fremont city

OH Galion city

OH Greenville city

OH Lancaster city

OH Lebanon city

OH Marietta city

OH Marion city

OH Medina city

OH Mount Vernon city

OH New Philadelphia city

OH Norwalk city

OH Oxford city

OH Piqua city

OH Portsmouth city

OH Salem city

OH Sandusky city

OH Sidney city

OH Tiffin city

  

OH Troy city

OH Urbana city

OH Washington city

OH Wilmington city

OH Wooster city

OH Xenia city

OH Zanesville city

OK Ada city

OK Altus city

OK Bartlesville city

OK Chickasha city

OK Claremore city

OK McAlester city

OK Miami city

OK Muskogee city

OK Okmulgee city

OK Owasso city

OK Ponca City city

OK Stillwater city

OK Tahlequah city

OK Weatherford city

OR Albany city

OR Ashland city

OR Astoria city

OR Bend city

OR City of the Dalles city

OR Coos Bay city

OR Corvallis city

  

OR Grants Pass city

OR Hermiston city ***68837**

OR Klamath Falls city

OR La Grande city

OR Lebanon city

OR McMinnville city

OR Newberg city

OR Pendleton city

OR Roseburg city

OR Woodburn city

PA Berwick borough

PA Bloomsburg town

PA Butler city

PA Carlisle borough

PA Chambersburg borough

PA Ephrata borough

PA Hanover borough

PA Hazleton city

PA Indiana borough

PA Lebanon city

PA Meadville city

PA New Castle city

PA Oil City city

PA Pottsville city

PA Sunbury city

PA Uniontown city

PA Warren city

RI Narragansett town

  

SC Clemson city

SC Easley city

SC Gaffney city

SC Greenwood city

SC Newberry town

SC Orangeburg city

SD Aberdeen city

SD Brookings city

SD Huron city

SD Mitchell city

SD Vermillion city

SD Watertown city

SD Yankton city

TN Brownsville city

TN Cleveland city

TN Collierville town

TN Cookeville city

TN Dyersburg city

TN Greeneville town

TN Lawrenceburg city

TN McMinnville city

TN Millington city

TN Morristown city

TN Murfreesboro city

TN Shelbyville city

TN Springfield city

TN Union City city

TX Alice city

  

TX Alvin city

TX Andrews city

TX Angleton city

TX Bay City city

TX Beeville city

TX Big Spring city

TX Borger city

TX Brenham city

TX Brownwood city

TX Burkburnett city

TX Canyon city

TX Cleburne city

TX Conroe city

TX Coppell city

TX Corsicana city

TX Del Rio city

TX Dumas city

TX Eagle Pass city

TX El Campo city

TX Gainesville city

TX Gatesville city

TX Georgetown city

TX Henderson city

TX Hereford city

TX Huntsville city

TX Jacksonville city

TX Kerrville city

TX Kingsville city

  

TX Lake Jackson city

TX Lamesa city

TX Levelland city

TX Lufkin city

TX Mercedes city

TX Mineral Wells city

TX Mount Pleasant city

TX Nacogdoches city

TX New Braunfels city

TX Palestine city

TX Pampa city

TX Pecos city

TX Plainview city

TX Port Lavaca city

TX Robstown city

TX Rosenberg city

TX Round Rock city

TX San Marcos city

TX Seguin city

TX Snyder city

TX Stephenville city

TX Sweetwater city

TX Taylor city

TX The Colony city

TX Uvalde city

TX Vernon city

TX Vidor city

UT Brigham City city

  

UT Cedar City city

UT Spanish Fork city

UT Tooele city

VA Blacksburg town

VA Christiansburg town

VA Front Royal town

VA Harrisonburg city

VA Leesburg town

VA Martinsville city

VA Radford city

VA Staunton city

VA Waynesboro city

VA Winchester city

VT Rutland city

WA Aberdeen city

WA Anacortes city

WA Centralia city

WA Ellensburg city

WA Moses Lake city

WA Mount Vernon city

WA Oak Harbor city

WA Port Angeles city

WA Pullman city

WA Sunnyside city

WA Walla Walla city

WA Wenatchee city

WI Beaver Dam city

WI Fond du Lac city

  

WI Fort Atkinson city

WI Manitowoc city

WI Marinette city

WI Marshfield city

WI Menomonie city

WI Monroe city

WI Oconomowoc city

WI Stevens Point city

WI Sun Prairie city

WI Two Rivers city

WI Watertown city

WI West Bend city

WI Whitewater city

WI Wisconsin Rapids city

WV Beckley city

WV Bluefield city

WV Clarksburg city

WV Fairmont city

WV Martinsburg city

WV Morgantown city

WY Evanston city

WY Gillette city

WY Green River city

WY Laramie city

WY Rock Springs city

WY Sheridan city

For the reasons set forth in the preamble, chapter I of title 40 of the Code of Federal Regulations is amended as follows:

**PART 9—OMB APPROVALS UNDER THE PAPERWORK REDUCTION ACT**

1. The authority citation for part 9 continues to read as follows:

  

Authority: 7 U.S.C. 135 et seq., 136-136y; 15 U.S.C. 2001, 2003, 2005, 2006, 2601-2671; 21 U.S.C. 331j, 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251 et seq., 1311, 1313d, 1314, 1318, 1321, 1326, 1330, 1342, 1344, 1345 (d) and (e), 1361; E.O. 11735, 38 FR 21243, 3 CFR, 1971-1975 Comp. p. 973; 42 U.S.C. 241, 242b, 243, 246, 300f, 300g, 300g-1, 300g-2, 300g-3, 300g-4, 300g-5, 300g-6, 300j-1, 300j-2, 300j-3, 300j-4, 300j-9, 1857 et seq., 6901-6992k, 7401-7671q, 7542, 9601-9657, 11023, 11048.
40 CFR § 9.1

2. In §9.1 the table is amended by adding entries in numerical order under the indicated heading to read as follows:
40 CFR § 9.1

**§9.1 OMB approvals under the Paperwork Reduction Act.**

* * * * *

| 40 CFR citation | OMB control No. |
|---|---|
| * * * * * * * | |
| EPA Administered Permit Programs: The National Pollutant Discharge Elimination System | |
| * * * * * * * | |
| 122.26(g) | 2040-0211 |
| * * * * * * * | |
| State Permit Requirements | |
| * * * * * * * | |
| 123.35(b) | 2040-0211 |
| * * * * * * * | |

***68838 PART 122—EPA ADMINISTERED PERMIT PROGRAMS: THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

1. The authority citation for part 122 continues to read as follows:

Authority: The Clean Water Act, 33 U.S.C. 1251 et seq.
40 CFR § 122.21

2. Revise §122.21(c)(1) to read as follows:
40 CFR § 122.21

**§122.21 Application for a permit (applicable to State programs, see §123.25).**

* * * * *

(c) Time to apply. (1) Any person proposing a new discharge, shall submit an application at least 180 days before the date on which the discharge is to commence, unless permission for a later date has been granted by the Director. Facilities proposing a new discharge of storm water associated with industrial activity shall submit an application 180 days before that facility commences industrial activity which may result in a discharge of storm water associated with that industrial activity. Facilities described under §122.26(b)(14)(x) or (b)(15)(i) shall submit applications at least 90 days before the date on which construction is to commence. Different submittal dates may be required under the terms of applicable general permits. Persons proposing a new discharge are encouraged to submit their applications well in advance of the 90 or 180 day requirements to avoid delay. See also paragraph (k) of this section and §122.26(c)(1)(i)(G) and (c)(1)(ii).

* * * * *40 CFR § 122.26

  

3. Amend §122.26 as follows:

a. Revise paragraphs (a)(9), (b)(4)(i), (b)(7)(i), (b)(14) introductory text, (b)(14)(x), (b)(14)(xi);

b. Redesignate paragraph (b)(15) as paragraph (b)(20) and add new paragraphs (b)(15) through (b)(19);

c. Revise the heading for paragraph (c), the first sentence of paragraph (c)(1) introductory text, the first sentence of paragraph (c)(1)(ii) introductory text, paragraphs (e) heading and introductory text, (e)(1), (e)(5) introductory text, and (e)(5)(i);

d. Add paragraphs (e)(8) and (e)(9); and

e. Revise paragraphs (f)(4), (f)(5), and (g).

The additions and revisions read as follows:
40 CFR § 122.26

**§122.26 Storm water discharges (applicable to State NPDES programs, see § 123.25).**
(a) * * *

(9)(i) On and after October 1, 1994, for discharges composed entirely of storm water, that are not required by paragraph (a)(1) of this section to obtain a permit, operators shall be required to obtain a NPDES permit only if:

(A) The discharge is from a small MS4 required to be regulated pursuant to § 122.32;

(B) The discharge is a storm water discharge associated with small construction activity pursuant to paragraph (b)(15) of this section;

(C) The Director, or in States with approved NPDES programs either the Director or the EPA Regional Administrator, determines that storm water controls are needed for the discharge based on wasteload allocations that are part of "total maximum daily loads" (TMDLs) that address the pollutant(s) of concern; or

(D) The Director, or in States with approved NPDES programs either the Director or the EPA Regional Administrator, determines that the discharge, or category of discharges within a geographic area, contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

(ii) Operators of small MS4s designated pursuant to paragraphs (a)(9)(i)(A), (a)(9)(i)(C), and (a)(9)(i)(D) of this section shall seek coverage under an NPDES permit in accordance with §§122.33 through 122.35. Operators of non-municipal sources designated pursuant to paragraphs (a)(9)(i)(B), (a)(9)(i)(C), and (a)(9)(i)(D) of this section shall seek coverage under an NPDES permit in accordance with paragraph (c)(1) of this section.

(iii) Operators of storm water discharges designated pursuant to paragraphs (a)(9)(i)(C) and (a)(9)(i)(D) of this section shall apply to the Director for a permit within 180 days of receipt of notice, unless permission for a later date is granted by the Director (see §124.52(c) of this chapter).

(b) * * *

(4) * * *

(i) Located in an incorporated place with a population of 250,000 or more as determined by the 1990 Decennial Census by the Bureau of the Census (Appendix F of this part); or

  

* * * * *

(7) * * *

(i) Located in an incorporated place with a population of 100,000 or more but less than 250,000, as determined by the 1990 Decennial Census by the Bureau of the Census (Appendix G of this part); or

* * * * *

(14) Storm water discharge associated with industrial activity means the discharge from any conveyance that is used for collecting and conveying storm ***68839** water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under this part 122. For the categories of industries identified in this section, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at part 401 of this chapter); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are federally, State, or municipally owned or operated that meet the description of the facilities listed in paragraphs (b)(14)(i) through (xi) of this section) include those facilities designated under the provisions of paragraph (a)(1)(v) of this section. The following categories of facilities are considered to be engaging in "industrial activity" for purposes of paragraph (b)(14):

* * * * *

(x) Construction activity including clearing, grading and excavation, except operations that result in the disturbance of less than five acres of total land area. Construction activity also includes the disturbance of less than five acres of total land area that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb five acres or more;

(xi) Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, and 4221-25;

(15) Storm water discharge associated with small construction activity means the discharge of storm water from:

(i) Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one acre and less than five acres. Small construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one and less than five acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. The Director may waive the otherwise applicable requirements in a general permit for a storm water discharge from construction activities that disturb less than five acres where:

(A) The value of the rainfall erosivity factor ("R" in the Revised Universal Soil Loss Equation) is less than five during the period of construction activity. The rainfall erosivity factor is determined in accordance with Chapter 2 of Agriculture Handbook Number 703, Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE), pages 21-64, dated January 1997. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C 552(a) and 1 CFR part 51. Copies may be obtained from EPA's Water Resource Center, Mail Code RC4100, 401 M St. S.W., Washington, DC 20460. A copy is also available for inspection at the U.S. EPA Water Docket , 401 M Street S.W., Washington, DC. 20460, or the Office of the Federal Register, 800 N. Capitol Street N.W. Suite

700, Washington, DC. An operator must certify to the Director that the construction activity will take place during a period when the value of the rainfall erosivity factor is less than five; or

(B) Storm water controls are not needed based on a "total maximum daily load" (TMDL) approved or established by EPA that addresses the pollutant(s) of concern or, for non-impaired waters that do not require TMDLs, an equivalent analysis that determines allocations for small construction sites for the pollutant(s) of concern or that determines that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. For the purpose of this paragraph, the pollutant(s) of concern include sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. The operator must certify to the Director that the construction activity will take place, and storm water discharges will occur, within the drainage area addressed by the TMDL or equivalent analysis.

(ii) Any other construction activity designated by the Director, or in States with approved NPDES programs either the Director or the EPA Regional Administrator, based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to waters of the United States.

**Exhibit 1 to §122.26(b)(15).—Summary of Coverage of "Storm Water Discharges Associated with Small Construction Activity" Under the NPDES Storm Water Program**

| | |
|---|---|
| Automatic Designation: Required Nationwide Coverage | - Construction activities that result in a land disturbance of equal to or greater than one acre and less than five acres.<br><br>- Construction activities disturbing less than one acre if part of a larger common plan of development or sale with a planned disturbance of equal to or greater than one acre and less than five acres. (see §122.26(b)(15)(i).) |
| Potential Designation: Optional Evaluation and Designation by the NPDES Permitting Authority or EPA Regional Administrator. | - Construction activities that result in a land disturbance of less than one acre based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants. (see §122.26(b)(15)(ii).) |
| Potential Waiver: Waiver from Requirements as Determined by the NPDES Permitting Authority. | Any automatically designated construction activity where the operator certifies: (1) A rainfall erosivity factor of less than five, or (2) That the activity will occur within an area where controls are not needed based on a TMDL or, for non-impaired waters that do not require a TMDL, an equivalent analysis for the pollutant(s) of concern. (see §122.26(b)(15)(i).) |

***68840** (16) Small municipal separate storm sewer system means all separate storm sewers that are:

(i) Owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States.

(ii) Not defined as "large" or "medium" municipal separate storm sewer systems pursuant to paragraphs (b)(4) and (b)(7) of this section, or designated under paragraph (a)(1)(v) of this section.

  

(iii) This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

(17) Small MS4 means a small municipal separate storm sewer system.

(18) Municipal separate storm sewer system means all separate storm sewers that are defined as "large" or "medium" or "small" municipal separate storm sewer systems pursuant to paragraphs (b)(4), (b)(7), and (b)(16) of this section, or designated under paragraph (a)(1)(v) of this section.

(19) MS4 means a municipal separate storm sewer system.

* * * * *

(c) Application requirements for storm water discharges associated with industrial activity and storm water discharges associated with small construction activity—(1) Individual application. Dischargers of storm water associated with industrial activity and with small construction activity are required to apply for an individual permit or seek coverage under a promulgated storm water general permit. * * *

* * * * *

(ii) An operator of an existing or new storm water discharge that is associated with industrial activity solely under paragraph (b)(14)(x) of this section or is associated with small construction activity solely under paragraph (b)(15) of this section, is exempt from the requirements of § 122.21(g) and paragraph (c)(1)(i) of this section. * * *

* * * * *

(e) Application deadlines. Any operator of a point source required to obtain a permit under this section that does not have an effective NPDES permit authorizing discharges from its storm water outfalls shall submit an application in accordance with the following deadlines:

(1) Storm water discharges associated with industrial activity. (i) Except as provided in paragraph (e)(1)(ii) of this section, for any storm water discharge associated with industrial activity identified in paragraphs (b)(14)(i) through (xi) of this section, that is not part of a group application as described in paragraph (c)(2) of this section or that is not authorized by a storm water general permit, a permit application made pursuant to paragraph (c) of this section must be submitted to the Director by October 1, 1992;

(ii) For any storm water discharge associated with industrial activity from a facility that is owned or operated by a municipality with a population of less than 100,000 that is not authorized by a general or individual permit, other than an airport, powerplant, or uncontrolled sanitary landfill, the permit application must be submitted to the Director by March 10, 2003.

* * * * *

(5) A permit application shall be submitted to the Director within 180 days of notice, unless permission for a later date is granted by the Director (see § 124.52(c) of this chapter), for:

(i) A storm water discharge that the Director, or in States with approved NPDES programs, either the Director or the EPA Regional Administrator, determines that the discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States (see paragraphs (a)(1)(v) and (b)(15)(ii) of this section);

* * * * *

(8) For any storm water discharge associated with small construction activity identified in paragraph (b)(15)(i) of this section, see §122.21(c)(1). Discharges from these sources require permit authorization by March 10, 2003, unless designated for coverage before then.

(9) For any discharge from a regulated small MS4, the permit application made under §122.33 must be submitted to the Director by:

  

(i) March 10, 2003 if designated under §122.32(a)(1) unless your MS4 serves a jurisdiction with a population under 10,000 and the NPDES permitting authority has established a phasing schedule under §123.35(d)(3) (see §122.33(c)(1)); or

(ii) Within 180 days of notice, unless the NPDES permitting authority grants a later date, if designated under §122.32(a)(2) (see §122.33(c)(2)).

(f) * * *

(4) Any person may petition the Director for the designation of a large, medium, or small municipal separate storm sewer system as defined by paragraph (b)(4)(iv), (b)(7)(iv), or (b)(16) of this section.

(5) The Director shall make a final determination on any petition received under this section within 90 days after receiving the petition with the exception of petitions to designate a small MS4 in which case the Director shall make a final determination on the petition within 180 days after its receipt.

(g) Conditional exclusion for "no exposure" of industrial activities and materials to storm water. Discharges composed entirely of storm water are not storm water discharges associated with industrial activity if there is "no exposure" of industrial materials and activities to rain, snow, snowmelt and/or runoff, and the discharger satisfies the conditions in paragraphs (g)(1) through (g)(4) of this section. "No exposure" means that all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste ***68841** products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product.

(1) Qualification. To qualify for this exclusion, the operator of the discharge must:

(i) Provide a storm resistant shelter to protect industrial materials and activities from exposure to rain, snow, snow melt, and runoff;

(ii) Complete and sign (according to §122.22) a certification that there are no discharges of storm water contaminated by exposure to industrial materials and activities from the entire facility, except as provided in paragraph (g)(2) of this section;

(iii) Submit the signed certification to the NPDES permitting authority once every five years;

(iv) Allow the Director to inspect the facility to determine compliance with the "no exposure" conditions;

(v) Allow the Director to make any "no exposure" inspection reports available to the public upon request; and

(vi) For facilities that discharge through an MS4, upon request, submit a copy of the certification of "no exposure" to the MS4 operator, as well as allow inspection and public reporting by the MS4 operator.

(2) Industrial materials and activities not requiring storm resistant shelter. To qualify for this exclusion, storm resistant shelter is not required for:

(i) Drums, barrels, tanks, and similar containers that are tightly sealed, provided those containers are not deteriorated and do not leak ("Sealed" means banded or otherwise secured and without operational taps or valves);

(ii) Adequately maintained vehicles used in material handling; and

(iii) Final products, other than products that would be mobilized in storm water discharge (e.g., rock salt).

(3) Limitations. (i) Storm water discharges from construction activities identified in paragraphs (b)(14)(x) and (b)(15) are not eligible for this conditional exclusion.

(ii) This conditional exclusion from the requirement for an NPDES permit is available on a facility-wide basis only, not for individual outfalls. If a facility has some discharges of storm water that would otherwise be "no exposure" discharges, individual permit requirements should be adjusted accordingly.

(iii) If circumstances change and industrial materials or activities become exposed to rain, snow, snow melt, and/or runoff, the conditions for this exclusion no longer apply. In such cases, the discharge becomes subject to enforcement for un-permitted discharge. Any conditionally exempt discharger who anticipates changes in circumstances should apply for and obtain permit authorization prior to the change of circumstances.

(iv) Notwithstanding the provisions of this paragraph, the NPDES permitting authority retains the authority to require permit authorization (and deny this exclusion) upon making a determination that the discharge causes, has a reasonable potential to cause, or contributes to an instream excursion above an applicable water quality standard, including designated uses.

(4) Certification. The no exposure certification must require the submission of the following information, at a minimum, to aid the NPDES permitting authority in determining if the facility qualifies for the no exposure exclusion:

(i) The legal name, address and phone number of the discharger (see § 122.21(b));

(ii) The facility name and address, the county name and the latitude and longitude where the facility is located;

(iii) The certification must indicate that none of the following materials or activities are, or will be in the foreseeable future, exposed to precipitation:

(A) Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed to storm water;

(B) Materials or residuals on the ground or in storm water inlets from spills/leaks;

(C) Materials or products from past industrial activity;

(D) Material handling equipment (except adequately maintained vehicles);

(E) Materials or products during loading/unloading or transporting activities;

(F) Materials or products stored outdoors (except final products intended for outside use, e.g., new cars, where exposure to storm water does not result in the discharge of pollutants);

(G) Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;

(H) Materials or products handled/stored on roads or railways owned or maintained by the discharger;

(I) Waste material (except waste in covered, non-leaking containers, e.g., dumpsters);

(J) Application or disposal of process wastewater (unless otherwise permitted); and

  

(K) Particulate matter or visible deposits of residuals from roof stacks/vents not otherwise regulated, i.e., under an air quality control permit, and evident in the storm water outflow;

(iv) All "no exposure" certifications must include the following certification statement, and be signed in accordance with the signatory requirements of § 122.22: "I certify under penalty of law that I have read and understand the eligibility requirements for claiming a condition of "no exposure" and obtaining an exclusion from NPDES storm water permitting; and that there are no discharges of storm water contaminated by exposure to industrial activities or materials from the industrial facility identified in this document (except as allowed under paragraph (g)(2)) of this section. I understand that I am obligated to submit a no exposure certification form once every five years to the NPDES permitting authority and, if requested, to the operator of the local MS4 into which this facility discharges (where applicable). I understand that I must allow the NPDES permitting authority, or MS4 operator where the discharge is into the local MS4, to perform inspections to confirm the condition of no exposure and to make such inspection reports publicly available upon request. I understand that I must obtain coverage under an NPDES permit prior to any point source discharge of storm water from the facility. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly involved in gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

40 CFR § 122.28

4. Revise §122.28(b)(2)(v) to read as follows:

40 CFR § 122.28

**§122.28 General permits (applicable to State NPDES programs, see §123.25).**

* * * * *

(b) * * *

(2) * * *

(v) Discharges other than discharges from publicly owned treatment works, combined sewer overflows, municipal ***68842** separate storm sewer systems, primary industrial facilities, and storm water discharges associated with industrial activity, may, at the discretion of the Director, be authorized to discharge under a general permit without submitting a notice of intent where the Director finds that a notice of intent requirement would be inappropriate. In making such a finding, the Director shall consider: the type of discharge; the expected nature of the discharge; the potential for toxic and conventional pollutants in the discharges; the expected volume of the discharges; other means of identifying discharges covered by the permit; and the estimated number of discharges to be covered by the permit. The Director shall provide in the public notice of the general permit the reasons for not requiring a notice of intent.

* * * * *

5. Add §§122.30 through 122.37 to subpart B to read as follows:

40 CFR § 122.30

**§122.30 What are the objectives of the storm water regulations for small MS4s?**

(a) Sections 122.30 through 122.37 are written in a "readable regulation" format that includes both rule requirements and EPA guidance that is not legally binding. EPA has clearly distinguished its recommended guidance from the rule requirements by putting the guidance in a separate paragraph headed by the word "guidance".

(b) Under the statutory mandate in section 402(p)(6) of the Clean Water Act, the purpose of this portion of the storm water program is to designate additional sources that need to be regulated to protect water quality and to establish a comprehensive storm water program to regulate these sources. (Because the storm water program is part of the National Pollutant Discharge

Elimination System (NPDES) Program, you should also refer to §122.1 which addresses the broader purpose of the NPDES program.)

(c) Storm water runoff continues to harm the nation's waters. Runoff from lands modified by human activities can harm surface water resources in several ways including by changing natural hydrologic patterns and by elevating pollutant concentrations and loadings. Storm water runoff may contain or mobilize high levels of contaminants, such as sediment, suspended solids, nutrients, heavy metals, pathogens, toxins, oxygen-demanding substances, and floatables.

(d) EPA strongly encourages partnerships and the watershed approach as the management framework for efficiently, effectively, and consistently protecting and restoring aquatic ecosystems and protecting public health.
40 CFR § 122.31

**§122.31 As a Tribe, what is my role under the NPDES storm water program?**
As a Tribe you may:

(a) Be authorized to operate the NPDES program including the storm water program, after EPA determines that you are eligible for treatment in the same manner as a State under §§123.31 through 123.34 of this chapter. (If you do not have an authorized NPDES program, EPA implements the program for discharges on your reservation as well as other Indian country, generally.);

(b) Be classified as an owner of a regulated small MS4, as defined in §122.32. (Designation of your Tribe as an owner of a small MS4 for purposes of this part is an approach that is consistent with EPA's 1984 Indian Policy of operating on a government-to-government basis with EPA looking to Tribes as the lead governmental authorities to address environmental issues on their reservations as appropriate. If you operate a separate storm sewer system that meets the definition of a regulated small MS4, you are subject to the requirements under §§122.33 through 122.35. If you are not designated as a regulated small MS4, you may ask EPA to designate you as such for the purposes of this part.); or

(c) Be a discharger of storm water associated with industrial activity or small construction activity under §§122.26(b)(14) or (b)(15), in which case you must meet the applicable requirements. Within Indian country, the NPDES permitting authority is generally EPA, unless you are authorized to administer the NPDES program.
40 CFR § 122.32

**§122.32 As an operator of a small MS4, am I regulated under the NPDES storm water program?**
(a) Unless you qualify for a waiver under paragraph (c) of this section, you are regulated if you operate a small MS4, including but not limited to systems operated by federal, State, Tribal, and local governments, including State departments of transportation; and:

(1) Your small MS4 is located in an urbanized area as determined by the latest Decennial Census by the Bureau of the Census. (If your small MS4 is not located entirely within an urbanized area, only the portion that is within the urbanized area is regulated); or

(2) You are designated by the NPDES permitting authority, including where the designation is pursuant to §§123.35(b)(3) and (b)(4) of this chapter, or is based upon a petition under §122.26(f).

(b) You may be the subject of a petition to the NPDES permitting authority to require an NPDES permit for your discharge of storm water. If the NPDES permitting authority determines that you need a permit, you are required to comply with §§122.33 through 122.35.

(c) The NPDES permitting authority may waive the requirements otherwise applicable to you if you meet the criteria of paragraph (d) or (e) of this section. If you receive a waiver under this section, you may subsequently be required to seek coverage under an NPDES permit in accordance with §122.33(a) if circumstances change. (See also §123.35(b) of this chapter.)

  

(d) The NPDES permitting authority may waive permit coverage if your MS4 serves a population of less than 1,000 within the urbanized area and you meet the following criteria:

(1) Your system is not contributing substantially to the pollutant loadings of a physically interconnected MS4 that is regulated by the NPDES storm water program (see §123.35(b)(4) of this chapter); and

(2) If you discharge any pollutant(s) that have been identified as a cause of impairment of any water body to which you discharge, storm water controls are not needed based on wasteload allocations that are part of an EPA approved or established "total maximum daily load" (TMDL) that addresses the pollutant(s) of concern.

(e) The NPDES permitting authority may waive permit coverage if your MS4 serves a population under 10,000 and you meet the following criteria:

(1) The permitting authority has evaluated all waters of the U.S., including small streams, tributaries, lakes, and ponds, that receive a discharge from your MS4;

(2) For all such waters, the permitting authority has determined that storm water controls are not needed based on wasteload allocations that are part of an EPA approved or established TMDL that addresses the pollutant(s) of concern or, if a TMDL has not been developed or approved, an equivalent analysis that determines sources and allocations for the pollutant(s) of concern;

(3) For the purpose of this paragraph (e), the pollutant(s) of concern include biochemical oxygen demand (BOD), sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation), pathogens, oil and grease, and any pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from your MS4; and ***68843**

(4) The permitting authority has determined that future discharges from your MS4 do not have the potential to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts.

40 CFR § 122.33

**§122.33 If I am an operator of a regulated small MS4, how do I apply for an NPDES permit and when do I have to apply?**

(a) If you operate a regulated small MS4 under §122.32, you must seek coverage under a NPDES permit issued by your NPDES permitting authority. If you are located in an NPDES authorized State, Tribe, or Territory, then that State, Tribe, or Territory is your NPDES permitting authority. Otherwise, your NPDES permitting authority is the EPA Regional Office.

(b) You must seek authorization to discharge under a general or individual NPDES permit, as follows:

(1) If your NPDES permitting authority has issued a general permit applicable to your discharge and you are seeking coverage under the general permit, you must submit a Notice of Intent (NOI) that includes the information on your best management practices and measurable goals required by §122.34(d). You may file your own NOI, or you and other municipalities or governmental entities may jointly submit an NOI. If you want to share responsibilities for meeting the minimum measures with other municipalities or governmental entities, you must submit an NOI that describes which minimum measures you will implement and identify the entities that will implement the other minimum measures within the area served by your MS4. The general permit will explain any other steps necessary to obtain permit authorization.

(2)(i) If you are seeking authorization to discharge under an individual permit and wish to implement a program under §122.34, you must submit an application to your NPDES permitting authority that includes the information required under §§122.21(f) and 122.34(d), an estimate of square mileage served by your small MS4, and any additional information that your NPDES permitting authority requests. A storm sewer map that satisfies the requirement of § 122.34(b)(3)(i) will satisfy the map requirement in §122.21(f)(7).

  

(ii) If you are seeking authorization to discharge under an individual permit and wish to implement a program that is different from the program under §122.34, you will need to comply with the permit application requirements of §122.26(d). You must submit both Parts of the application requirements in §§122.26(d)(1) and (2) by March 10, 2003. You do not need to submit the information required by §§122.26(d)(1)(ii) and (d)(2) regarding your legal authority, unless you intend for the permit writer to take such information into account when developing your other permit conditions.

(iii) If allowed by your NPDES permitting authority, you and another regulated entity may jointly apply under either paragraph (b)(2)(i) or (b)(2)(ii) of this section to be co-permittees under an individual permit.

(3) If your small MS4 is in the same urbanized area as a medium or large MS4 with an NPDES storm water permit and that other MS4 is willing to have you participate in its storm water program, you and the other MS4 may jointly seek a modification of the other MS4 permit to include you as a limited co-permittee. As a limited co-permittee, you will be responsible for compliance with the permit's conditions applicable to your jurisdiction. If you choose this option you will need to comply with the permit application requirements of §122.26, rather than the requirements of §122.34. You do not need to comply with the specific application requirements of §122.26(d)(1)(iii) and (iv) and (d)(2)(iii) (discharge characterization). You may satisfy the requirements in §122.26 (d)(1)(v) and (d)(2)(iv) (identification of a management program) by referring to the other MS4's storm water management program.

(4) Guidance: In referencing an MS4's storm water management program, you should briefly describe how the existing plan will address discharges from your small MS4 or would need to be supplemented in order to adequately address your discharges. You should also explain your role in coordinating storm water pollutant control activities in your MS4, and detail the resources available to you to accomplish the plan.

(c) If you operate a regulated small MS4:

(1) Designated under §122.32(a)(1), you must apply for coverage under an NPDES permit, or apply for a modification of an existing NPDES permit under paragraph (b)(3) of this section by March 10, 2003, unless your MS4 serves a jurisdiction with a population under 10,000 and the NPDES permitting authority has established a phasing schedule under §123.35(d)(3) of this chapter.

(2) Designated under §122.32(a)(2), you must apply for coverage under an NPDES permit, or apply for a modification of an existing NPDES permit under paragraph (b)(3) of this section, within 180 days of notice, unless the NPDES permitting authority grants a later date.

40 CFR § 122.34

**§122.34 As an operator of a regulated small MS4, what will my NPDES MS4 storm water permit require?**

(a) Your NPDES MS4 permit will require at a minimum that you develop, implement, and enforce a storm water management program designed to reduce the discharge of pollutants from your MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act. Your storm water management program must include the minimum control measures described in paragraph (b) of this section unless you apply for a permit under §122.26(d). For purposes of this section, narrative effluent limitations requiring implementation of best management practices (BMPs) are generally the most appropriate form of effluent limitations when designed to satisfy technology requirements (including reductions of pollutants to the maximum extent practicable) and to protect water quality. Implementation of best management practices consistent with the provisions of the storm water management program required pursuant to this section and the provisions of the permit required pursuant to §122.33 constitutes compliance with the standard of reducing pollutants to the "maximum extent practicable." Your NPDES permitting authority will specify a time period of up to 5 years from the date of permit issuance for you to develop and implement your program.

  

(b) Minimum control measures—(1) Public education and outreach on storm water impacts. (i) You must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff.

(ii) Guidance: You may use storm water educational materials provided by your State, Tribe, EPA, environmental, public interest or trade organizations, or other MS4s. The public education program should inform individuals and households about the steps they can take to reduce storm water pollution, such as ensuring proper septic system maintenance, ensuring the proper use and disposal of landscape and garden chemicals including fertilizers and pesticides, protecting and restoring riparian vegetation, and properly disposing of used motor oil or ***68844** household hazardous wastes. EPA recommends that the program inform individuals and groups how to become involved in local stream and beach restoration activities as well as activities that are coordinated by youth service and conservation corps or other citizen groups. EPA recommends that the public education program be tailored, using a mix of locally appropriate strategies, to target specific audiences and communities. Examples of strategies include distributing brochures or fact sheets, sponsoring speaking engagements before community groups, providing public service announcements, implementing educational programs targeted at school age children, and conducting community-based projects such as storm drain stenciling, and watershed and beach cleanups. In addition, EPA recommends that some of the materials or outreach programs be directed toward targeted groups of commercial, industrial, and institutional entities likely to have significant storm water impacts. For example, providing information to restaurants on the impact of grease clogging storm drains and to garages on the impact of oil discharges. You are encouraged to tailor your outreach program to address the viewpoints and concerns of all communities, particularly minority and disadvantaged communities, as well as any special concerns relating to children.

(2) Public involvement/participation. (i) You must, at a minimum, comply with State, Tribal and local public notice requirements when implementing a public involvement/ participation program.

(ii) Guidance: EPA recommends that the public be included in developing, implementing, and reviewing your storm water management program and that the public participation process should make efforts to reach out and engage all economic and ethnic groups. Opportunities for members of the public to participate in program development and implementation include serving as citizen representatives on a local storm water management panel, attending public hearings, working as citizen volunteers to educate other individuals about the program, assisting in program coordination with other pre-existing programs, or participating in volunteer monitoring efforts. (Citizens should obtain approval where necessary for lawful access to monitoring sites.)

(3) Illicit discharge detection and elimination. (i) You must develop, implement and enforce a program to detect and eliminate illicit discharges (as defined at §122.26(b)(2)) into your small MS4.

(ii) You must:

(A) Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from those outfalls;

(B) To the extent allowable under State, Tribal or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into your storm sewer system and implement appropriate enforcement procedures and actions;

(C) Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to your system; and

  

(D) Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.

(iii) You need address the following categories of non-storm water discharges or flows (i.e., illicit discharges) only if you identify them as significant contributors of pollutants to your small MS4: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water (discharges or flows from fire fighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the United States).

(iv) Guidance: EPA recommends that the plan to detect and address illicit discharges include the following four components: procedures for locating priority areas likely to have illicit discharges; procedures for tracing the source of an illicit discharge; procedures for removing the source of the discharge; and procedures for program evaluation and assessment. EPA recommends visually screening outfalls during dry weather and conducting field tests of selected pollutants as part of the procedures for locating priority areas. Illicit discharge education actions may include storm drain stenciling, a program to promote, publicize, and facilitate public reporting of illicit connections or discharges, and distribution of outreach materials.

(4) Construction site storm water runoff control. (i) You must develop, implement, and enforce a program to reduce pollutants in any storm water runoff to your small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in your program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. If the NPDES permitting authority waives requirements for storm water discharges associated with small construction activity in accordance with § 122.26(b)(15)(i), you are not required to develop, implement, and/or enforce a program to reduce pollutant discharges from such sites.

(ii) Your program must include the development and implementation of, at a minimum:

(A) An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State, Tribal, or local law;

(B) Requirements for construction site operators to implement appropriate erosion and sediment control best management practices;

(C) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;

(D) Procedures for site plan review which incorporate consideration of potential water quality impacts;

(E) Procedures for receipt and consideration of information submitted by the public, and

(F) Procedures for site inspection and enforcement of control measures.

(iii) Guidance: Examples of sanctions to ensure compliance include non-monetary penalties, fines, bonding requirements and/or permit denials for non-compliance. EPA recommends that procedures for site plan review include the review of individual pre-construction site plans to ensure consistency with local sediment and erosion control requirements. Procedures for site inspections and enforcement of control measures could include steps to identify priority sites for inspection and enforcement based on the nature of the construction activity, topography, and the characteristics of soils and receiving ***68845** water quality.

  

You are encouraged to provide appropriate educational and training measures for construction site operators. You may wish to require a storm water pollution prevention plan for construction sites within your jurisdiction that discharge into your system. See § 122.44(s) (NPDES permitting authorities' option to incorporate qualifying State, Tribal and local erosion and sediment control programs into NPDES permits for storm water discharges from construction sites). Also see § 122.35(b) (The NPDES permitting authority may recognize that another government entity, including the permitting authority, may be responsible for implementing one or more of the minimum measures on your behalf.)

(5) Post-construction storm water management in new development and redevelopment.

(i) You must develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into your small MS4. Your program must ensure that controls are in place that would prevent or minimize water quality impacts.

(ii) You must:

(A) Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for your community;

(B) Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State, Tribal or local law; and

(C) Ensure adequate long-term operation and maintenance of BMPs.

(iii) Guidance: If water quality impacts are considered from the beginning stages of a project, new development and potentially redevelopment provide more opportunities for water quality protection. EPA recommends that the BMPs chosen: be appropriate for the local community; minimize water quality impacts; and attempt to maintain pre-development runoff conditions. In choosing appropriate BMPs, EPA encourages you to participate in locally-based watershed planning efforts which attempt to involve a diverse group of stakeholders including interested citizens. When developing a program that is consistent with this measure's intent, EPA recommends that you adopt a planning process that identifies the municipality's program goals (e.g., minimize water quality impacts resulting from post-construction runoff from new development and redevelopment), implementation strategies (e.g., adopt a combination of structural and/or non-structural BMPs), operation and maintenance policies and procedures, and enforcement procedures. In developing your program, you should consider assessing existing ordinances, policies, programs and studies that address storm water runoff quality. In addition to assessing these existing documents and programs, you should provide opportunities to the public to participate in the development of the program. Non-structural BMPs are preventative actions that involve management and source controls such as: policies and ordinances that provide requirements and standards to direct growth to identified areas, protect sensitive areas such as wetlands and riparian areas, maintain and/or increase open space (including a dedicated funding source for open space acquisition), provide buffers along sensitive water bodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation; policies or ordinances that encourage infill development in higher density urban areas, and areas with existing infrastructure; education programs for developers and the public about project designs that minimize water quality impacts; and measures such as minimization of percent impervious area after development and minimization of directly connected impervious areas. Structural BMPs include: storage practices such as wet ponds and extended-detention outlet structures; filtration practices such as grassed swales, sand filters and filter strips; and infiltration practices such as infiltration basins and infiltration trenches. EPA recommends that you ensure the appropriate implementation of the structural BMPs by considering some or all of the following: pre-construction review of BMP designs; inspections during construction to verify BMPs are built as designed; post-construction inspection and maintenance of BMPs; and penalty provisions for the noncompliance with design, construction or operation and maintenance. Storm water technologies are constantly being improved, and EPA recommends that your requirements be responsive to these changes, developments or improvements in control technologies.

  

(6) Pollution prevention/good housekeeping for municipal operations. (i) You must develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. Using training materials that are available from EPA, your State, Tribe, or other organizations, your program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.

(ii) Guidance: EPA recommends that, at a minimum, you consider the following in developing your program: maintenance activities, maintenance schedules, and long-term inspection procedures for structural and non-structural storm water controls to reduce floatables and other pollutants discharged from your separate storm sewers; controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations and snow disposal areas operated by you, and waste transfer stations; procedures for properly disposing of waste removed from the separate storm sewers and areas listed above (such as dredge spoil, accumulated sediments, floatables, and other debris); and ways to ensure that new flood management projects assess the impacts on water quality and examine existing projects for incorporating additional water quality protection devices or practices. Operation and maintenance should be an integral component of all storm water management programs. This measure is intended to improve the efficiency of these programs and require new programs where necessary. Properly developed and implemented operation and maintenance programs reduce the risk of water quality problems.

(c) If an existing qualifying local program requires you to implement one or more of the minimum control measures of paragraph (b) of this section, the NPDES permitting authority may include conditions in your NPDES permit that direct you to follow that qualifying program's requirements rather than the requirements of paragraph (b) of this section. A qualifying local program is a local, State or Tribal municipal storm water management program that imposes, at a minimum, the relevant requirements of paragraph (b) of this section.

(d)(1) In your permit application (either a notice of intent for coverage ***68846** under a general permit or an individual permit application), you must identify and submit to your NPDES permitting authority the following information:

(i) The best management practices (BMPs) that you or another entity will implement for each of the storm water minimum control measures at paragraphs (b)(1) through (b)(6) of this section;

(ii) The measurable goals for each of the BMPs including, as appropriate, the months and years in which you will undertake required actions, including interim milestones and the frequency of the action; and

(iii) The person or persons responsible for implementing or coordinating your storm water management program.

(2) If you obtain coverage under a general permit, you are not required to meet any measurable goal(s) identified in your notice of intent in order to demonstrate compliance with the minimum control measures in paragraphs (b)(3) through (b)(6) of this section unless, prior to submitting your NOI, EPA or your State or Tribe has provided or issued a menu of BMPs that addresses each such minimum measure. Even if no regulatory authority issues the menu of BMPs, however, you still must comply with other requirements of the general permit, including good faith implementation of BMPs designed to comply with the minimum measures.

(3) Guidance: Either EPA or your State or Tribal permitting authority will provide a menu of BMPs. You may choose BMPs from the menu or select others that satisfy the minimum control measures.

(e)(1) You must comply with any more stringent effluent limitations in your permit, including permit requirements that modify, or are in addition to, the minimum control measures based on an approved total maximum daily load (TMDL) or equivalent

  

analysis. The permitting authority may include such more stringent limitations based on a TMDL or equivalent analysis that determines such limitations are needed to protect water quality.

(2) Guidance: EPA strongly recommends that until the evaluation of the storm water program in §122.37, no additional requirements beyond the minimum control measures be imposed on regulated small MS4s without the agreement of the operator of the affected small MS4, except where an approved TMDL or equivalent analysis provides adequate information to develop more specific measures to protect water quality.

(f) You must comply with other applicable NPDES permit requirements, standards and conditions established in the individual or general permit, developed consistent with the provisions of §§122.41 through 122.49, as appropriate.

(g) Evaluation and assessment—(1) Evaluation. You must evaluate program compliance, the appropriateness of your identified best management practices, and progress towards achieving your identified measurable goals.

Note to Paragraph (g)(1): The NPDES permitting authority may determine monitoring requirements for you in accordance with State/Tribal monitoring plans appropriate to your watershed. Participation in a group monitoring program is encouraged.

(2) Recordkeeping. You must keep records required by the NPDES permit for at least 3 years. You must submit your records to the NPDES permitting authority only when specifically asked to do so. You must make your records, including a description of your storm water management program, available to the public at reasonable times during regular business hours (see §122.7 for confidentiality provision). (You may assess a reasonable charge for copying. You may require a member of the public to provide advance notice.)

(3) Reporting. Unless you are relying on another entity to satisfy your NPDES permit obligations under §122.35(a), you must submit annual reports to the NPDES permitting authority for your first permit term. For subsequent permit terms, you must submit reports in year two and four unless the NPDES permitting authority requires more frequent reports. Your report must include:

(i) The status of compliance with permit conditions, an assessment of the appropriateness of your identified best management practices and progress towards achieving your identified measurable goals for each of the minimum control measures;

(ii) Results of information collected and analyzed, including monitoring data, if any, during the reporting period;

(iii) A summary of the storm water activities you plan to undertake during the next reporting cycle;

(iv) A change in any identified best management practices or measurable goals for any of the minimum control measures; and

(v) Notice that you are relying on another governmental entity to satisfy some of your permit obligations (if applicable).
40 CFR § 122.35

**§122.35 As an operator of a regulated small MS4, may I share the responsibility to implement the minimum control measures with other entities?**
(a) You may rely on another entity to satisfy your NPDES permit obligations to implement a minimum control measure if:

(1) The other entity, in fact, implements the control measure;

(2) The particular control measure, or component thereof, is at least as stringent as the corresponding NPDES permit requirement; and

  

(3) The other entity agrees to implement the control measure on your behalf. In the reports you must submit under §122.34(g)(3), you must also specify that you rely on another entity to satisfy some of your permit obligations. If you are relying on another governmental entity regulated under section 122 to satisfy all of your permit obligations, including your obligation to file periodic reports required by §122.34(g)(3), you must note that fact in your NOI, but you are not required to file the periodic reports. You remain responsible for compliance with your permit obligations if the other entity fails to implement the control measure (or component thereof). Therefore, EPA encourages you to enter into a legally binding agreement with that entity if you want to minimize any uncertainty about compliance with your permit.

(b) In some cases, the NPDES permitting authority may recognize, either in your individual NPDES permit or in an NPDES general permit, that another governmental entity is responsible under an NPDES permit for implementing one or more of the minimum control measures for your small MS4 or that the permitting authority itself is responsible. Where the permitting authority does so, you are not required to include such minimum control measure(s) in your storm water management program. (For example, if a State or Tribe is subject to an NPDES permit that requires it to administer a program to control construction site runoff at the State or Tribal level and that program satisfies all of the requirements of §122.34(b)(4), you could avoid responsibility for the construction measure, but would be responsible for the remaining minimum control measures.) Your permit may be reopened and modified to include the requirement to implement a minimum control measure if the entity fails to implement it. ***68847**

40 CFR § 122.36

**§122.36 As an operator of a regulated small MS4, what happens if I don't comply with the application or permit requirements in §§122.33 through 122.35?**

NPDES permits are federally enforceable. Violators may be subject to the enforcement actions and penalties described in Clean Water Act sections 309 (b), (c), and (g) and 505, or under applicable State, Tribal, or local law. Compliance with a permit issued pursuant to section 402 of the Clean Water Act is deemed compliance, for purposes of sections 309 and 505, with sections 301, 302, 306, 307, and 403, except any standard imposed under section 307 for toxic pollutants injurious to human health. If you are covered as a co-permittee under an individual permit or under a general permit by means of a joint Notice of Intent you remain subject to the enforcement actions and penalties for the failure to comply with the terms of the permit in your jurisdiction except as set forth in §122.35(b).

40 CFR § 122.37

**§122.37 Will the small MS4 storm water program regulations at §§122.32 through 122.36 and §123.35 of this chapter change in the future?**

EPA will evaluate the small MS4 regulations at §§122.32 through 122.36 and § 123.35 of this chapter after December 10, 2012 and make any necessary revisions. (EPA intends to conduct an enhanced research effort and compile a comprehensive evaluation of the NPDES MS4 storm water program. EPA will re-evaluate the regulations based on data from the NPDES MS4 storm water program, from research on receiving water impacts from storm water, and the effectiveness of best management practices (BMPs), as well as other relevant information sources.)

40 CFR § 122.44

6. In §122.44, redesignate paragraphs (k)(2) and (k)(3) as paragraphs (k)(3) and (k)(4), remove the comma at the end of newly redesignated paragraph (k)(3) and add a semicolon in its place, and add new paragraphs (k)(2) and (s) to read as follows:

40 CFR § 122.44

**§122.44 Establishing limitations, standards, and other permit conditions (applicable to State NPDES programs, see §123.25).**

* * * * *

(k) * * *

(2) Authorized under section 402(p) of CWA for the control of storm water discharges;

* * * * *

(s) Qualifying State, Tribal, or local programs. (1) For storm water discharges associated with small construction activity identified in § 122.26(b)(15), the Director may include permit conditions that incorporate qualifying State, Tribal, or local erosion and sediment control program requirements by reference. Where a qualifying State, Tribal, or local program does not include one or more of the elements in this paragraph (s)(1), then the Director must include those elements as conditions in the permit. A qualifying State, Tribal, or local erosion and sediment control program is one that includes:

(i) Requirements for construction site operators to implement appropriate erosion and sediment control best management practices;

(ii) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;

(iii) Requirements for construction site operators to develop and implement a storm water pollution prevention plan. (A storm water pollution prevention plan includes site descriptions, descriptions of appropriate control measures, copies of approved State, Tribal or local requirements, maintenance procedures, inspection procedures, and identification of non-storm water discharges); and

(iv) Requirements to submit a site plan for review that incorporates consideration of potential water quality impacts.

(2) For storm water discharges from construction activity identified in § 122.26(b)(14)(x), the Director may include permit conditions that incorporate qualifying State, Tribal, or local erosion and sediment control program requirements by reference. A qualifying State, Tribal or local erosion and sediment control program is one that includes the elements listed in paragraph (s)(1) of this section and any additional requirements necessary to achieve the applicable technology-based standards of "best available technology" and "best conventional technology" based on the best professional judgment of the permit writer.
40 CFR § 122.62
7. Add §122.62(a)(14) to read as follows:
40 CFR § 122.62

**§122.62 Modification or revocation and reissuance of permits (applicable to State programs, see §123.25).**
* * * * *
(a) * * *

(14) For a small MS4, to include an effluent limitation requiring implementation of a minimum control measure or measures as specified in § 122.34(b) when:

(i) The permit does not include such measure(s) based upon the determination that another entity was responsible for implementation of the requirement(s); and

(ii) The other entity fails to implement measure(s) that satisfy the requirement(s).
* * * * *
8. Revise Appendices F, G, H, and I to Part 122 to read as follows:

**Appendix F to Part 122.—Incorporated Places With Populations Greater Than 250,000 According to the 1990 Decennial Census by the Bureau of the Census**

| State | Incorporated Place |
|---|---|
| Alabama | Birmingham. |
| Arizona | Phoenix. |

  

| | |
|---|---|
| | Tucson. |
| California | Long Beach. |
| | Los Angeles. |
| | Oakland. |
| | Sacramento. |
| | San Diego. |
| | San Francisco. |
| | San Jose. |
| Colorado | Denver. |
| District of Columbia | |
| Florida | Jacksonville. |
| | Miami. |
| | Tampa. |
| Georgia. | Atlanta. |
| Illinois | Chicago. |
| Indiana | Indianapolis. |
| Kansas | Wichita. |
| Kentucky | Louisville. |
| Louisiana | New Orleans. |
| Maryland | Baltimore. |
| Massachusetts | Boston. |
| Michigan | Detroit. |
| Minnesota | Minneapolis. |
| | St. Paul. |
| Missouri | Kansas City. |
| | St. Louis. |
| Nebraska | Omaha. |
| New Jersey | Newark. |
| New Mexico | Albuquerque. |

  

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|---|---|
| New York | Buffalo. |
| | Bronx Borough. |
| | Brooklyn Borough. |
| | Manhattan Borough. |
| | Queens Borough. |
| | Staten Island Borough. |
| North Carolina | Charlotte. |
| Ohio | Cincinnati. |
| | Cleveland. |
| | Columbus. |
| | Toledo. |
| Oklahoma | Oklahoma City. |
| | Tulsa. |
| Oregon | Portland. |
| Pennsylvania | Philadelphia. |
| | Pittsburgh. |
| Tennessee | Memphis. |
| | Nashville/Davidson. |
| Texas | Austin. |
| | Dallas. |
| | El Paso. |
| | Fort Worth. |
| | Houston. |
| | San Antonio. |
| Virginia | Norfolk. |
| | Virginia Beach. |
| Washington | Seattle. |
| Wisconsin | Milwaukee. |

  

## Appendix G to Part 122.—Incorporated Places With Populations Greater Than 100,000 But Less Than 250,000 According to the 1990 Decennial Census by the Bureau of the Census

| State | Incorporated place |
|---|---|
| Alabama | Huntsville. |
| | Mobile. |
| | Montgomery. |
| Alaska | Anchorage. |
| Arizona | Mesa. |
| | Tempe. |
| Arkansas | Little Rock. |
| California | Anaheim. |
| | Bakersfield. |
| | Berkeley. |
| | Chula Vista. |
| | Concord. |
| | El Monte. |
| | Escondido. |
| | Fremont. |
| | Fresno. |
| | Fullerton. |
| | Garden Grove. |
| | Glendale. |
| | Hayward. |
| | Huntington Beach. |
| | Inglewood. |
| | Irvine. |
| | Modesto. |
| | Moreno Valley. |
| | Oceanside. |

  

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|---|---|
| | Ontario. |
| | Orange. |
| Colorado | Aurora. |
| | Colorado Springs. |
| | Lakewood. |
| | Pueblo. |
| Connecticut | Bridgeport. |
| | Hartford. |
| | New Haven. |
| | Stamford. |
| | Waterbury. |
| Florida | Fort Lauderdale. |
| | Hialeah. |
| | Hollywood. |
| | Orlando. |
| | St. Petersburg. |
| | Tallahassee. |
| Georgia | Columbus. |
| | Macon. |
| | Savannah. |
| Idaho | Boise City. |
| Illinois | Peoria. |
| | Rockford. |
| Indiana | Evansville. |
| | Fort Wayne. |
| | Gary. |
| | South Bend. |
| Iowa | Cedar Rapids. |
| | Davenport. |

  

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|---|---|
| | Des Moines. |
| Kansas | Kansas City. |
| | Topeka. |
| Kentucky | Lexington-Fayette. |
| Louisiana | Baton Rouge. |
| | Shreveport. |
| Massachusetts | Springfield. |
| | Worcester. |
| Michigan | Ann Arbor. |
| | Flint. |
| | Grand Rapids. |
| | Lansing. |
| | Livonia. |
| | Sterling Heights. |
| | Warren. |
| Mississippi | Jackson. |
| Missouri | Independence. |
| | Springfield. |
| Nebraska | Lincoln. |
| Nevada | Las Vegas. |
| | Reno. |
| New Jersey | Elizabeth. |
| | Jersey City. |
| | Paterson. |
| New York | Albany. |
| | Rochester. |
| | Syracuse. |
| | Yonkers. |
| North Carolina | Durham. |

  

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|---|---|
| | Greensboro. |
| | Raleigh. |
| | Winston-Salem. |
| Ohio | Akron. |
| | Dayton. |
| | Youngstown. |
| Oregon | Eugene. |
| Pennsylvania | Allentown. |
| | Erie. |
| Rhode Island | Providence. |
| South Carolina | Columbia. |
| Tennessee | Chattanooga. |
| | Knoxville. |
| Texas | Abilene. |
| | Amarillo. |
| | Arlington. |
| | Beaumont. |
| | Corpus Christi. |
| | Garland. |
| | Irving. |
| | Laredo. |
| | Lubbock. |
| | Mesquite. |
| | Pasadena. |
| | Plano. |
| | Waco. |
| Utah | Salt Lake City. |
| Virginia | Alexandria. |
| | Chesapeake. |

  

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|---|---|
| | Hampton. |
| | Newport News. |
| | Portsmouth. |
| | Richmond. |
| | Roanoke. |
| Washington | Spokane. |
| | Tacoma. |
| Wisconsin | Madison. |

**Appendix H to Part 122.—Counties With Unincorporated Urbanized Areas With a Population of 250,000 or More According to the 1990 Decennial Census by the Bureau of the Census**

| State | County | Unincorporated urbanized population |
|---|---|---|
| California | Los Angeles | 886,780 |
| | Sacramento | 594,889 |
| | San Diego | 250,414 |
| Delaware | New Castle | 296,996 |
| Florida | Dade | 1,014,504 |
| Georgia | DeKalb | 448,686 |
| Hawaii | Honolulu [1] | 114,506 |
| Maryland | Anne Arundel | 344,654 |
| | Baltimore | 627,593 |
| | Montgomery | 599,028 |
| | Prince George's | 494,369 |
| Texas | Harris | 729,206 |
| Utah | Salt Lake | 270,989 |
| Virginia | Fairfax | 760,730 |
| Washington | King | 520,468 |

**Appendix I to Part 122.—Counties With Unincorporated Urbanized Areas Greater Than 100,000 But Less Than 250,000 According to the 1990 Decennial Census by the Bureau of the Census**

| State | County | Unincorporated urbanized population |
|---|---|---|

  

| | | |
|---|---|---|
| Alabama | Jefferson | 78,608 |
| Arizona | Pima | 162,202 |
| California | Alameda | 115,082 |
| | Contra Costa | 131,082 |
| | Kern | 128,503 |
| | Orange | 223,081 |
| | Riverside | 166,509 |
| | San Bernardino | 162,202 |
| Colorado | Arapahoe | 103,248 |
| Florida | Broward | 142,329 |
| | Escambia | 167,463 |
| | Hillsborough | 398,593 |
| | Lee | 102,337 |
| | Manatee | 123,828 |
| | Orange | 378,611 |
| | Palm Beach | 360,553 |
| | Pasco | 148,907 |
| | Pinellas | 255,772 |
| | Polk | 121,528 |
| | Sarasota | 172,600 |
| | Seminole | 127,873 |
| Georgia | Clayton | 133,237 |
| | Cobb | 322,595 |
| | Fulton | 127,776 |
| | Gwinnett | 237,305 |
| | Richmond | 126,476 |
| Kentucky | Jefferson | 239,430 |
| Louisiana | East Baton Rouge | 102,539 |
| | Parish | 331,307 |

  

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|---|---|---|
| | Jefferson Parish | ..... |
| Maryland | Howard | 157,972 |
| North Carolina | Cumberland | 146,827 |
| Nevada | Clark | 327,618 |
| Oregon | Multnomah [1] | 52,923 |
| | Washington | 116,687 |
| South Carolina | Greenville | 147,464 |
| | Richland | 130,589 |
| Virginia | Arlington | 170,936 |
| | Chesterfield | 174,488 |
| | Henrico | 201,367 |
| | Prince William | 157,131 |
| Washington | Pierce | 258,530 |
| | Snohomish | 157,218 |

***68849 PART 123—STATE PROGRAM REQUIREMENTS**

1. The authority citation for part 123 continues to read as follows:

Authority: The Clean Water Act, 33 U.S.C. 1251 et seq.

40 CFR § 123.25

2. Amend §123.25 by removing the word "and" at the end of paragraph (a)(37), by removing the period at the end of paragraph (a)(38) and adding a semicolon in its place, and by adding paragraphs (a)(39) through (a)(45) to read as follows:

40 CFR § 123.25

**§123.25 Requirements for permitting.**

(a) * * * ***68850**

(39) §122.30 (What are the objectives of the storm water regulations for small MS4s?);

(40) §122.31 (For Indian Tribes only) (As a Tribe, what is my role under the NPDES storm water program?);

(41) §122.32 (As an operator of a small MS4, am I regulated under the NPDES storm water program?);

(42) §122.33 (If I am an operator of a regulated small MS4, how do I apply for an NPDES permit? When do I have to apply?);

(43) §122.34 (As an operator of a regulated small MS4, what will my NPDES MS4 storm water permit require?);

(44) §122.35 (As an operator of a regulated small MS4, may I share the responsibility to implement the minimum control measures with other entities?); and

  

(45) §122.36 (As an operator of a regulated small MS4, what happens if I don't comply with the application or permit requirements in §§122.33 through 122.35?).

* * * * *40 CFR § 123.35

3. Add §123.35 to subpart B to read as follows:

40 CFR § 123.35

**§123.35 As the NPDES Permitting Authority for regulated small MS4s, what is my role?**

(a) You must comply with the requirements for all NPDES permitting authorities under Parts 122, 123, 124, and 125 of this chapter. (This section is meant only to supplement those requirements and discuss specific issues related to the small MS4 storm water program.)

(b) You must develop a process, as well as criteria, to designate small MS4s other than those described in §122.32(a)(1) of this chapter, as regulated small MS4s to be covered under the NPDES storm water discharge control program. This process must include the authority to designate a small MS4 waived under paragraph (d) of this section if circumstances change. EPA may make designations under this section if a State or Tribe fails to comply with the requirements listed in this paragraph. In making designations of small MS4s, you must:

(1)(i) Develop criteria to evaluate whether a storm water discharge results in or has the potential to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts.

(ii) Guidance: For determining other significant water quality impacts, EPA recommends a balanced consideration of the following designation criteria on a watershed or other local basis: discharge to sensitive waters, high growth or growth potential, high population density, contiguity to an urbanized area, significant contributor of pollutants to waters of the United States, and ineffective protection of water quality by other programs;

(2) Apply such criteria, at a minimum, to any small MS4 located outside of an urbanized area serving a jurisdiction with a population density of at least 1,000 people per square mile and a population of at least 10,000;

(3) Designate any small MS4 that meets your criteria by December 9, 2002. You may wait until December 8, 2004 to apply the designation criteria on a watershed basis if you have developed a comprehensive watershed plan. You may apply these criteria to make additional designations at any time, as appropriate; and

(4) Designate any small MS4 that contributes substantially to the pollutant loadings of a physically interconnected municipal separate storm sewer that is regulated by the NPDES storm water program.

(c) You must make a final determination within 180 days from receipt of a petition under §122.26(f) of this chapter (or analogous State or Tribal law). If you do not do so within that time period, EPA may make a determination on the petition.

(d) You must issue permits consistent with §§122.32 through 122.35 of this chapter to all regulated small MS4s. You may waive or phase in the requirements otherwise applicable to regulated small MS4s, as defined in § 122.32(a)(1) of this chapter, under the following circumstances:

(1) You may waive permit coverage for each small MS4s in jurisdictions with a population under 1,000 within the urbanized area where all of the following criteria have been met:

(i) Its discharges are not contributing substantially to the pollutant loadings of a physically interconnected regulated MS4 (see paragraph (b)(4) of this section); and

  

(ii) If the small MS4 discharges any pollutant(s) that have been identified as a cause of impairment of any water body to which it discharges, storm water controls are not needed based on wasteload allocations that are part of an EPA approved or established "total maximum daily load" (TMDL) that address the pollutant(s) of concern.

(2) You may waive permit coverage for each small MS4 in jurisdictions with a population under 10,000 where all of the following criteria have been met:

(i) You have evaluated all waters of the U.S., including small streams, tributaries, lakes, and ponds, that receive a discharge from the MS4 eligible for such a waiver.

(ii) For all such waters, you have determined that storm water controls are not needed based on wasteload allocations that are part of an EPA approved or established TMDL that addresses the pollutant(s) of concern or, if a TMDL has not been developed or approved, an equivalent analysis that determines sources and allocations for the pollutant(s) of concern.

(iii) For the purpose of paragraph (d)(2)(ii) of this section, the pollutant(s) of concern include biochemical oxygen demand (BOD), sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation), pathogens, oil and grease, and any pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the MS4.

(iv) You have determined that current and future discharges from the MS4 do not have the potential to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts.

(v) Guidance: To help determine other significant water quality impacts, EPA recommends a balanced consideration of the following criteria on a watershed or other local basis: discharge to sensitive waters, high growth or growth potential, high population or commercial density, significant contributor of pollutants to waters of the United States, and ineffective protection of water quality by other programs.

(3) You may phase in permit coverage for small MS4s serving jurisdictions with a population under 10,000 on a schedule consistent with a State watershed permitting approach. Under this approach, you must develop and implement a schedule to phase in permit coverage for approximately 20 percent annually of all small MS4s that qualify for such phased-in coverage. Under this option, all regulated small MS4s are required to have coverage under an NPDES permit by no later than March 8, 2007. Your schedule for phasing in permit coverage for small MS4s must be approved by the Regional Administrator no later than December 10, 2001.

(4) If you choose to phase in permit coverage for small MS4s in jurisdictions with a population under 10,000, in accordance with paragraph (d)(3) of this section, you may also provide waivers in accordance with paragraphs (d)(1) and (d)(2) of this section pursuant to your approved schedule. ***68851**

(5) If you do not have an approved schedule for phasing in permit coverage, you must make a determination whether to issue an NPDES permit or allow a waiver in accordance with paragraph (d)(1) or (d)(2) of this section, for each eligible MS4 by December 9, 2002.

(6) You must periodically review any waivers granted in accordance with paragraph (d)(2) of this section to determine whether any of the information required for granting the waiver has changed. At a minimum, you must conduct such a review once every five years. In addition, you must consider any petition to review any waiver when the petitioner provides evidence that the information required for granting the waiver has substantially changed.

  

(e) You must specify a time period of up to 5 years from the date of permit issuance for operators of regulated small MS4s to fully develop and implement their storm water program.

(f) You must include the requirements in §§122.33 through 122.35 of this chapter in any permit issued for regulated small MS4s or develop permit limits based on a permit application submitted by a regulated small MS4. (You may include conditions in a regulated small MS4 NPDES permit that direct the MS4 to follow an existing qualifying local program's requirements, as a way of complying with some or all of the requirements in §122.34(b) of this chapter. See §122.34(c) of this chapter. Qualifying local, State or Tribal program requirements must impose, at a minimum, the relevant requirements of §122.34(b) of this chapter.)

(g) If you issue a general permit to authorize storm water discharges from small MS4s, you must make available a menu of BMPs to assist regulated small MS4s in the design and implementation of municipal storm water management programs to implement the minimum measures specified in §122.34(b) of this chapter. EPA plans to develop a menu of BMPs that will apply in each State or Tribe that has not developed its own menu. Regardless of whether a menu of BMPs has been developed by EPA, EPA encourages State and Tribal permitting authorities to develop a menu of BMPs that is appropriate for local conditions. EPA also intends to provide guidance on developing BMPs and measurable goals and modify, update, and supplement such guidance based on the assessments of the NPDES MS4 storm water program and research to be conducted over the next thirteen years.

(h)(1) You must incorporate any additional measures necessary to ensure effective implementation of your State or Tribal storm water program for regulated small MS4s.

(2) Guidance: EPA recommends consideration of the following:

(i) You are encouraged to use a general permit for regulated small MS4s;

(ii) To the extent that your State or Tribe administers a dedicated funding source, you should play an active role in providing financial assistance to operators of regulated small MS4s;

(iii) You should support local programs by providing technical and programmatic assistance, conducting research projects, performing watershed monitoring, and providing adequate legal authority at the local level;

(iv) You are encouraged to coordinate and utilize the data collected under several programs including water quality management programs, TMDL programs, and water quality monitoring programs;

(v) Where appropriate, you may recognize existing responsibilities among governmental entities for the control measures in an NPDES small MS4 permit (see §122.35(b) of this chapter); and

(vi) You are encouraged to provide a brief (e.g., two page) reporting format to facilitate compiling and analyzing data from submitted reports under § 122.34(g)(3) of this chapter. EPA intends to develop a model form for this purpose.

**PART 124—PROCEDURES FOR DECISIONMAKING**

1. The authority citation for part 124 continues to read as follows:

Authority: Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seq.; Safe Drinking Water Act, 42 U.S.C. 300(f) et seq.; Clean Water Act, 33 U.S.C. 1251 et seq.; Clean Air Act, 42 U.S.C. 7401 et seq.

40 CFR § 124.52

2. Revise §124.52(c) to read as follows:

40 CFR § 124.52

**§124.52 Permits required on a case-by-case basis.**

  

* * * * *

(c) Prior to a case-by-case determination that an individual permit is required for a storm water discharge under this section (see §122.26(a)(1)(v), (c)(1)(v), and (a)(9)(iii) of this chapter), the Regional Administrator may require the discharger to submit a permit application or other information regarding the discharge under section 308 of the CWA. In requiring such information, the Regional Administrator shall notify the discharger in writing and shall send an application form with the notice. The discharger must apply for a permit within 180 days of notice, unless permission for a later date is granted by the Regional Administrator. The question whether the initial designation was proper will remain open for consideration during the public comment period under §124.11 or §124.118 and in any subsequent hearing.

[FR Doc. 99-29181 Filed 12-7-99; 8:45 am]

BILLING CODE 6560-50-P

Footnotes

1 National level benefits are not inclusive of all categories of benefits that can be expected to result from the regulation.

2 Total may not add due to rounding.

1 To estimate non-local willingness to pay per household, the 33% of willingness is multiplied by the fraction of previously impaired national waters (in each use category) that attain the beneficial use as a result of the Phase II rule. To estimate the aggregate non-local benefits, non-local willingness to pay is multiplied with the total number of households in the US.
+= positive benefits expected but not monetized.

1 Includes water quality benefit of municipal programs, based on 80% effectiveness of municipal programs.

2 Based on research by Carson and Mitchell (1993). Fresh water value only. Does not include commercial fishery, navigation, or diversionary (e.g. municipal drinking water cost savings or risk reductions) benefits. May not fully capture human health risk reduction or ecological values.

3 Based on research by Paterson et al. (1993). Although the survey's description of the benefits of reducing soil erosion from construction sites included reduced dredging, avoided flooding, and water storage capacity benefits, these benefit categories may not be fully incorporated in the WTP values. Small streams may account for over 2% of total benefits.

Notes:

1 Source: U.S. EPA, Office of Wastewater Management. Economic Analysis for the Storm Water Phase II Rule.

2 The total number of potential no exposure respondents was divided by 5 to estimate an annual total. It was assumed that the annual number of respondents for the no exposure certification would be spread over the five year period the exclusion applies.

3 The number of respondents in each category represents only those respondents located within the 44 NPDES-authorized States and Territories. The burden and cost estimates provided in this section are for the NPDES-authorized States in their role as the permitting authority for municipal designations and industrial no exposure.

4 The number of respondents for this activity, 15, represents the number of NPDES-authorized States and Territories that must develop designation criteria and assess small MS4s located outside of an urbanized area for possible Phase II coverage divided by the three year ICR period.

1 County was previously listed in this appendix; however, population dropped to below 250,000 in the 1990 Census.

1 County was previously listed in this appendix; however, population dropped to below 100,000 in the 1990 Census.

# ATTACHMENT B
# STATE CONSTITUTIONAL PROVISIONS AND STATUTES

West's Annotated California Codes Constitution of the State of California 1879 (Refs & Annos) Article III. State of California (Refs & Annos)

West's Ann.Cal.Const. Art. 3, § 3.5

# § 3.5. Administrative agencies; prohibition against declaring statute unenforceable or unconstitutional; exceptions

Currentness

Sec. 3.5. An administrative agency, including an administrative agency created by the Constitution or an initiative statute, has no power:

(a) To declare a statute unenforceable, or refuse to enforce a statute, on the basis of it being unconstitutional unless an appellate court has made a determination that such statute is unconstitutional;

(b) To declare a statute unconstitutional;

(c) To declare a statute unenforceable, or to refuse to enforce a statute on the basis that federal law or federal regulations prohibit the enforcement of such statute unless an appellate court has made a determination that the enforcement of such statute is prohibited by federal law or federal regulations.

**Credits**
(Added June 6, 1978.)

Notes of Decisions (35)

West's Ann. Cal. Const. Art. 3, § 3.5, CA CONST Art. 3, § 3.5
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Constitution of the State of California 1879 (Refs & Annos) Article Xiiib. Government Spending Limitation (Refs & Annos)

West's Ann.Cal.Const. Art. 13B, § 6

# § 6. New programs or services mandated by Legislature or state agencies; subvention; appropriation of funds or suspension of operation

Effective: June 4, 2014
Currentness

SEC. 6. (a) Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the State shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service, except that the Legislature may, but need not, provide a subvention of funds for the following mandates:

(1) Legislative mandates requested by the local agency affected.

(2) Legislation defining a new crime or changing an existing definition of a crime.

(3) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975.

(4) Legislative mandates contained in statutes within the scope of paragraph (7) of subdivision (b) of Section 3 of Article I.

(b)(1) Except as provided in paragraph (2), for the 2005-06 fiscal year and every subsequent fiscal year, for a mandate for which the costs of a local government claimant have been determined in a preceding fiscal year to be payable by the State pursuant to law, the Legislature shall either appropriate, in the annual Budget Act, the full payable amount that has not been previously paid, or suspend the operation of the mandate for the fiscal year for which the annual Budget Act is applicable in a manner prescribed by law.

(2) Payable claims for costs incurred prior to the 2004-05 fiscal year that have not been paid prior to the 2005-06 fiscal year may be paid over a term of years, as prescribed by law.

(3) Ad valorem property tax revenues shall not be used to reimburse a local government for the costs of a new program or higher level of service.

(4) This subdivision applies to a mandate only as it affects a city, county, city and county, or special district.

(5) This subdivision shall not apply to a requirement to provide or recognize any procedural or substantive protection, right, benefit, or employment status of any local government employee or retiree, or of any local government employee organization,

  

that arises from, affects, or directly relates to future, current, or past local government employment and that constitutes a mandate subject to this section.

(c) A mandated new program or higher level of service includes a transfer by the Legislature from the State to cities, counties, cities and counties, or special districts of complete or partial financial responsibility for a required program for which the State previously had complete or partial financial responsibility.

**Credits**

(Adopted Nov. 6, 1979. Amended by Stats.2004, Res. c. 133 (S.C.A.4) (Prop.1A, approved Nov. 2, 2004, eff. Nov. 3, 2004); Stats.2013, Res. c. 123 (S.C.A.3), § 2 (Prop. 42, approved June 3, 2014, eff. June 4, 2014).)

Notes of Decisions (231)

West's Ann. Cal. Const. Art. 13B, § 6, CA CONST Art. 13B, § 6
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Constitution of the State of California 1879 (Refs & Annos) Article XIIIC. [Voter Approval for Local Tax Levies] (Refs & Annos)

West's Ann.Cal.Const. Art. 13C, § 1

§ 1. Definitions

Effective: November 3, 2010
Currentness

SECTION 1. Definitions. As used in this article:

(a) “General tax” means any tax imposed for general governmental purposes.

(b) “Local government” means any county, city, city and county, including a charter city or county, any special district, or any other local or regional governmental entity.

(c) “Special district” means an agency of the State, formed pursuant to general law or a special act, for the local performance of governmental or proprietary functions with limited geographic boundaries including, but not limited to, school districts and redevelopment agencies.

(d) “Special tax” means any tax imposed for specific purposes, including a tax imposed for specific purposes, which is placed into a general fund.

(e) As used in this article, “tax” means any levy, charge, or exaction of any kind imposed by a local government, except the following:

(1) A charge imposed for a specific benefit conferred or privilege granted directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of conferring the benefit or granting the privilege.

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

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

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

  

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

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

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

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

**Credits**

(Added by Initiative Measure (Prop. 218, § 3, approved Nov. 5, 1996). Amended by Initiative Measure (Prop. 26, § 3, approved Nov. 2, 2010, eff. Nov. 3, 2010).)

Notes of Decisions (77)

West's Ann. Cal. Const. Art. 13C, § 1, CA CONST Art. 13C, § 1
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Constitution of the State of California 1879 (Refs & Annos) Article XIIID. [Assessment and Property Related Fee Reform] (Refs & Annos)

West's Ann.Cal.Const. Art. 13D, § 6

§ 6. New or existing increased fees and charges; procedures and requirements; voter approval

Currentness

Sec. 6. Property Related Fees and Charges. (a) Procedures for New or Increased Fees and Charges. An agency shall follow the procedures pursuant to this section in imposing or increasing any fee or charge as defined pursuant to this article, including, but not limited to, the following:

(1) The parcels upon which a fee or charge is proposed for imposition shall be identified. The amount of the fee or charge proposed to be imposed upon each parcel shall be calculated. The agency shall provide written notice by mail of the proposed fee or charge to the record owner of each identified parcel upon which the fee or charge is proposed for imposition, the amount of the fee or charge proposed to be imposed upon each, the basis upon which the amount of the proposed fee or charge was calculated, the reason for the fee or charge, together with the date, time, and location of a public hearing on the proposed fee or charge.

(2) The agency shall conduct a public hearing upon the proposed fee or charge not less than 45 days after mailing the notice of the proposed fee or charge to the record owners of each identified parcel upon which the fee or charge is proposed for imposition. At the public hearing, the agency shall consider all protests against the proposed fee or charge. If written protests against the proposed fee or charge are presented by a majority of owners of the identified parcels, the agency shall not impose the fee or charge.

(b) Requirements for Existing, New or Increased Fees and Charges. A fee or charge shall not be extended, imposed, or increased by any agency unless it meets all of the following requirements:

(1) Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.

(2) Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.

(3) The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.

(4) No fee or charge may be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property in question. Fees or charges based on potential or future use of a service are not permitted. Standby charges, whether characterized as charges or assessments, shall be classified as assessments and shall not be imposed without compliance with Section 4.

  

(5) No fee or charge may be imposed for general governmental services including, but not limited to, police, fire, ambulance or library services, where the service is available to the public at large in substantially the same manner as it is to property owners. Reliance by an agency on any parcel map, including, but not limited to, an assessor's parcel map, may be considered a significant factor in determining whether a fee or charge is imposed as an incident of property ownership for purposes of this article. In any legal action contesting the validity of a fee or charge, the burden shall be on the agency to demonstrate compliance with this article.

(c) Voter Approval for New or Increased Fees and Charges. Except for fees or charges for sewer, water, and refuse collection services, no property related fee or charge shall be imposed or increased unless and until that fee or charge is submitted and approved by a majority vote of the property owners of the property subject to the fee or charge or, at the option of the agency, by a two-thirds vote of the electorate residing in the affected area. The election shall be conducted not less than 45 days after the public hearing. An agency may adopt procedures similar to those for increases in assessments in the conduct of elections under this subdivision.

(d) Beginning July 1, 1997, all fees or charges shall comply with this section.

**Credits**

(Added by Initiative Measure (Prop. 218, § 4, approved Nov. 5, 1996).)

Notes of Decisions (92)

West's Ann. Cal. Const. Art. 13D, § 6, CA CONST Art. 13D, § 6
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Government Code (Refs & Annos) Title 3. Government of Counties (Refs & Annos) Division 1. Counties Generally (Refs & Annos) Chapter 1. General (Refs & Annos)

West's Ann.Cal.Gov.Code § 23010.3

# § 23010.3. Conveyance works in connection with sewer or drainage improvements

Currentness

Upon adoption of an authorizing resolution by the board of supervisors, in connection with the construction of any sanitary sewer, storm sewer, or drainage improvements, a county may expend any of its available funds for any additional cost of construction of any conveyance works in excess of the construction required for the current project, or for a portion of the cost of conveyance works directly benefiting properties in an area outside the area to be served by the current project, if the board of supervisors first finds and declares in that resolution, that there is an area outside the area to be served by the current project which may in the future utilize the conveyance works; that additional construction of conveyance works for the current project is necessary to serve the outside area in the future; and that the board of supervisors will have the right in the future to use, or to permit the use of, the conveyance works and the additional construction which will benefit the outside area. In lieu of a county contribution of funds for additional construction or for a portion of the cost of the conveyance works where an outside area is directly benefited, the board of supervisors may agree to reimburse, from future connection fees, any entity or person described in subdivisions (a) to (g), inclusive.

The provisions of this section shall be applicable in cases in which improvements are to be constructed by any of the following:

(a) A county pursuant to the "The Improvement Act of 1911," Division 7 (commencing with Section 5000) of the Streets and Highways Code.

(b) A county pursuant to the "Municipal Improvement Act of 1913," Division 12 (commencing with Section 10000) of the Streets and Highways Code.

(c) A county in any other manner.

(d) Any district which is governed by the board of supervisors of the county in which the work is to be performed.

(e) Any district, not governed by the board of supervisors of the county in which the work is to be performed, with which the board of supervisors has contracted so as to assure the right of the county to use the conveyance works and the additional construction, for the future benefit of the outside area.

(f) Any incorporated city with which the board of supervisors has contracted so as to assure the right of the county to use the conveyance works and the additional construction, for the future benefit of the outside area.

(g) Any person, if the works when completed are to be dedicated or conveyed to the county or to a district governed by the board of supervisors of the county in which the work is to be performed.

  

The board of supervisors may impose a connection fee upon any person or district in the outside area to be paid to the county as a condition to connecting to any conveyance works which have been augmented by additional construction, or which have been found by the board of supervisors to directly benefit the outside area, pursuant to this section. The connection fee shall be a prorated share of the total cost of the additional construction, or of the portion of the costs of the conveyance works where an outside area is directly benefited. The fee may include a reasonable amount for administrative costs associated with the collection of the fee and to provide reimbursement to an entity or person described in subdivisions (a) to (g), inclusive. In computing the total cost of the additional construction, or of the portion of the costs of the conveyance works where an outside area is directly benefited, the board of supervisors shall include an amount attributable to interest from the date of completion of the construction to the date of connection and, in the event the board of supervisors agrees to reimburse, from future connection fees, any entity or person described in subdivisions (a) to (g), inclusive, all accrued interest shall be payable to that entity or person.

This section shall not decrease or limit any other power vested in counties or boards of supervisors.

**Credits**

(Added by Stats.1963, c. 1193, p. 2696, § 1. Amended by Stats.1967, c. 1248, p. 3030, § 2; Stats.1983, c. 704, § 1.)

West's Ann. Cal. Gov. Code § 23010.3, CA GOVT § 23010.3
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Government Code (Refs & Annos) Title 5. Local Agencies (Refs & Annos) Division 2. Cities, Counties, and Other Agencies (Refs & Annos) Part 1. Powers and Duties Common to Cities, Counties, and Other Agencies (Refs & Annos) Chapter 4. Financial Affairs (Refs & Annos) Article 4.6. Proposition 218 Omnibus Implementation Act (Refs & Annos)

West's Ann.Cal.Gov.Code § 53750

§ 53750. Definitions

Effective: January 1, 2018
Currentness

For purposes of Article XIII C and Article XIII D of the California Constitution and this article, the following words have the following meanings, and shall be read and interpreted in light of the findings and declarations contained in Section 53751:

(a) "Agency" means any local government as defined in subdivision (b) of Section 1 of Article XIII C of the California Constitution.

(b) "Assessment" means any levy or charge by an agency upon real property that is based upon the special benefit conferred upon the real property by a public improvement or service, that is imposed to pay the capital cost of the public improvement, the maintenance and operation expenses of the public improvement, or the cost of the service being provided. "Assessment" includes, but is not limited to, "special assessment," "benefit assessment," "maintenance assessment," and "special assessment tax."

(c) "District" means an area that is determined by an agency to contain all of the parcels that will receive a special benefit from a proposed public improvement or service.

(d) "Drainage system" means any system of public improvements that is intended to provide for erosion control, for landslide abatement, or for other types of water drainage.

(e) "Extended," when applied to an existing tax or fee or charge, means a decision by an agency to extend the stated effective period for the tax or fee or charge, including, but not limited to, amendment or removal of a sunset provision or expiration date.

(f) "Flood control" means any system of public improvements that is intended to protect property from overflow by water.

(g) "Identified parcel" means a parcel of real property that an agency has identified as having a special benefit conferred upon it and upon which a proposed assessment is to be imposed, or a parcel of real property upon which a proposed property-related fee or charge is proposed to be imposed.

(h)(1) "Increased," when applied to a tax, assessment, or property-related fee or charge, means a decision by an agency that does either of the following:

  

(A) Increases any applicable rate used to calculate the tax, assessment, fee, or charge.

(B) Revises the methodology by which the tax, assessment, fee, or charge is calculated, if that revision results in an increased amount being levied on any person or parcel.

(2) A tax, fee, or charge is not deemed to be "increased" by an agency action that does either or both of the following:

(A) Adjusts the amount of a tax, fee, or charge in accordance with a schedule of adjustments, including a clearly defined formula for inflation adjustment that was adopted by the agency prior to November 6, 1996.

(B) Implements or collects a previously approved tax, fee, or charge, so long as the rate is not increased beyond the level previously approved by the agency, and the methodology previously approved by the agency is not revised so as to result in an increase in the amount being levied on any person or parcel.

(3) A tax, assessment, fee, or charge is not deemed to be "increased" in the case in which the actual payments from a person or property are higher than would have resulted when the agency approved the tax, assessment, fee, or charge, if those higher payments are attributable to events other than an increased rate or revised methodology, such as a change in the density, intensity, or nature of the use of land.

(i) "Notice by mail" means any notice required by Article XIII C or XIII D of the California Constitution that is accomplished through a mailing, postage prepaid, deposited in the United States Postal Service and is deemed given when so deposited. Notice by mail may be included in any other mailing to the record owner that otherwise complies with Article XIII C or XIII D of the California Constitution and this article, including, but not limited to, the mailing of a bill for the collection of an assessment or a property-related fee or charge.

(j) "Record owner" means the owner of a parcel whose name and address appears on the last equalized secured property tax assessment roll, or in the case of any public entity, the State of California, or the United States, means the representative of that public entity at the address of that entity known to the agency.

(k) "Sewer" includes systems, all real estate, fixtures, and personal property owned, controlled, operated, or managed in connection with or to facilitate sewage collection, treatment, or disposition for sanitary or drainage purposes, including lateral and connecting sewers, interceptors, trunk and outfall lines, sanitary sewage treatment or disposal plants or works, drains, conduits, outlets for surface or storm waters, and any and all other works, property, or structures necessary or convenient for the collection or disposal of sewage, industrial waste, or surface or storm waters. "Sewer system" shall not include a sewer system that merely collects sewage on the property of a single owner.

(*l*) "Registered professional engineer" means an engineer registered pursuant to the Professional Engineers Act (Chapter 7 (commencing with Section 6700) of Division 3 of the Business and Professions Code).

  

(m) "Vector control" means any system of public improvements or services that is intended to provide for the surveillance, prevention, abatement, and control of vectors as defined in subdivision (k) of Section 2002 of the Health and Safety Code and a pest as defined in Section 5006 of the Food and Agricultural Code.

(n) "Water" means any system of public improvements intended to provide for the production, storage, supply, treatment, or distribution of water from any source.

**Credits**

(Added by Stats.1997, c. 38 (S.B.919), § 5, eff. July 1, 1997. Amended by Stats.1998, c. 876 (S.B.1649), § 10; Stats.2002, c. 395 (S.B.1588), § 3; Stats.2014, c. 78 (A.B.2403), § 2, eff. Jan. 1, 2015; Stats.2017, c. 536 (S.B.231), § 1, eff. Jan. 1, 2018.)

Notes of Decisions (14)

West's Ann. Cal. Gov. Code § 53750, CA GOVT § 53750
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Government Code (Refs & Annos) Title 5. Local Agencies (Refs & Annos) Division 2. Cities, Counties, and Other Agencies (Refs & Annos) Part 1. Powers and Duties Common to Cities, Counties, and Other Agencies (Refs & Annos) Chapter 4. Financial Affairs (Refs & Annos) Article 4.6. Proposition 218 Omnibus Implementation Act (Refs & Annos)

West's Ann.Cal.Gov.Code § 53751

# § 53751. Legislative findings and declarations relating to sewers

Effective: January 1, 2018
Currentness

The Legislature finds and declares all of the following:

(a) The ongoing, historic drought has made clear that California must invest in a 21st century water management system capable of effectively meeting the economic, social, and environmental needs of the state.

(b) Sufficient and reliable funding to pay for local water projects is necessary to improve the state's water infrastructure.

(c) Proposition 218 was approved by the voters at the November 5, 1996, statewide general election. Some court interpretations of the law have constrained important tools that local governments need to manage storm water and drainage runoff.

(d) Storm waters are carried off in storm sewers, and careful management is necessary to ensure adequate state water supplies, especially during drought, and to reduce pollution. But a court decision has found storm water subject to the voter-approval provisions of Proposition 218 that apply to property-related fees, preventing many important projects from being built.

(e) The court of appeal in Howard Jarvis Taxpayers Ass'n v. City of Salinas (2002) 98 Cal.App.4th 1351 concluded that the term "sewer," as used in Proposition 218, is "ambiguous" and declined to use the statutory definition of the term "sewer system," which was part of the then-existing law as Section 230.5 of the Public Utilities Code.

(f) The court in Howard Jarvis Taxpayers Ass'n v. City of Salinas (2002) 98 Cal.App.4th 1351 failed to follow long-standing principles of statutory construction by disregarding the plain meaning of the term "sewer." Courts have long held that statutory construction rules apply to initiative measures, including in cases that apply specifically to Proposition 218 (see People v. Bustamante (1997) 57 Cal.App.4th 693; Keller v. Chowchilla Water Dist. (2000) 80 Cal.App.4th 1006). When construing statutes, courts look first to the words of the statute, which should be given their usual, ordinary, and commonsense meaning (People v. Mejia (2012) 211 Cal.App.4th 586, 611). The purpose of utilizing the plain meaning of statutory language is to spare the courts the necessity of trying to divine the voters' intent by resorting to secondary or subjective indicators. The court in Howard Jarvis Taxpayers Ass'n v. City of Salinas (2002) 98 Cal.App.4th 1351 asserted its belief as to what most voters thought when voting for Proposition 218, but did not cite the voter pamphlet or other accepted sources for determining legislative intent. Instead, the court substituted its own judgment for the judgment of voters.

  

(g) Neither the words "sanitary" nor "sewerage" are used in Proposition 218, and the common meaning of the term "sewer services" is not "sanitary sewerage." In fact, the phrase "sanitary sewerage" is uncommon.

(h) Proposition 218 exempts sewer and water services from the voter-approval requirement. Sewer and water services are commonly considered to have a broad reach, encompassing the provision of clean water and then addressing the conveyance and treatment of dirty water, whether that water is rendered unclean by coming into contact with sewage or by flowing over the built-out human environment and becoming urban runoff.

(i) Numerous sources predating Proposition 218 reject the notion that the term "sewer" applies only to sanitary sewers and sanitary sewerage, including, but not limited to:

(1) Section 230.5 of the Public Utilities Code, added by Chapter 1109 of the Statutes of 1970.

(2) Section 23010.3, added by Chapter 1193 of the Statutes of 1963.

(3) The Street Improvement Act of 1913.

(4) L.A. County Flood Control Dist. v. Southern Cal. Edison Co. (1958) 51 Cal.2d 331, where the California Supreme Court stated that "no distinction has been made between sanitary sewers and storm drains or sewers."

(5) Many other cases where the term "sewer" has been used interchangeably to refer to both sanitary and storm sewers include, but are not limited to, County of Riverside v. Whitlock (1972) 22 Cal.App.3d 863, Ramseier v. Oakley Sanitary Dist. (1961) 197 Cal.App.2d 722, and Torson v. Fleming (1928) 91 Cal.App. 168.

(6) Dictionary definitions of sewer, which courts have found to be an objective source for determining common or ordinary meaning, including Webster's (1976), American Heritage (1969), and Oxford English Dictionary (1971).

(j) Prior legislation has affirmed particular interpretations of words in Proposition 218, specifically Assembly Bill 2403 of the 2013-14 Regular Session (Chapter 78 of the Statutes of 2014).

(k) In Crawley v. Alameda Waste Management Authority (2015) 243 Cal.App.4th 396, the Court of Appeal relied on the statutory definition of "refuse collection services" to interpret the meaning of that phrase in Proposition 218, and found that this interpretation was further supported by the plain meaning of refuse. Consistent with this decision, in determining the definition of "sewer," the plain meaning rule shall apply in conjunction with the definitions of terms as provided in Section 53750.

(*l*) The Legislature reaffirms and reiterates that the definition found in Section 230.5 of the Public Utilities Code is the definition of "sewer" or "sewer service" that should be used in the Proposition 218 Omnibus Implementation Act.

(m) Courts have read the Legislature's definition of "water" in the Proposition 218 Omnibus Implementation Act to include related services. In Griffith v. Pajaro Valley Water Management Agency (2013) 220 Cal.App.4th 586, the Court of Appeal

  

concurred with the Legislature's view that “water service means more than just supplying water,” based upon the definition of water provided by the Proposition 218 Omnibus Implementation Act, and found that actions necessary to provide water can be funded through fees for water service. Consistent with this decision, “sewer” should be interpreted to include services necessary to collect, treat, or dispose of sewage, industrial waste, or surface or storm waters, and any entity that collects, treats, or disposes of any of these necessarily provides sewer service.

**Credits**

(Added by Stats.2017, c. 536 (S.B.231), § 2, eff. Jan. 1, 2018.)

West's Ann. Cal. Gov. Code § 53751, CA GOVT § 53751
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Health and Safety Code (Refs & Annos) Division 5. Sanitation Part 3. Community Facilities (Refs & Annos) Chapter 6. General Provisions with Respect to Sewers (Refs & Annos) Article 4. Sanitation and Sewerage Systems (Refs & Annos)

West's Ann.Cal.Health & Safety Code § 5471

# § 5471. Power to prescribe and collect fees, tolls, rates, rentals or other charges; use of revenues; continuance of charges; new, increased, or extended assessments

Effective: January 1, 2017
Currentness

(a) In addition to the powers granted in the principal act, any entity shall have power, by an ordinance or resolution approved by a two-thirds vote of the members of the legislative body thereof, to prescribe, revise and collect, fees, tolls, rates, rentals, or other charges for services and facilities furnished by it, either within or without its territorial limits, in connection with its water, sanitation, storm drainage, or sewerage system.

(b) In addition to the powers granted in the principal act, any entity shall have power, pursuant to the notice, protest, and hearing procedures in Section 53753 of the Government Code, to prescribe, revise, and collect water, sewer, or water and sewer standby or immediate availability charges for services and facilities furnished by it, either within or without its territorial limits, in connection with its water, sanitation, storm drainage, or sewerage system.

(c) The entity may provide that the charge for the service shall be collected with the rates, tolls, and charges for any other utility, and that any or all of these charges may be billed upon the same bill. Where the charge is to be collected with the charges for any other utility service furnished by a department or agency of the entity and over which its legislative body does not exercise control, the consent of the department or agency shall be obtained prior to collecting water, sanitation, storm drainage, or sewerage charges with the charges for any other utility. Revenues derived under the provisions in this section, shall be used only for the acquisition, construction, reconstruction, maintenance, and operation of water systems and sanitation, storm drainage, or sewerage facilities, to repay principal and interest on bonds issued for the construction or reconstruction of these water systems and sanitary, storm drainage, or sewerage facilities and to repay federal or state loans or advances made to the entity for the construction or reconstruction of water systems and sanitary, storm drainage, or sewerage facilities. However, the revenue shall not be used for the acquisition or construction of new local street sewers or laterals as distinguished from main trunk, interceptor, and outfall sewers.

(d) If the procedures set forth in this section as it read at the time a standby charge was established were followed, the entity may, by ordinance or resolution adopted by a two-thirds vote of the members of the legislative body thereof, continue the charge pursuant to this section in successive years at the same rate. If new, increased, or extended assessments are proposed, the entity shall comply with the notice, protest, and hearing procedures in Section 53753 of the Government Code.

**Credits**

(Formerly § 5470 added by Stats.1945, c. 979, p. 1877, § 5. Amended by Stats.1949, c. 319, p. 608, § 1; Stats.1951, c. 719, p. 1984, § 1. Renumbered § 5471 and amended by Stats.1953, c. 862, p. 2206, § 1, eff. May 23, 1953. Amended by Stats.1973, c. 545, p. 1048, § 4; Stats.1988, c. 706, § 1; Stats.1991, c. 1110 (S.B.682), § 35; Stats.2007, c. 27 (S.B.444), § 11; Stats.2016, c. 366 (S.B.974), § 16, eff. Jan. 1, 2017.)

  

Notes of Decisions (30)

West's Ann. Cal. Health & Safety Code § 5471, CA HLTH & S § 5471
Current with all laws through Ch. 870 of 2019 Reg.Sess.

End of Document

West's Annotated California Codes Public Resources Code (Refs & Annos) Division 30. Waste Management (Refs & Annos) Part 1. Integrated Waste Management (Refs & Annos) Chapter 1. General Provisions (Refs & Annos) Article 2. General Provisions (Refs & Annos)

West's Ann.Cal.Pub.Res.Code § 40059

# § 40059. Local determinations; extent of services; means for providing services; abrogation of existing franchises, contracts, or licenses

Currentness

(a) Notwithstanding any other provision of law, each county, city, district, or other local governmental agency may determine all of the following:

(1) Aspects of solid waste handling which are of local concern, including, but not limited to, frequency of collection, means of collection and transportation, level of services, charges and fees, and nature, location, and extent of providing solid waste handling services.

(2) Whether the services are to be provided by means of nonexclusive franchise, contract, license, permit, or otherwise, either with or without competitive bidding, or if, in the opinion of its governing body, the public health, safety, and well-being so require, by partially exclusive or wholly exclusive franchise, contract, license, permit, or otherwise, either with or without competitive bidding. The authority to provide solid waste handling services may be granted under terms and conditions prescribed by the governing body of the local governmental agency by resolution or ordinance.

(b) Nothing in this division modifies or abrogates in any manner either of the following:

(1) Any franchise previously granted or extended by any county or other local governmental agency.

(2) Any contract, license, or any permit to collect solid waste previously granted or extended by a city, county, or a city and county.

**Credits**

(Added by Stats.1989, c. 1095, § 22. Amended by Stats.1990, c. 1355 (A.B.3992), § 1, eff. Sept. 27, 1990.)

Notes of Decisions (25)

West's Ann. Cal. Pub. Res. Code § 40059, CA PUB RES § 40059
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Public Utilities Code (Refs & Annos) Division 1. Regulation of Public Utilities (Refs & Annos) Part 1. Public Utilities Act (Refs & Annos) Chapter 1. General Provisions and Definitions (Refs & Annos)

West's Ann.Cal.Pub.Util.Code § 230.5

§ 230.5. Sewer system

Currentness

"Sewer system" includes all real estate, fixtures, and personal property owned, controlled, operated, or managed in connection with or to facilitate sewage collection, treatment, or disposition for sanitary or drainage purposes, including any and all lateral and connecting sewers, interceptors, trunk and outfall lines and sanitary sewage treatment or disposal plants or works, and any and all drains, conduits, and outlets for surface or storm waters, and any and all other works, property or structures necessary or convenient for the collection or disposal of sewage, industrial waste, or surface or storm waters. "Sewer system" shall not include a sewer system which merely collects sewage on the property of a single owner.

**Credits**

(Added by Stats.1970, c. 1109, p. 1973, § 2, operative July 1, 1971.)

Notes of Decisions (1)

West's Ann. Cal. Pub. Util. Code § 230.5, CA PUB UTIL § 230.5
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

 KeyCite Yellow Flag - Negative Treatment
Proposed Legislation

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 1. Policy (Refs & Annos)

West's Ann.Cal.Water Code § 13000

# § 13000. Conservation, control, and utilization of water resources; quality; statewide program; regional administration

Currentness

The Legislature finds and declares that the people of the state have a primary interest in the conservation, control, and utilization of the water resources of the state, and that the quality of all the waters of the state shall be protected for use and enjoyment by the people of the state.

The Legislature further finds and declares that activities and factors which may affect the quality of the waters of the state shall be regulated to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible.

The Legislature further finds and declares that the health, safety and welfare of the people of the state requires that there be a statewide program for the control of the quality of all the waters of the state; that the state must be prepared to exercise its full power and jurisdiction to protect the quality of waters in the state from degradation originating inside or outside the boundaries of the state; that the waters of the state are increasingly influenced by interbasin water development projects and other statewide considerations; that factors of precipitation, topography, population, recreation, agriculture, industry and economic development vary from region to region within the state; and that the statewide program for water quality control can be most effectively administered regionally, within a framework of statewide coordination and policy.

**Credits**
(Added by Stats.1969, c. 482, p. 1051, § 18, operative Jan. 1, 1970.)

Notes of Decisions (30)

West's Ann. Cal. Water Code § 13000, CA WATER § 13000
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

KeyCite Yellow Flag - Negative Treatment
Unconstitutional or PreemptedLimited on Preemption Grounds by Karuk Tribe of Northern California v. California Regional Water Quality Control Bd., North Coast Region, Cal.App. 1 Dist., Mar. 30, 2010

KeyCite Yellow Flag - Negative TreatmentProposed Legislation

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 2. Definitions (Refs & Annos)

West's Ann.Cal.Water Code § 13050

§ 13050. Definitions

Currentness

As used in this division:

(a) “State board” means the State Water Resources Control Board.

(b) “Regional board” means any California regional water quality control board for a region as specified in Section 13200.

(c) “Person” includes any city, county, district, the state, and the United States, to the extent authorized by federal law.

(d) “Waste” includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

(e) “Waters of the state” means any surface water or groundwater, including saline waters, within the boundaries of the state.

(f) “Beneficial uses” of the waters of the state that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

(g) “Quality of the water” refers to chemical, physical, biological, bacteriological, radiological, and other properties and characteristics of water which affect its use.

(h) “Water quality objectives” means the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

(i) “Water quality control” means the regulation of any activity or factor which may affect the quality of the waters of the state and includes the prevention and correction of water pollution and nuisance.

  

(j) "Water quality control plan" consists of a designation or establishment for the waters within a specified area of all of the following:

(1) Beneficial uses to be protected.

(2) Water quality objectives.

(3) A program of implementation needed for achieving water quality objectives.

(k) "Contamination" means an impairment of the quality of the waters of the state by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. "Contamination" includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.

(*l*)(1) "Pollution" means an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects either of the following:

(A) The waters for beneficial uses.

(B) Facilities which serve these beneficial uses.

(2) "Pollution" may include "contamination."

(m) "Nuisance" means anything which meets all of the following requirements:

(1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.

(2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

(3) Occurs during, or as a result of, the treatment or disposal of wastes.

(n) "Recycled water" means water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefor considered a valuable resource.

(*o*) "Citizen or domiciliary" of the state includes a foreign corporation having substantial business contacts in the state or which is subject to service of process in this state.

  

(p)(1) “Hazardous substance” means either of the following:

(A) For discharge to surface waters, any substance determined to be a hazardous substance pursuant to Section 311(b)(2) of the Federal Water Pollution Control Act (33 U.S.C. Sec. 1251 et seq.).

(B) For discharge to groundwater, any substance listed as a hazardous waste or hazardous material pursuant to Section 25140 of the Health and Safety Code, without regard to whether the substance is intended to be used, reused, or discarded, except that “hazardous substance” does not include any substance excluded from Section 311(b)(2) of the Federal Water Pollution Control Act because it is within the scope of Section 311(a)(1) of that act.

(2) “Hazardous substance” does not include any of the following:

(A) Nontoxic, nonflammable, and noncorrosive stormwater runoff drained from underground vaults, chambers, or manholes into gutters or storm sewers.

(B) Any pesticide which is applied for agricultural purposes or is applied in accordance with a cooperative agreement authorized by Section 116180 of the Health and Safety Code, and is not discharged accidentally or for purposes of disposal, the application of which is in compliance with all applicable state and federal laws and regulations.

(C) Any discharge to surface water of a quantity less than a reportable quantity as determined by regulations issued pursuant to Section 311(b)(4) of the Federal Water Pollution Control Act.

(D) Any discharge to land which results, or probably will result, in a discharge to groundwater if the amount of the discharge to land is less than a reportable quantity, as determined by regulations adopted pursuant to Section 13271, for substances listed as hazardous pursuant to Section 25140 of the Health and Safety Code. No discharge shall be deemed a discharge of a reportable quantity until regulations set a reportable quantity for the substance discharged.

(q)(1) “Mining waste” means all solid, semisolid, and liquid waste materials from the extraction, beneficiation, and processing of ores and minerals. Mining waste includes, but is not limited to, soil, waste rock, and overburden, as defined in Section 2732 of the Public Resources Code, and tailings, slag, and other processed waste materials, including cementitious materials that are managed at the cement manufacturing facility where the materials were generated.

(2) For the purposes of this subdivision, “cementitious material” means cement, cement kiln dust, clinker, and clinker dust.

(r) “Master recycling permit” means a permit issued to a supplier or a distributor, or both, of recycled water, that includes waste discharge requirements prescribed pursuant to Section 13263 and water recycling requirements prescribed pursuant to Section 13523.1.

**Credits**

(Added by Stats.1969, c. 482, p. 1052, § 18, operative Jan. 1, 1970. Amended by Stats.1969, c. 800, p. 1617, § 2.5, operative Jan. 1, 1970; Stats.1970, c. 202, § 1; Stats.1980, c. 877, p. 2751, § 1; Stats.1989, c. 642, § 2; Stats.1991, c. 187 (A.B.673), §

  

1; Stats.1992, c. 211 (A.B.3012), § 1; Stats.1995, c. 28 (A.B.1247), § 17; Stats.1995, c. 847 (S.B.206), § 2; Stats.1996, c. 1023 (S.B.1497), § 429, eff. Sept. 29, 1996.)

Notes of Decisions (46)

West's Ann. Cal. Water Code § 13050, CA WATER § 13050
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 3. State Water Quality Control (Refs & Annos) Article 1. State Water Resources Control Board (Refs & Annos)

West's Ann.Cal.Water Code § 13100

# § 13100. Creation of state and regional boards; duties of state board

Currentness

There is in the California Environmental Protection Agency the State Water Resources Control Board and the California regional water quality control boards. The organization, membership, and some of the duties of the state board are provided for in Article 3 (commencing with Section 174) of Chapter 2 of Division 1 of this code.

**Credits**

(Added by Stats.1969, c. 482, p. 1053, § 18, operative Jan. 1, 1970. Amended by Stats.1976, c. 596, p. 1440, § 2; Gov.Reorg.Plan No. 1 of 1991, § 193, eff. July 17, 1991.)

Notes of Decisions (1)

West's Ann. Cal. Water Code § 13100, CA WATER § 13100
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 3. State Water Quality Control (Refs & Annos) Article 3. State Policy for Water Quality Control (Refs & Annos)

West's Ann.Cal.Water Code § 13140

§ 13140. Adoption of statewide policy for water quality control

Currentness

The state board shall formulate and adopt state policy for water quality control. Such policy shall be adopted in accordance with the provisions of this article and shall be in conformity with the policies set forth in Chapter 1 (commencing with Section 13000).

**Credits**
(Added by Stats.1969, c. 482, p. 1054, § 18, operative Jan. 1, 1970.)

Notes of Decisions (6)

West's Ann. Cal. Water Code § 13140, CA WATER § 13140
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 3. State Water Quality Control (Refs & Annos) Article 4. Other Powers and Duties of the State Board (Refs & Annos)

West's Ann.Cal.Water Code § 13170

# § 13170. Adoption of water quality control plans for waters as required by Federal Water Pollution Control Act

Currentness

The state board may adopt water quality control plans in accordance with the provisions of Sections 13240 to 13244, inclusive, insofar as they are applicable, for waters for which water quality standards are required by the Federal Water Pollution Control Act [1] and acts amendatory thereof or supplementary thereto. Such plans, when adopted, supersede any regional water quality control plans for the same waters to the extent of any conflict.

**Credits**

(Added by Stats.1971, c. 1288, p. 2524, § 6.)

Notes of Decisions (2)

Footnotes

1 33 U.S.C.A. § 1251 et seq.

West's Ann. Cal. Water Code § 13170, CA WATER § 13170
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 4. Regional Water Quality Control (Refs & Annos) Article 1. Organization and Membership of Regional Boards (Refs & Annos)

West's Ann.Cal.Water Code § 13200

§ 13200. Regions

Currentness

The state is divided, for the purpose of this division, into nine regions:

(a) North Coast region, which comprises all basins including Lower Klamath Lake and Lost River Basins draining into the Pacific Ocean from the California-Oregon state line southerly to the southerly boundary of the watershed of Estero de San Antonio and Stemple Creek in Marin and Sonoma Counties.

(b) San Francisco Bay region, which comprises San Francisco Bay, Suisun Bay, from Sacramento River and San Joaquin River westerly from a line which passes between Collinsville and Montezuma Island and follows thence the boundary common to Sacramento and Solano Counties and that common to Sacramento and Contra Costa Counties to the westerly boundary of the watershed of Markley Canyon in Contra Costa County, all basins draining into the bays and rivers westerly from this line, and all basins draining into the Pacific Ocean between the southerly boundary of the north coastal region and the southerly boundary of the watershed of Pescadero Creek in San Mateo and Santa Cruz Counties.

(c) Central Coast region, which comprises all basins, including Carrizo Plain in San Luis Obispo and Kern Counties, draining into the Pacific Ocean from the southerly boundary of the watershed of Pescadero Creek in San Mateo and Santa Cruz Counties to the southeasterly boundary, located in the westerly part of Ventura County, of the watershed of Rincon Creek.

(d) Los Angeles region, which comprises all basins draining into the Pacific Ocean between the southeasterly boundary, located in the westerly part of Ventura County, of the watershed of Rincon Creek and a line which coincides with the southeasterly boundary of Los Angeles County from the ocean to San Antonio Peak and follows thence the divide between San Gabriel River and Lytle Creek drainages to the divide between Sheep Creek and San Gabriel River drainages.

(e) Santa Ana region, which comprises all basins draining into the Pacific Ocean between the southeasterly boundary of the Los Angeles region and a line which follows the drainage divide between Muddy and Moro Canyons from the ocean to the summit of San Joaquin Hills; thence along the divide between lands draining into Newport Bay and into Laguna Canyon to Niguel Road; thence along Niguel Road and Los Aliso Avenue to the divide between Newport Bay and Aliso Creek drainages; thence along that divide and the southeasterly boundary of the Santa Ana River drainage to the divide between Baldwin Lake and Mojave Desert drainages; thence along that divide to the divide between Pacific Ocean and Mojave Desert drainages.

(f) San Diego region, which comprises all basins draining into the Pacific Ocean between the southern boundary of the Santa Ana region and the California-Mexico boundary.

  

(g) Central Valley region, which comprises all basins including Goose Lake Basin draining into the Sacramento and San Joaquin Rivers to the easterly boundary of the San Francisco Bay region near Collinsville. The Central Valley region shall have section offices in the Sacramento Valley and the San Joaquin Valley.

(h) Lahontan region, which comprises all basins east of the Santa Ana, Los Angeles and Central Valley regions from the California-Oregon boundary to the southerly boundary located in Los Angeles and San Bernardino Counties of the watersheds draining into Antelope Valley, Mojave River Basin and Dry Lake Basin near Ivanpah.

(i) Colorado River Basin region, which comprises all basins east of the Santa Ana and San Diego regions draining into the Colorado River, Salton Sea and local sinks from the southerly boundary of the Lahontan region to the California-Mexico boundary.

The regions defined and described in this section shall be as precisely delineated on official maps of the department and include all of the areas within the boundaries of the state.

For purposes of this section the boundaries of the state extend three nautical miles into the Pacific Ocean from the line of mean lower low water marking the seaward limits of inland waters and three nautical miles from the line of mean lower low water on the mainland and each offshore island.

Nothing in this section shall limit the power conferred by this chapter to regulate the disposal of waste into ocean waters beyond the boundaries of the state.

**Credits**
(Added by Stats.1969, c. 482, p. 1057, § 18, operative Jan. 1, 1970.)

Notes of Decisions (1)

West's Ann. Cal. Water Code § 13200, CA WATER § 13200
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 4. Regional Water Quality Control (Refs & Annos) Article 1. Organization and Membership of Regional Boards (Refs & Annos)

West's Ann.Cal.Water Code § 13201

§ 13201. Regional boards; membership; confirmation

Effective: June 27, 2012
Currentness

(a) There is a regional board for each of the regions described in Section 13200. Each board shall consist of seven members appointed by the Governor, each of whom shall represent, and act on behalf of, all the people and shall reside or have a principal place of business within the region.

(b) Except as specified in subdivision (c), each member shall be appointed on the basis of his or her demonstrated interest or proven ability in the field of water quality, including water pollution control, water resource management, water use, or water protection. The Governor shall consider appointments from the public and nonpublic sectors. In regard to appointments from the nonpublic sector, the Governor shall consider including members from key economic sectors in a given region, such as agriculture, industry, commercial activities, forestry, and fisheries.

(c) At least one member shall be appointed as a public member who is not required to meet the criteria established pursuant to subdivision (b).

(d) All persons appointed to a regional board shall be subject to Senate confirmation, but shall not be required to appear before any committee of the Senate for purposes of such confirmation unless specifically requested to appear by the Senate Committee on Rules.

(e) Insofar as practicable, appointments shall be made in such manner as to result in representation on the board from all parts of the region.

(f) Insofar as practicable, appointments shall be made in a manner as to result in representation on the board from diverse experiential backgrounds.

(g) Each member shall be appointed on the basis of his or her ability to attend substantially all meetings of the board and to actively discharge all duties and responsibilities of a member of the board.

(h) The reduction in the number of members of each regional board required by the act that added this subdivision shall be achieved according to the ordinary expiration of the terms of incumbents and other vacancies. Notwithstanding Section 13202 the Governor shall not fill a vacancy on any regional board until the number of members serving on that regional board falls below seven members. When the numbers of members serving on the regional board falls below seven members, the Governor shall appoint or reappoint individuals pursuant to this section.

  

**Credits**

(Added by Stats.1969, c. 482, p. 1059, § 18, operative Jan. 1, 1970. Amended by Stats.1978, c. 622, p. 2075, § 1; Stats.1979, c. 721, p. 2213, § 1; Stats.2003, c. 272 (S.B.196), § 1; Stats.2012, c. 39 (S.B.1018), § 117, eff. June 27, 2012.)

Notes of Decisions (3)

West's Ann. Cal. Water Code § 13201, CA WATER § 13201
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 4. Regional Water Quality Control (Refs & Annos) Article 3. Regional Water Quality Control Plans (Refs & Annos)

West's Ann.Cal.Water Code § 13240

# § 13240. Adoption of plans; conformance with state policy

Currentness

Each regional board shall formulate and adopt water quality control plans for all areas within the region. Such plans shall conform to the policies set forth in Chapter 1 (commencing with Section 13000) of this division and any state policy for water quality control. During the process of formulating such plans the regional boards shall consult with and consider the recommendations of affected state and local agencies. Such plans shall be periodically reviewed and may be revised.

**Credits**

(Added by Stats.1969, c. 482, p. 1061, § 18, operative Jan. 1, 1970.)

Notes of Decisions (22)

West's Ann. Cal. Water Code § 13240, CA WATER § 13240
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

KeyCite Yellow Flag - Negative Treatment
Unconstitutional or PreemptedLimited on Preemption Grounds by Karuk Tribe of Northern California v. California Regional Water Quality Control Bd., North Coast Region, Cal.App. 1 Dist., Mar. 30, 2010

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 4. Regional Water Quality Control (Refs & Annos) Article 3. Regional Water Quality Control Plans (Refs & Annos)

West's Ann.Cal.Water Code § 13241

# § 13241. Water quality objectives; beneficial uses; prevention of nuisances

Currentness

Each regional board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance; however, it is recognized that it may be possible for the quality of water to be changed to some degree without unreasonably affecting beneficial uses. Factors to be considered by a regional board in establishing water quality objectives shall include, but not necessarily be limited to, all of the following:

(a) Past, present, and probable future beneficial uses of water.

(b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.

(c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.

(d) Economic considerations.

(e) The need for developing housing within the region.

(f) The need to develop and use recycled water.

**Credits**
(Added by Stats.1969, c. 482, p. 1061, § 18, operative Jan. 1, 1970. Amended by Stats.1979, c. 947, p. 3272, § 8; Stats.1991, c. 187 (A.B.673), § 2.)

Notes of Decisions (47)

West's Ann. Cal. Water Code § 13241, CA WATER § 13241
Current with all laws through Ch. 870 of 2019 Reg.Sess.

End of Document

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 4. Regional Water Quality Control (Refs & Annos) Article 3. Regional Water Quality Control Plans (Refs & Annos)

West's Ann.Cal.Water Code § 13242

# § 13242. Program to achieve objectives

Currentness

The program of implementation for achieving water quality objectives shall include, but not be limited to:

(a) A description of the nature of actions which are necessary to achieve the objectives, including recommendations for appropriate action by any entity, public or private.

(b) A time schedule for the actions to be taken.

(c) A description of surveillance to be undertaken to determine compliance with objectives.

**Credits**
(Added by Stats.1969, c. 482, p. 1062, § 18, operative Jan. 1, 1970.)

Notes of Decisions (2)

West's Ann. Cal. Water Code § 13242, CA WATER § 13242
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 4. Regional Water Quality Control (Refs & Annos) Article 3. Regional Water Quality Control Plans (Refs & Annos)

West's Ann.Cal.Water Code § 13243

# § 13243. Prohibition against discharge of waste in certain areas

Currentness

A regional board, in a water quality control plan or in waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted.

**Credits**

(Added by Stats.1969, c. 482, p. 1062, § 18, operative Jan. 1, 1970.)

Notes of Decisions (2)

West's Ann. Cal. Water Code § 13243, CA WATER § 13243
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 4. Regional Water Quality Control (Refs & Annos) Article 3. Regional Water Quality Control Plans (Refs & Annos)

West's Ann.Cal.Water Code § 13244

# § 13244. Hearing on adoption of plan; notice

Currentness

The regional boards shall not adopt any water quality control plan unless a public hearing is first held, after the giving of notice of such hearing by publication in the affected county or counties pursuant to Section 6061 of the Government Code. When the plan proposes to prohibit discharges of waste pursuant to Section 13243, similar notice shall be given by publication pursuant to Section 6061.3 of the Government Code.

**Credits**

(Added by Stats.1969, c. 482, p. 1062, § 18, operative Jan. 1, 1970.)

West's Ann. Cal. Water Code § 13244, CA WATER § 13244
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 4. Regional Water Quality Control (Refs & Annos) Article 3. Regional Water Quality Control Plans (Refs & Annos)

West's Ann.Cal.Water Code § 13245

# § 13245. Effective date of plan; approval by state board

Currentness

A water quality control plan, or a revision thereof adopted by a regional board, shall not become effective unless and until it is approved by the state board. The state board may approve such plan, or return it to the regional board for further consideration and resubmission to the state board. Upon resubmission the state board may either approve or, after a public hearing in the affected region, revise and approve such plan.

**Credits**

(Added by Stats.1969, c. 482, p. 1062, § 18, operative Jan. 1, 1970. Amended by Stats.1971, c. 1288, p. 2524, § 7.)

Notes of Decisions (2)

West's Ann. Cal. Water Code § 13245, CA WATER § 13245
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 4. Regional Water Quality Control (Refs & Annos) Article 3. Regional Water Quality Control Plans (Refs & Annos)

West's Ann.Cal.Water Code § 13245.5

# § 13245.5. Guidelines; effective upon approval

Currentness

Guidelines adopted by a regional board shall not become effective unless and until approved by the state board.

**Credits**
(Added by Stats.1986, c. 758, § 3.)

Notes of Decisions (1)

West's Ann. Cal. Water Code § 13245.5, CA WATER § 13245.5
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 4. Regional Water Quality Control (Refs & Annos) Article 3. Regional Water Quality Control Plans (Refs & Annos)

West's Ann.Cal.Water Code § 13246

§ 13246. Action on plan by state board; timeline

Effective: April 8, 2002
Currentness

(a) The state board shall act upon any water quality control plan not later than 60 days from the date the regional board submitted the plan to the state board, or 90 days from the date of resubmission of the plan.

(b) When the state board is acting upon a water quality control plan that is being amended solely for an action related to a regional board's total maximum daily load submittal, not including submittals related to listing, the state board shall not exceed the 60-day timeline, inclusive of the time spent sending the submittal back to the regional board, unless one of the following circumstances exists:

(1) The proposed amendment is for an exceedingly complex total maximum daily load. In order to determine if a total maximum daily load is exceedingly complex, the state board may consider a number of factors including, but not limited to, the volume of the record, the number of pollutants included, the number of dischargers and land uses involved, and the size of the watershed. The reason or reasons that any total maximum daily load is determined to be exceedingly complex shall be provided by the state board to the regional board in writing.

(2) The submittal by the regional board is clearly incomplete.

**Credits**
(Added by Stats.1969, c. 482, p. 1062, § 18, operative Jan. 1, 1970. Amended by Stats.2002, c. 20 (S.B.469), § 2, eff. April 8, 2002.)

West's Ann. Cal. Water Code § 13246, CA WATER § 13246
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 4. Regional Water Quality Control (Refs & Annos) Article 3. Regional Water Quality Control Plans (Refs & Annos)

West's Ann.Cal.Water Code § 13247

# § 13247. Activities of state offices, departments and boards; compliance with approved plans

Currentness

State offices, departments, and boards, in carrying out activities which may affect water quality, shall comply with water quality control plans approved or adopted by the state board unless otherwise directed or authorized by statute, in which case they shall indicate to the regional boards in writing their authority for not complying with such plans.

**Credits**

(Added by Stats.1969, c. 482, p. 1062, § 18, operative Jan. 1, 1970. Amended by Stats.1971, c. 1288, p. 2524, § 8.)

Notes of Decisions (2)

West's Ann. Cal. Water Code § 13247, CA WATER § 13247
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 4. Regional Water Quality Control (Refs & Annos) Article 3. Regional Water Quality Control Plans (Refs & Annos)

West's Ann.Cal.Water Code § 13248

# § 13248. Failure to act; review; actions by state board

Effective: January 1, 2011
Currentness

(a) At any time, the state board may, on its own motion, review the regional board's failure to act under this article.

(b) The state board may find that the failure of the regional board to act was appropriate and proper. Upon finding that the failure of the regional board to act was inappropriate or improper, the state board may direct that appropriate action be taken by the regional board, refer the matter to another state agency having jurisdiction, take appropriate action itself, or take any combination of those actions. In taking any action, the state board is vested with all the powers of the regional boards under this division.

**Credits**
(Added by Stats.2010, c. 288 (S.B.1169), § 21.)

West's Ann. Cal. Water Code § 13248, CA WATER § 13248
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 4. Regional Water Quality Control (Refs & Annos) Article 3. Regional Water Quality Control Plans (Refs & Annos)

West's Ann.Cal.Water Code § 13249

# § 13249. Acceptance of donations for the purpose of updating water quality control plan

Effective: January 1, 2019
Currentness

The state board may, on behalf of itself or a regional board, accept donations of moneys from a permittee for the purpose of updating a water quality control plan as consistent with the designated use of the funds.

**Credits**
(Added by Stats.2018, c. 355 (S.B.1133), § 1, eff. Jan. 1, 2019.)

West's Ann. Cal. Water Code § 13249, CA WATER § 13249
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Ann.Cal.Water Code § 13263

# § 13263. Discharge requirements; considerations by regional board; review of requirements; notice of requirements; no vested right; master reclamation permit

Currentness

(a) The regional board, after any necessary hearing, shall prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge, except discharges into a community sewer system, with relation to the conditions existing in the disposal area or receiving waters upon, or into which, the discharge is made or proposed. The requirements shall implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Section 13241.

(b) A regional board, in prescribing requirements, need not authorize the utilization of the full waste assimilation capacities of the receiving waters.

(c) The requirements may contain a time schedule, subject to revision in the discretion of the board.

(d) The regional board may prescribe requirements although no discharge report has been filed.

(e) Upon application by any affected person, or on its own motion, the regional board may review and revise requirements. All requirements shall be reviewed periodically.

(f) The regional board shall notify in writing the person making or proposing the discharge or the change therein of the discharge requirements to be met. After receipt of the notice, the person so notified shall provide adequate means to meet the requirements.

(g) No discharge of waste into the waters of the state, whether or not the discharge is made pursuant to waste discharge requirements, shall create a vested right to continue the discharge. All discharges of waste into waters of the state are privileges, not rights.

(h) The regional board may incorporate the requirements prescribed pursuant to this section into a master recycling permit for either a supplier or distributor, or both, of recycled water.

(i) The state board or a regional board may prescribe general waste discharge requirements for a category of discharges if the state board or that regional board finds or determines that all of the following criteria apply to the discharges in that category:

(1) The discharges are produced by the same or similar operations.

(2) The discharges involve the same or similar types of waste.

(3) The discharges require the same or similar treatment standards.

(4) The discharges are more appropriately regulated under general discharge requirements than individual discharge requirements.

(j) The state board, after any necessary hearing, may prescribe waste discharge requirements in accordance with this section.

**Credits**

(Added by Stats.1969, c. 482, p. 1063, § 18, operative Jan. 1, 1970. Amended by Stats.1992, c. 211 (A.B.3012), § 3; Stats.1995, c. 28 (A.B.1247), § 21; Stats.1995, c. 421 (S.B.572), § 2.)

Notes of Decisions (48)

West's Ann. Cal. Water Code § 13263, CA WATER § 13263
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 4. Regional Water Quality Control (Refs & Annos) Article 4. Waste Discharge Requirements (Refs & Annos)

West's Ann.Cal.Water Code § 13267

# § 13267. Investigation of water quality; reports; inspection of facilities

Effective: January 1, 2007
Currentness

(a) A regional board, in establishing or reviewing any water quality control plan or waste discharge requirements, or in connection with any action relating to any plan or requirement authorized by this division, may investigate the quality of any waters of the state within its region.

(b)(1) In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

(2) When requested by the person furnishing a report, the portions of a report that might disclose trade secrets or secret processes may not be made available for inspection by the public but shall be made available to governmental agencies for use in making studies. However, these portions of a report shall be available for use by the state or any state agency in judicial review or enforcement proceedings involving the person furnishing the report.

(c) In conducting an investigation pursuant to subdivision (a), the regional board may inspect the facilities of any person to ascertain whether the purposes of this division are being met and waste discharge requirements are being complied with. The inspection shall be made with the consent of the owner or possessor of the facilities or, if the consent is withheld, with a warrant duly issued pursuant to the procedure set forth in Title 13 (commencing with Section 1822.50) of Part 3 of the Code of Civil Procedure. However, in the event of an emergency affecting the public health or safety, an inspection may be performed without consent or the issuance of a warrant.

(d) The state board or a regional board may require any person, including a person subject to a waste discharge requirement under Section 13263, who is discharging, or who proposes to discharge, wastes or fluid into an injection well, to furnish the state board or regional board with a complete report on the condition and operation of the facility or injection well, or any other information that may be reasonably required to determine whether the injection well could affect the quality of the waters of the state.

(e) As used in this section, “evidence” means any relevant evidence on which responsible persons are accustomed to rely in the conduct of serious affairs, regardless of the existence of any common law or statutory rule which might make improper the admission of the evidence over objection in a civil action.

  

(f) The state board may carry out the authority granted to a regional board pursuant to this section if, after consulting with the regional board, the state board determines that it will not duplicate the efforts of the regional board.

**Credits**

(Added by Stats.1969, c. 482, p. 1064, § 18, operative Jan. 1, 1970. Amended by Stats.1970, c. 918, § 5; Stats.1986, c. 1013, § 8, eff. Sept. 23, 1986; Stats.1992, c. 729 (S.B.1277), § 1; Stats.2001, c. 869 (A.B.1664), § 3; Stats.2006, c. 293 (S.B.729), § 2.)

Notes of Decisions (3)

West's Ann. Cal. Water Code § 13267, CA WATER § 13267
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13370

§ 13370. Legislative findings and declarations

Currentness

The Legislature finds and declares as follows:

(a) The Federal Water Pollution Control Act (33 U.S.C. Sec. 1251 et seq.), as amended, provides for permit systems to regulate the discharge of pollutants and dredged or fill material to the navigable waters of the United States and to regulate the use and disposal of sewage sludge.

(b) The Federal Water Pollution Control Act, as amended, provides that permits may be issued by states which are authorized to implement the provisions of that act.

(c) It is in the interest of the people of the state, in order to avoid direct regulation by the federal government of persons already subject to regulation under state law pursuant to this division, to enact this chapter in order to authorize the state to implement the provisions of the Federal Water Pollution Control Act and acts amendatory thereof or supplementary thereto, and federal regulations and guidelines issued pursuant thereto, provided, that the state board shall request federal funding under the Federal Water Pollution Control Act for the purpose of carrying out its responsibilities under this program.

**Credits**

(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972. Amended by Stats.1978, c. 746, p. 2343, § 1; Stats.1980, c. 676, p. 2028, § 319; Stats.1987, c. 1189, § 1.)

Notes of Decisions (4)

West's Ann. Cal. Water Code § 13370, CA WATER § 13370
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13370.5

§ 13370.5. Additional findings and declarations; pretreatment program

Currentness

(a) The Legislature finds and declares that, since the Federal Water Pollution Control Act (33 U.S.C. Sec. 1251 et seq.), as amended, and applicable federal regulations (40 C.F.R. § 403 et seq.) provide for a pretreatment program to regulate the discharge of pollutants into publicly owned treatment works and provide that states with approved national pollutant discharge elimination system (NPDES) permit programs shall apply for approval of a state pretreatment program, it is in the interest of the people of the state to enact this section in order to avoid direct regulation by the federal government of publicly owned treatment works already subject to regulation under state law pursuant to this division.

(b) The state board shall develop a state pretreatment program and shall, not later than September 1, 1985, apply to the Environmental Protection Agency for approval of the pretreatment program in accordance with federal requirements.

**Credits**
(Added by Stats.1984, c. 1542, § 1.)

West's Ann. Cal. Water Code § 13370.5, CA WATER § 13370.5
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

 KeyCite Red Flag - Severe Negative Treatment
KeyCite Red Flag Negative Treatment§ 13371. Repealed by Stats.1987, c. 1189, § 2

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13371

§ 13371. Repealed by Stats.1987, c. 1189, § 2

Currentness

West's Ann. Cal. Water Code § 13371, CA WATER § 13371
Current with all laws through Ch. 870 of 2019 Reg.Sess.

End of Document

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13372

§ 13372. Construction and application of chapter

Effective: January 1, 2004
Currentness

(a) This chapter shall be construed to ensure consistency with the requirements for state programs implementing the Federal Water Pollution Control Act and acts amendatory thereof or supplementary thereto. To the extent other provisions of this division are consistent with the provisions of this chapter and with the requirements for state programs implementing the Federal Water Pollution Control Act and acts amendatory thereof or supplementary thereto, those provisions apply to actions and procedures provided for in this chapter. The provisions of this chapter shall prevail over other provisions of this division to the extent of any inconsistency. The provisions of this chapter apply only to actions required under the Federal Water Pollution Control Act and acts amendatory thereof or supplementary thereto.

(b) The provisions of Section 13376 requiring the filing of a report for the discharge of dredged or fill material and the provisions of this chapter relating to the issuance of dredged or fill material permits by the state board or a regional board shall be applicable only to discharges for which the state has an approved permit program, in accordance with the provisions of the Federal Water Pollution Control Act, as amended, for the discharge of dredged or fill material.

**Credits**
(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972. Amended by Stats.1987, c. 1189, § 3; Stats.2003, c. 683 (A.B.897), § 5.)

Notes of Decisions (3)

West's Ann. Cal. Water Code § 13372, CA WATER § 13372
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13373

§ 13373. Certain definitions; same as federal act

Currentness

The terms “navigable waters,” “administrator,” “pollutants,” “biological monitoring,” “discharge” and “point sources” as used in this chapter shall have the same meaning as in the Federal Water Pollution Control Act and acts amendatory thereof or supplementary thereto.

**Credits**

(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972. Amended by Stats.1987, c. 1189, § 4.)

Notes of Decisions (2)

West's Ann. Cal. Water Code § 13373, CA WATER § 13373
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13374

# § 13374. Waste discharge requirements; equivalent to “permits” under federal act

Currentness

The term “waste discharge requirements” as referred to in this division is the equivalent of the term “permits” as used in the Federal Water Pollution Control Act, as amended.

**Credits**

(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972.)

Notes of Decisions (3)

West's Ann. Cal. Water Code § 13374, CA WATER § 13374
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13375

§ 13375. Radiological, chemical or biological warfare agents; discharge prohibited

Currentness

The discharge of any radiological, chemical, or biological warfare agent into the waters of the state is hereby prohibited.

**Credits**
(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972.)

West's Ann. Cal. Water Code § 13375, CA WATER § 13375
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13376

# § 13376. Discharging pollutants or dredged or fill material or operating treatment works; reports of discharges or proposed discharges; prohibited discharges; exceptions

Effective: January 1, 2011
Currentness

A person who discharges pollutants or proposes to discharge pollutants to the navigable waters of the United States within the jurisdiction of this state or a person who discharges dredged or fill material or proposes to discharge dredged or fill material into the navigable waters of the United States within the jurisdiction of this state shall file a report of the discharge in compliance with the procedures set forth in Section 13260. Unless required by the state board or a regional board, a report need not be filed under this section for discharges that are not subject to the permit application requirements of the Federal Water Pollution Control Act, as amended. [1] A person who proposes to discharge pollutants or dredged or fill material or to operate a publicly owned treatment works or other treatment works treating domestic sewage shall file a report at least 180 days in advance of the date on which it is desired to commence the discharge of pollutants or dredged or fill material or the operation of the treatment works. A person who owns or operates a publicly owned treatment works or other treatment works treating domestic sewage, which treatment works commenced operation before January 1, 1988, and does not discharge to navigable waters of the United States, shall file a report within 45 days of a written request by a regional board or the state board, or within 45 days after the state has an approved permit program for the use and disposal of sewage sludge, whichever occurs earlier. The discharge of pollutants or dredged or fill material or the operation of a publicly owned treatment works or other treatment works treating domestic sewage by any person, except as authorized by waste discharge requirements or dredged or fill material permits, is prohibited. This prohibition does not apply to discharges or operations if a state or federal permit is not required under the Federal Water Pollution Control Act, as amended.

**Credits**
(Added by Stats.1987, c. 1189, § 6. Amended by Stats.2010, c. 288 (S.B.1169), § 32.)

Notes of Decisions (11)

Footnotes
1 33 U.S.C.A. § 1251 et seq.
West's Ann. Cal. Water Code § 13376, CA WATER § 13376
Current with all laws through Ch. 870 of 2019 Reg.Sess.

End of Document

KeyCite Yellow Flag - Negative Treatment
Unconstitutional or PreemptedLimited on Preemption Grounds by Karuk Tribe of Northern California v. California Regional Water Quality Control Bd., North Coast Region, Cal.App. 1 Dist., Mar. 30, 2010

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13377

# § 13377. Issuance of waste discharge requirements and dredged or fill material permits

Currentness

Notwithstanding any other provision of this division, the state board or the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge requirements and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.

**Credits**

(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972. Amended by Stats.1978, c. 618, p. 2068, § 1; Stats.1978, c. 746, p. 2344, § 3.)

**Editors' Notes**

**VALIDITY**

*For validity of this section, see Karuk Tribe of Northern California v. California Regional Water Quality Control Bd., North Coast Region (App. 1 Dist. 2010) 108 Cal.Rptr.3d 40, 183 Cal.App.4th 330.*

Notes of Decisions (13)

West's Ann. Cal. Water Code § 13377, CA WATER § 13377
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13378

# § 13378. Adoption of waste discharge requirements and dredged or fill material permits; notice and hearing; term

Currentness

Waste discharge requirements and dredged or fill material permits shall be adopted only after notice and any necessary hearing. Such requirements or permits shall be adopted for a fixed term not to exceed five years for any proposed discharge, existing discharge, or any material change therein.

**Credits**

(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972. Amended by Stats.1978, c. 746, p. 2344, § 4.)

Notes of Decisions (2)

West's Ann. Cal. Water Code § 13378, CA WATER § 13378
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**


KeyCite Red Flag - Severe Negative Treatment
KeyCite Red Flag Negative Treatment§ 13379. Repealed by Stats.1978, c. 618, p. 2069, § 2

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13379

§ 13379. Repealed by Stats.1978, c. 618, p. 2069, § 2

Currentness

West's Ann. Cal. Water Code § 13379, CA WATER § 13379
Current with all laws through Ch. 870 of 2019 Reg.Sess.

End of Document

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13380

# § 13380. Review of waste discharge requirements and dredged or fill material permits

Currentness

Any waste discharge requirements or dredged or fill material permits adopted under this chapter shall be reviewed at least every five years and, if appropriate, revised.

**Credits**

(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972. Amended by Stats.1978, c. 746, p. 2344, § 5.)

West's Ann. Cal. Water Code § 13380, CA WATER § 13380
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13381

# § 13381. Termination or modification of waste discharge requirements and dredged or fill material permits

Currentness

Waste discharge requirements or dredged or fill material permits may be terminated or modified for cause, including, but not limited to, all of the following:

(a) Violation of any condition contained in the requirements or permits.

(b) Obtaining the requirements by misrepresentation, or failure to disclose fully all relevant facts.

(c) A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

**Credits**
(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972. Amended by Stats.1978, c. 746, p. 2344, § 6.)

West's Ann. Cal. Water Code § 13381, CA WATER § 13381
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13382

# § 13382. Control of disposal of pollutants into wells or surrounding groundwater

Currentness

Waste discharge requirements shall be adopted to control the disposal of pollutants into wells or in areas where pollutants may enter into a well from the surrounding groundwater.

**Credits**

(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972. Amended by Stats.1984, c. 1461, § 1.)

West's Ann. Cal. Water Code § 13382, CA WATER § 13382
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13382.5

# § 13382.5. Discharge of pollutants from a point source to aquaculture project

Currentness

Waste discharge requirements shall be adopted to permit the discharge of a specific pollutant or pollutants in a controlled manner from a point source to a defined managed aquaculture project if such discharge meets all applicable requirements of the Federal Water Pollution Control Act [1] and acts amendatory thereof and supplementary thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans.

**Credits**

(Added by Stats.1978, c. 618, p. 2069, § 3.)

Footnotes

1 33 U.S.C.A. § 1251 et seq.

West's Ann. Cal. Water Code § 13382.5, CA WATER § 13382.5

Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13383

# § 13383. Monitoring, inspection, entry, reporting, and recordkeeping requirements; establishment and maintenance; inspections

Effective: January 1, 2004
Currentness

(a) The state board or a regional board may establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Section 13160, 13376, or 13377 or by subdivisions (b) and (c) of this section, for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge.

(b) The state board or the regional boards may require any person subject to this section to establish and maintain monitoring equipment or methods, including, where appropriate, biological monitoring methods, sample effluent as prescribed, and provide other information as may be reasonably required.

(c) The state board or a regional board may inspect the facilities of any person subject to this section pursuant to the procedure set forth in subdivision (c) of Section 13267.

**Credits**
(Added by Stats.1987, c. 1189, § 8. Amended by Stats.2003, c. 683 (A.B.897), § 6.)

West's Ann. Cal. Water Code § 13383, CA WATER § 13383
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13383.5

# § 13383.5. Storm water discharge; monitoring requirements; application to specified municipalities and regulated industries

Effective: January 1, 2002
Currentness

(a) As used in this section, "regulated municipalities and industries" means the municipalities and industries required to obtain a storm water permit under Section 402(p) of the Clean Water Act (33 U.S.C. Sec. 1342(p)) and implementing regulations.

(b) This section only applies to regulated municipalities that were subject to a storm water permit on or before December 31, 2001, and to regulated industries that are subject to the General Permit for Storm Water Discharges Associated with Industrial Activities Excluding Construction Activities.

(c) Before January 1, 2003, the state board shall develop minimum monitoring requirements for each regulated municipality and minimum standard monitoring requirements for regulated industries. This program shall include, but is not limited to, all of the following:

(1) Standardized methods for collection of storm water samples.

(2) Standardized methods for analysis of storm water samples.

(3) A requirement that every sample analysis under this program be completed by a state certified laboratory or by the regulated municipality or industry in the field in accordance with the quality assurance and quality control protocols established pursuant to this section.

(4) A standardized reporting format.

(5) Standard sampling and analysis programs for quality assurance and quality control.

(6) Minimum detection limits.

(7) Annual reporting requirements for regulated municipalities and industries.

  

(8) For the purposes of determining constituents to be sampled for, sampling intervals, and sampling frequencies, to be included in a municipal storm water permit monitoring program, the regional board shall consider the following information, as the regional board determines to be applicable:

(A) Discharge characterization monitoring data.

(B) Water quality data collected through the permit monitoring program.

(C) Applicable water quality data collected, analyzed, and reported by federal, state, and local agencies, and other public and private entities.

(D) Any applicable listing under Section 303(d) of the Clean Water Act (33 U.S.C. Sec. 1313).

(E) Applicable water quality objectives and criteria established in accordance with the regional board basin plans, statewide plans, and federal regulations.

(F) Reports and studies regarding source contribution of pollutants in runoff not based on direct water quality measurements.

(d) The requirements prescribed pursuant to this section shall be included in all storm water permits for regulated municipalities and industries that are reissued following development of the requirements described in subdivision (c). Those permits shall include these provisions on or before July 1, 2008. In a year in which the Legislature appropriates sufficient funds for that purpose, the state board shall make available to the public via the Internet a summary of the results obtained from storm water monitoring conducted in accordance with this section.

**Credits**
(Added by Stats.2001, c. 492 (S.B.72), § 1.)

West's Ann. Cal. Water Code § 13383.5, CA WATER § 13383.5
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13383.6

# § 13383.6. Educational materials on stormwater pollution; permits issued with the requirement; satisfaction

Effective: January 1, 2006
Currentness

On and after January 1, 2007, if a regional board or the state board issues a municipal stormwater permit pursuant to Section 402(p) of the Clean Water Act (33 U.S.C. Sec. 1342(p)) that includes a requirement to provide elementary and secondary public schools with educational materials on stormwater pollution, the permittee may satisfy the requirement, upon approval by the regional board or state board, by contributing an equivalent amount of funds to the Environmental Education Account established pursuant to subdivision (a) of Section 71305 of the Public Resources Code.

**Credits**
(Added by Stats.2005, c. 581 (A.B.1721), § 7.)

West's Ann. Cal. Water Code § 13383.6, CA WATER § 13383.6
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13383.7

# § 13383.7. Comprehensive guidance document for evaluating and measuring effectiveness of municipal stormwater management programs; quantifiable measures; reference to guidelines in establishing municipal stormwater programs and permits

Effective: January 1, 2008
Currentness

(a) No later than July 1, 2009, and after holding public workshops and soliciting public comments, the state board shall develop a comprehensive guidance document for evaluating and measuring the effectiveness of municipal stormwater management programs undertaken, and permits issued, in accordance with Section 402(p) of the Clean Water Act (33 U.S.C. Sec. 1342(p)) and this division.

(b) For the purpose of implementing subdivision (a), the state board shall promote the use of quantifiable measures for evaluating the effectiveness of municipal stormwater management programs and provide for the evaluation of, at a minimum, all of the following:

(1) Compliance with stormwater permitting requirements, including all of the following:

(A) Inspection programs.

(B) Construction controls.

(C) Elimination of unlawful discharges.

(D) Public education programs.

(E) New development and redevelopment requirements.

(2) Reduction of pollutant loads from pollution sources.

(3) Reduction of pollutants or stream erosion due to stormwater discharge.

(4) Improvements in the quality of receiving water in accordance with water quality standards.

  

(c) The state board and the regional boards shall refer to the guidance document developed pursuant to subdivision (a) when establishing requirements in municipal stormwater programs and permits.

**Credits**

(Added by Stats.2007, c. 610 (A.B.739), § 6.)

West's Ann. Cal. Water Code § 13383.7, CA WATER § 13383.7
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13383.8

# § 13383.8. Stormwater management task force; report on implementation of priority goals and objectives of Ocean Protection Council's strategic plan

Effective: January 1, 2008
Currentness

(a) The state board shall appoint a stormwater management task force comprised of public agencies, representatives of the regulated community, and nonprofit organizations with expertise in water quality and stormwater management. The task force shall provide advice to the state board on its stormwater management program that may include, but is not limited to, program priorities, funding criteria, project selection, and interagency coordination of state programs that address stormwater management.

(b) The state board shall submit a report, including, but not limited to, stormwater and other polluted runoff control information, to the Ocean Protection Council no later than January 1, 2009, on the way in which the state board is implementing the priority goals and objectives of the council's strategic plan.

**Credits**
(Added by Stats.2007, c. 610 (A.B.739), § 7.)

West's Ann. Cal. Water Code § 13383.8, CA WATER § 13383.8
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13383.9

§ 13383.9. Online resource center; available information

Effective: January 1, 2017
Currentness

The state board shall establish an online resource center that addresses measures available for municipalities to comply with municipal stormwater permit requirements and may include the following information:

(a) Links to the following:

(1) Relevant state, federal, and local agencies regarding municipal separate storm sewer system national pollutant discharge elimination system permits.

(2) Water quality mitigation measures for watershed management programs or enhanced watershed management programs.

(3) Various regional agencies related to stormwater, including, but not limited to, public works departments and special districts.

(b) A library of scientific studies relevant to stormwater issues confronting our communities.

**Credits**
(Added by Stats.2016, c. 153 (S.B.1260), § 1, eff. Jan. 1, 2017.)

West's Ann. Cal. Water Code § 13383.9, CA WATER § 13383.9
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13383.10

# § 13383.10. Posting of Standard Industrial Classification codes relating to stormwater discharge on State Board internet website

Effective: January 1, 2020
Currentness

On or before April 1, 2020, the state board shall post on its internet website, for the purpose of the determinations made by the city pursuant to Section 16000.3 of the Business and Professions Code and a county pursuant to Section 16100.3 of the Business and Professions Code, a list of all Standard Industrial Classification codes applicable to a General Permit for Stormwater Discharges Associated with Industrial Activities Excluding Construction Activities, as referenced in Section 13383.5, and known as the Industrial General Permit. The state board shall update that list on its internet website within 90 days of any final updates by the United States Department of Labor or the United States Environmental Protection Agency.

**Credits**
(Added by Stats.2019, c. 470 (S.B.205), § 4, eff. Jan. 1, 2020.)

West's Ann. Cal. Water Code § 13383.10, CA WATER § 13383.10
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13384

# § 13384. Applications for requirements and permits; notice to public and affected states; hearing

Currentness

The state board or the regional boards shall ensure that the public, and that any other state, the waters of which may be affected by any discharge of pollutants or dredged or fill material to navigable waters within this state, shall receive notice of each application for requirements or report of waste discharge or application for a dredged or fill material permit or report of dredged or fill material discharge and are provided an opportunity for public hearing before adoption of such requirements or permit.

**Credits**

(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972. Amended by Stats.1978, c. 746, p. 2344, § 8.)

West's Ann. Cal. Water Code § 13384, CA WATER § 13384
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13385

# § 13385. Violations; civil liability; applicability; compliance projects; annual report

Effective: January 1, 2018
Currentness

(a) A person who violates any of the following shall be liable civilly in accordance with this section:

(1) Section 13375 or 13376.

(2) A waste discharge requirement or dredged or fill material permit issued pursuant to this chapter or any water quality certification issued pursuant to Section 13160.

(3) A requirement established pursuant to Section 13383.

(4) An order or prohibition issued pursuant to Section 13243 or Article 1 (commencing with Section 13300) of Chapter 5, if the activity subject to the order or prohibition is subject to regulation under this chapter.

(5) A requirement of Section 301, 302, 306, 307, 308, 318, 401, or 405 of the federal Clean Water Act (33 U.S.C. Sec. 1311, 1312, 1316, 1317, 1318, 1341, or 1345), as amended.

(6) A requirement imposed in a pretreatment program approved pursuant to waste discharge requirements issued under Section 13377 or approved pursuant to a permit issued by the administrator.

(b)(1) Civil liability may be imposed by the superior court in an amount not to exceed the sum of both of the following:

(A) Twenty-five thousand dollars ($25,000) for each day in which the violation occurs.

(B) Where there is a discharge, any portion of which is not susceptible to cleanup or is not cleaned up, and the volume discharged but not cleaned up exceeds 1,000 gallons, an additional liability not to exceed twenty-five dollars ($25) multiplied by the number of gallons by which the volume discharged but not cleaned up exceeds 1,000 gallons.

(2) The Attorney General, upon request of a regional board or the state board, shall petition the superior court to impose the liability.

  

(c) Civil liability may be imposed administratively by the state board or a regional board pursuant to Article 2.5 (commencing with Section 13323) of Chapter 5 in an amount not to exceed the sum of both of the following:

(1) Ten thousand dollars ($10,000) for each day in which the violation occurs.

(2) Where there is a discharge, any portion of which is not susceptible to cleanup or is not cleaned up, and the volume discharged but not cleaned up exceeds 1,000 gallons, an additional liability not to exceed ten dollars ($10) multiplied by the number of gallons by which the volume discharged but not cleaned up exceeds 1,000 gallons.

(d) For purposes of subdivisions (b) and (c), "discharge" includes any discharge to navigable waters of the United States, any introduction of pollutants into a publicly owned treatment works, or any use or disposal of sewage sludge.

(e) In determining the amount of any liability imposed under this section, the regional board, the state board, or the superior court, as the case may be, shall take into account the nature, circumstances, extent, and gravity of the violation or violations, whether the discharge is susceptible to cleanup or abatement, the degree of toxicity of the discharge, and, with respect to the violator, the ability to pay, the effect on its ability to continue its business, any voluntary cleanup efforts undertaken, any prior history of violations, the degree of culpability, economic benefit or savings, if any, resulting from the violation, and other matters that justice may require. At a minimum, liability shall be assessed at a level that recovers the economic benefits, if any, derived from the acts that constitute the violation.

(f)(1) Except as provided in paragraph (2), for the purposes of this section, a single operational upset that leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation.

(2)(A) For the purposes of subdivisions (h) and (i), a single operational upset in a wastewater treatment unit that treats wastewater using a biological treatment process shall be treated as a single violation, even if the operational upset results in violations of more than one effluent limitation and the violations continue for a period of more than one day, if all of the following apply:

(i) The discharger demonstrates all of the following:

(I) The upset was not caused by wastewater treatment operator error and was not due to discharger negligence.

(II) But for the operational upset of the biological treatment process, the violations would not have occurred nor would they have continued for more than one day.

(III) The discharger carried out all reasonable and immediately feasible actions to reduce noncompliance with the applicable effluent limitations.

(ii) The discharger is implementing an approved pretreatment program, if so required by federal or state law.

  

(B) Subparagraph (A) only applies to violations that occur during a period for which the regional board has determined that violations are unavoidable, but in no case may that period exceed 30 days.

(g) Remedies under this section are in addition to, and do not supersede or limit, any other remedies, civil or criminal, except that no liability shall be recoverable under Section 13261, 13265, 13268, or 13350 for violations for which liability is recovered under this section.

(h)(1) Notwithstanding any other provision of this division, and except as provided in subdivisions (j), (k), and (*l*), a mandatory minimum penalty of three thousand dollars ($3,000) shall be assessed for each serious violation.

(2) For the purposes of this section, a "serious violation" means any waste discharge that violates the effluent limitations contained in the applicable waste discharge requirements for a Group II pollutant, as specified in Appendix A to Section 123.45 of Title 40 of the Code of Federal Regulations, by 20 percent or more or for a Group I pollutant, as specified in Appendix A to Section 123.45 of Title 40 of the Code of Federal Regulations, by 40 percent or more.

(i)(1) Notwithstanding any other provision of this division, and except as provided in subdivisions (j), (k), and (*l*), a mandatory minimum penalty of three thousand dollars ($3,000) shall be assessed for each violation whenever the person does any of the following four or more times in any period of six consecutive months, except that the requirement to assess the mandatory minimum penalty shall not be applicable to the first three violations:

(A) Violates a waste discharge requirement effluent limitation.

(B) Fails to file a report pursuant to Section 13260.

(C) Files an incomplete report pursuant to Section 13260.

(D) Violates a toxicity effluent limitation contained in the applicable waste discharge requirements where the waste discharge requirements do not contain pollutant-specific effluent limitations for toxic pollutants.

(2) For the purposes of this section, a "period of six consecutive months" means the period commencing on the date that one of the violations described in this subdivision occurs and ending 180 days after that date.

(j) Subdivisions (h) and (i) do not apply to any of the following:

(1) A violation caused by one or any combination of the following:

(A) An act of war.

  

(B) An unanticipated, grave natural disaster or other natural phenomenon of an exceptional, inevitable, and irresistible character, the effects of which could not have been prevented or avoided by the exercise of due care or foresight.

(C) An intentional act of a third party, the effects of which could not have been prevented or avoided by the exercise of due care or foresight.

(D)(i) The operation of a new or reconstructed wastewater treatment unit during a defined period of adjusting or testing, not to exceed 90 days for a wastewater treatment unit that relies on a biological treatment process and not to exceed 30 days for any other wastewater treatment unit, if all of the following requirements are met:

(I) The discharger has submitted to the regional board, at least 30 days in advance of the operation, an operations plan that describes the actions the discharger will take during the period of adjusting and testing, including steps to prevent violations and identifies the shortest reasonable time required for the period of adjusting and testing, not to exceed 90 days for a wastewater treatment unit that relies on a biological treatment process and not to exceed 30 days for any other wastewater treatment unit.

(II) The regional board has not objected in writing to the operations plan.

(III) The discharger demonstrates that the violations resulted from the operation of the new or reconstructed wastewater treatment unit and that the violations could not have reasonably been avoided.

(IV) The discharger demonstrates compliance with the operations plan.

(V) In the case of a reconstructed wastewater treatment unit, the unit relies on a biological treatment process that is required to be out of operation for at least 14 days in order to perform the reconstruction, or the unit is required to be out of operation for at least 14 days and, at the time of the reconstruction, the cost of reconstructing the unit exceeds 50 percent of the cost of replacing the wastewater treatment unit.

(ii) For the purposes of this section, “wastewater treatment unit” means a component of a wastewater treatment plant that performs a designated treatment function.

(2)(A) Except as provided in subparagraph (B), a violation of an effluent limitation where the waste discharge is in compliance with either a cease and desist order issued pursuant to Section 13301 or a time schedule order issued pursuant to Section 13300, if all of the following requirements are met:

(i) The cease and desist order or time schedule order is issued after January 1, 1995, but not later than July 1, 2000, specifies the actions that the discharger is required to take in order to correct the violations that would otherwise be subject to subdivisions (h) and (i), and the date by which compliance is required to be achieved and, if the final date by which compliance is required to be achieved is later than one year from the effective date of the cease and desist order or time schedule order, specifies the interim requirements by which progress towards compliance will be measured and the date by which the discharger will be in compliance with each interim requirement.

  

(ii) The discharger has prepared and is implementing in a timely and proper manner, or is required by the regional board to prepare and implement, a pollution prevention plan that meets the requirements of Section 13263.3.

(iii) The discharger demonstrates that it has carried out all reasonable and immediately feasible actions to reduce noncompliance with the waste discharge requirements applicable to the waste discharge and the executive officer of the regional board concurs with the demonstration.

(B) Subdivisions (h) and (i) shall become applicable to a waste discharge on the date the waste discharge requirements applicable to the waste discharge are revised and reissued pursuant to Section 13380, unless the regional board does all of the following on or before that date:

(i) Modifies the requirements of the cease and desist order or time schedule order as may be necessary to make it fully consistent with the reissued waste discharge requirements.

(ii) Establishes in the modified cease and desist order or time schedule order a date by which full compliance with the reissued waste discharge requirements shall be achieved. For the purposes of this subdivision, the regional board may not establish this date later than five years from the date the waste discharge requirements were required to be reviewed pursuant to Section 13380. If the reissued waste discharge requirements do not add new effluent limitations or do not include effluent limitations that are more stringent than those in the original waste discharge requirements, the date shall be the same as the final date for compliance in the original cease and desist order or time schedule order or five years from the date that the waste discharge requirements were required to be reviewed pursuant to Section 13380, whichever is earlier.

(iii) Determines that the pollution prevention plan required by clause (ii) of subparagraph (A) is in compliance with the requirements of Section 13263.3 and that the discharger is implementing the pollution prevention plan in a timely and proper manner.

(3) A violation of an effluent limitation where the waste discharge is in compliance with either a cease and desist order issued pursuant to Section 13301 or a time schedule order issued pursuant to Section 13300 or 13308, if all of the following requirements are met:

(A) The cease and desist order or time schedule order is issued on or after July 1, 2000, and specifies the actions that the discharger is required to take in order to correct the violations that would otherwise be subject to subdivisions (h) and (i).

(B) The regional board finds that, for one of the following reasons, the discharger is not able to consistently comply with one or more of the effluent limitations established in the waste discharge requirements applicable to the waste discharge:

(i) The effluent limitation is a new, more stringent, or modified regulatory requirement that has become applicable to the waste discharge after the effective date of the waste discharge requirements and after July 1, 2000, new or modified control measures are necessary in order to comply with the effluent limitation, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

  

(ii) New methods for detecting or measuring a pollutant in the waste discharge demonstrate that new or modified control measures are necessary in order to comply with the effluent limitation and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

(iii) Unanticipated changes in the quality of the municipal or industrial water supply available to the discharger are the cause of unavoidable changes in the composition of the waste discharge, the changes in the composition of the waste discharge are the cause of the inability to comply with the effluent limitation, no alternative water supply is reasonably available to the discharger, and new or modified measures to control the composition of the waste discharge cannot be designed, installed, and put into operation within 30 calendar days.

(iv) The discharger is a publicly owned treatment works located in Orange County that is unable to meet effluent limitations for biological oxygen demand, suspended solids, or both, because the publicly owned treatment works meets all of the following criteria:

(I) Was previously operating under modified secondary treatment requirements pursuant to Section 301(h) of the Clean Water Act (33 U.S.C. Sec. 1311(h)).

(II) Did vote on July 17, 2002, not to apply for a renewal of the modified secondary treatment requirements.

(III) Is in the process of upgrading its treatment facilities to meet the secondary treatment standards required by Section 301(b)(1)(B) of the Clean Water Act (33 U.S.C. Sec. 1311(b)(1)(B)).

(C)(i) The regional board establishes a time schedule for bringing the waste discharge into compliance with the effluent limitation that is as short as possible, taking into account the technological, operational, and economic factors that affect the design, development, and implementation of the control measures that are necessary to comply with the effluent limitation. Except as provided in clause (ii), for the purposes of this subdivision, the time schedule shall not exceed five years in length.

(ii)(I) For purposes of the upgrade described in subclause (III) of clause (iv) of subparagraph (B), the time schedule shall not exceed 10 years in length.

(II) Following a public hearing, and upon a showing that the discharger is making diligent progress toward bringing the waste discharge into compliance with the effluent limitation, the regional board may extend the time schedule for an additional period not exceeding five years in length, if the discharger demonstrates that the additional time is necessary to comply with the effluent limitation. This subclause does not apply to a time schedule described in subclause (I).

(iii) If the time schedule exceeds one year from the effective date of the order, the schedule shall include interim requirements and the dates for their achievement. The interim requirements shall include both of the following:

(I) Effluent limitations for the pollutant or pollutants of concern.

(II) Actions and milestones leading to compliance with the effluent limitation.

  

(D) The discharger has prepared and is implementing in a timely and proper manner, or is required by the regional board to prepare and implement, a pollution prevention plan pursuant to Section 13263.3.

(k)(1) In lieu of assessing all or a portion of the mandatory minimum penalties pursuant to subdivisions (h) and (i) against a publicly owned treatment works serving a small community, the state board or the regional board may elect to require the publicly owned treatment works to spend an equivalent amount towards the completion of a compliance project proposed by the publicly owned treatment works, if the state board or the regional board finds all of the following:

(A) The compliance project is designed to correct the violations within five years.

(B) The compliance project is in accordance with the enforcement policy of the state board, excluding any provision in the policy that is inconsistent with this section.

(C) The publicly owned treatment works has prepared a financing plan to complete the compliance project.

(2) For the purposes of this subdivision, "a publicly owned treatment works serving a small community" means a publicly owned treatment works serving a population of 20,000 persons or fewer or a rural county, with a financial hardship as determined by the state board after considering such factors as median income of the residents, rate of unemployment, or low population density in the service area of the publicly owned treatment works.

(*l*)(1) In lieu of assessing penalties pursuant to subdivision (h) or (i), the state board or the regional board, with the concurrence of the discharger, may direct a portion of the penalty amount to be expended on a supplemental environmental project in accordance with the enforcement policy of the state board. If the penalty amount exceeds fifteen thousand dollars ($15,000), the portion of the penalty amount that may be directed to be expended on a supplemental environmental project may not exceed fifteen thousand dollars ($15,000) plus 50 percent of the penalty amount that exceeds fifteen thousand dollars ($15,000).

(2) For the purposes of this section, a "supplemental environmental project" means an environmentally beneficial project that a person agrees to undertake, with the approval of the regional board, that would not be undertaken in the absence of an enforcement action under this section.

(3) This subdivision applies to the imposition of penalties pursuant to subdivision (h) or (i) on or after January 1, 2003, without regard to the date on which the violation occurs.

(m) The Attorney General, upon request of a regional board or the state board, shall petition the appropriate court to collect any liability or penalty imposed pursuant to this section. Any person who fails to pay on a timely basis any liability or penalty imposed under this section shall be required to pay, in addition to that liability or penalty, interest, attorney's fees, costs for collection proceedings, and a quarterly nonpayment penalty for each quarter during which the failure to pay persists. The nonpayment penalty shall be in an amount equal to 20 percent of the aggregate amount of the person's penalty and nonpayment penalties that are unpaid as of the beginning of the quarter.

  

(n)(1) Subject to paragraph (2), funds collected pursuant to this section shall be deposited in the State Water Pollution Cleanup and Abatement Account.

(2)(A) Notwithstanding any other provision of law, moneys collected for a violation of a water quality certification in accordance with paragraph (2) of subdivision (a) or for a violation of Section 401 of the federal Clean Water Act (33 U.S.C. Sec. 1341) in accordance with paragraph (5) of subdivision (a) shall be deposited in the Waste Discharge Permit Fund and separately accounted for in that fund.

(B) The funds described in subparagraph (A) shall be expended by the state board, upon appropriation by the Legislature, to assist regional boards, and other public agencies with authority to clean up waste or abate the effects of the waste, in cleaning up or abating the effects of the waste on waters of the state or for the purposes authorized in Section 13443.

(*o*) The state board shall continuously report and update information on its Internet Web site. The state board shall report annually on or before December 31 regarding its enforcement activities. The information shall include all of the following:

(1) A compilation of the number of violations of waste discharge requirements in the previous calendar year, including stormwater enforcement violations.

(2) A record of the formal and informal compliance and enforcement actions taken for each violation, including stormwater enforcement actions.

(3) An analysis of the effectiveness of current enforcement policies, including mandatory minimum penalties.

(p) The amendments made to subdivisions (f), (h), (i), and (j) during the second year of the 2001-02 Regular Session apply only to violations that occur on or after January 1, 2003.

**Credits**

(Added by Stats.1987, c. 1189, § 10. Amended by Stats.1999, c. 92 (A.B.1104), § 6; Stats.1999, c. 93 (S.B.709), § 6; Stats.2000, c. 807 (S.B.2165), § 2; Stats.2001, c. 869 (A.B.1664), § 7; Stats.2002, c. 995 (A.B.2351), § 1; Stats.2002, c. 1019 (A.B.1969), § 2, eff. Sept. 28, 2002; Stats.2002, c. 1019 (A.B.1969), § 3, eff. Sept. 28, 2002, operative Jan. 1, 2003; Stats.2003, c. 683 (A.B.897), § 7; Stats.2004, c. 644 (A.B.2701), § 41; Stats.2006, c. 404 (S.B.1733), § 3; Stats.2007, c. 130 (A.B.299), § 239; Stats.2010, c. 645 (S.B.1284), § 1; Stats.2011, c. 296 (A.B.1023), § 314; Stats.2017, c. 524 (A.B.355), § 3, eff. Jan. 1, 2018.)

Notes of Decisions (9)

West's Ann. Cal. Water Code § 13385, CA WATER § 13385
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13385.1

# § 13385.1. Discharge monitoring reports; serious violation; time to file report and penalties for failure to file; deposit and expenditure of penalty funds; "effluent limitation" defined

Effective: January 1, 2011
Currentness

(a)(1) For the purposes of subdivision (h) of Section 13385, a "serious violation" also means a failure to file a discharge monitoring report required pursuant to Section 13383 for each complete period of 30 days following the deadline for submitting the report, if the report is designed to ensure compliance with limitations contained in waste discharge requirements that contain effluent limitations. This paragraph applies only to violations that occur on or after January 1, 2004.

(2)(A) Notwithstanding paragraph (1), a failure to file a discharge monitoring report is not a serious violation for purposes of subdivision (h) of Section 13385 at any time prior to the date a discharge monitoring report is required to be filed or within 30 days after receiving written notice from the state board or a regional board of the need to file a discharge monitoring report, if the discharger submits a written statement to the state board or the regional board that includes both of the following:

(i) A statement that there were no discharges to waters of the United States reportable under the applicable waste discharge requirements during the relevant monitoring period.

(ii) The reason or reasons the required report was not submitted to the regional board by the deadline for filing that report.

(B) Upon the request of the state board or regional board, the discharger may be required to support the statement with additional explanation or evidence.

(C) If, in a statement submitted pursuant to subparagraph (A), the discharger willfully states as true any material fact that he or she knows to be false, that person shall be subject to a civil penalty not exceeding ten thousand dollars ($10,000). Any public prosecutor may bring an action for a civil penalty under this subparagraph in the name of the people of the State of California, and the penalty imposed shall be enforced as a civil judgment.

(D) Notwithstanding subparagraph (A), the failure to file a discharge monitoring report is subject to penalties in accordance with subdivisions (c) and (e) of Section 13385.

(b)(1) Notwithstanding paragraph (1) of subdivision (a), a mandatory minimum penalty shall continue to apply and shall be assessed pursuant to subdivision (h) of Section 13385, but only for each required report that is not timely filed, and shall not be separately assessed for each 30-day period following the deadline for submitting the report, if both of the following conditions are met:

  

(A) The discharger did not on any occasion previously receive, from the state board or a regional board, a complaint to impose liability pursuant to subdivision (b) or (c) of Section 13385 arising from a failure to timely file a discharge monitoring report, a notice of violation for failure to timely file a discharge monitoring report, or a notice of the obligation to file a discharge monitoring report required pursuant to Section 13383, in connection with its corresponding waste discharge requirements.

(B) The discharges during the period or periods covered by the report do not violate effluent limitations, as defined in subdivision (d), contained in waste discharge requirements.

(2) Paragraph (1) shall only apply to a discharger who does both of the following:

(A) Files a discharge monitoring report that had not previously been timely filed within 30 days after the discharger receives written notice, including notice transmitted by electronic mail, from the state board or regional board concerning the failure to timely file the report.

(B) Pays all penalties assessed by the state board or regional board in accordance with paragraph (1) within 30 days after an order is issued to pay these penalties pursuant to Section 13385.

(3) Notwithstanding paragraph (1), the failure to file a discharge monitoring report is subject to penalties in accordance with subdivisions (c) and (e) of Section 13385.

(4) This subdivision shall become inoperative on January 1, 2014.

(c)(1) Notwithstanding any other provision of law, moneys collected pursuant to this section for a failure to timely file a report, as described in subdivision (a), shall be deposited in the State Water Pollution Cleanup and Abatement Account.

(2) Notwithstanding Section 13340 of the Government Code, the funds described in paragraph (1) are continuously appropriated, without regard to fiscal years, to the state board for expenditure by the state board to assist regional boards, and other public agencies with authority to clean up waste or abate the effects of the waste, in responding to significant water pollution problems.

(d) For the purposes of this section, paragraph (2) of subdivision (f) of Section 13385, and subdivisions (h), (i), and (j) of Section 13385 only, "effluent limitation" means a numeric restriction or a numerically expressed narrative restriction, on the quantity, discharge rate, concentration, or toxicity units of a pollutant or pollutants that may be discharged from an authorized location. An effluent limitation may be final or interim, and may be expressed as a prohibition. An effluent limitation, for those purposes, does not include a receiving water limitation, a compliance schedule, or a best management practice.

(e) The amendments made to this section by Senate Bill 1284 of the 2009-10 Regular Session of the Legislature shall apply to violations for which an administrative civil liability complaint or a judicial complaint has not been filed before July 1, 2010, without regard to the date on which the violations occurred.

  

**Credits**

(Added by Stats.2003, c. 609 (A.B.1541), § 1. Amended by Stats.2005, c. 145 (A.B.495), § 1; Stats.2006, c. 538 (S.B.1852), § 677; Stats.2008, c. 760 (A.B.1338), § 23, eff. Sept. 30, 2008; Stats.2010, c. 645 (S.B.1284), § 2.)

**Editors' Notes**

**APPLICATION**

<For application of the amendment by Stats.2010, c. 645 (S.B.1284), see the terms of this section.>

West's Ann. Cal. Water Code § 13385.1, CA WATER § 13385.1
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13385.2

# § 13385.2. Publicly owned treatment works (POTW) to demonstrate that financing plan is designed to generate sufficient funding to complete compliance program

Effective: September 29, 2006
Currentness

(a) Prior to the state board or regional board making its findings pursuant to subdivision (k) of Section 13385, the publicly owned treatment works shall demonstrate to the satisfaction of the state board or regional board that the financing plan prepared pursuant to subparagraph (C) of paragraph (1) of subdivision (k) of that section is designed to generate sufficient funding to complete the compliance project within the time period specified pursuant to subparagraph (A) of paragraph (1) of subdivision (k) of that section.

(b) This section shall only become operative if Senate Bill 1733 [1] of the 2005-06 Regular Session is enacted and becomes operative.

**Credits**
(Added by Stats.2006, c. 725 (A.B.1752), § 1, eff. Sept. 29, 2006.)

**Editors' Notes**

**OPERATIVE EFFECT**

<For operative effect of this section, see its terms.>

Footnotes
1 Stats.2006, c. 404 (S.B.1733).
West's Ann. Cal. Water Code § 13385.2, CA WATER § 13385.2
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13385.3

# § 13385.3. Operative effect

Effective: September 29, 2006
Currentness

(a) The amendments made to subdivision (k) of Section 13385 of the Water Code by Senate Bill 1733 [1] of the 2005-06 Regular Session shall become operative on July 1, 2007.

(b) This section shall only become operative if Senate Bill 1733 of the 2005-06 Regular Session is enacted and becomes operative.

**Credits**
(Added by Stats.2006, c. 725 (A.B.1752), § 2, eff. Sept. 29, 2006.)

Footnotes
1 Stats.2006, c. 404 (S.B.1733).
West's Ann. Cal. Water Code § 13385.3, CA WATER § 13385.3
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13386

# § 13386. Threatened or continuing violations or failure of discharger to comply with cost or charge; injunctions

Currentness

Upon any threatened or continuing violation of any of the requirements listed in paragraphs (1) to (6), inclusive, of subdivision (a) of Section 13385, or upon the failure of any discharger into a public treatment system to comply with any cost or charge adopted by any public agency under Section 204(b) of the Federal Water Pollution Control Act, as amended, [1] the Attorney General, upon the request of the state board or regional board shall petition the appropriate court for the issuance of a preliminary or permanent injunction, or both, as appropriate, restraining that person or persons from committing or continuing the violation. Subdivision (b) of Section 13331 shall be applicable to proceedings under this section.

**Credits**

(Added by Stats.1987, c. 1189, § 12. Amended by Stats.1996, c. 659 (A.B.3036), § 27.)

Footnotes

1 33 U.S.C.A. § 1284(b).

West's Ann. Cal. Water Code § 13386, CA WATER § 13386

Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13387

§ 13387. Violations; criminal penalties

Effective: October 1, 2011
Currentness

(a) Any person who knowingly or negligently does any of the following is subject to criminal penalties as provided in subdivisions (b), (c), and (d):

(1) Violates Section 13375 or 13376.

(2) Violates any waste discharge requirements or dredged or fill material permit issued pursuant to this chapter or any water quality certification issued pursuant to Section 13160.

(3) Violates any order or prohibition issued pursuant to Section 13243 or 13301, if the activity subject to the order or prohibition is subject to regulation under this chapter.

(4) Violates any requirement of Section 301, 302, 306, 307, 308, 318, 401, or 405 of the Clean Water Act (33 U.S.C. Sec. 1311, 1312, 1316, 1317, 1318, 1328, 1341, or 1345), as amended.

(5) Introduces into a sewer system or into a publicly owned treatment works any pollutant or hazardous substances that the person knew or reasonably should have known could cause personal injury or property damage.

(6) Introduces any pollutant or hazardous substance into a sewer system or into a publicly owned treatment works, except in accordance with any applicable pretreatment requirements, which causes the treatment works to violate waste discharge requirements.

(b) Any person who negligently commits any of the violations set forth in subdivision (a) shall, upon conviction, be punished by a fine of not less than five thousand dollars ($5,000), nor more than twenty-five thousand dollars ($25,000), for each day in which the violation occurs, by imprisonment for not more than one year in a county jail, or by both that fine and imprisonment. If a conviction of a person is for a violation committed after a first conviction of the person under this subdivision, subdivision (c), or subdivision (d), punishment shall be by a fine of not more than fifty thousand dollars ($50,000) for each day in which the violation occurs, by imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for 16, 20, or 24 months, or by both that fine and imprisonment.

  

(c) Any person who knowingly commits any of the violations set forth in subdivision (a) shall, upon conviction, be punished by a fine of not less than five thousand dollars ($5,000), nor more than fifty thousand dollars ($50,000), for each day in which the violation occurs, by imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code, or by both that fine and imprisonment. If a conviction of a person is for a violation committed after a first conviction of the person under this subdivision or subdivision (d), punishment shall be by a fine of not more than one hundred thousand dollars ($100,000) for each day in which the violation occurs, by imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for two, four, or six years, or by both that fine and imprisonment.

(d)(1) Any person who knowingly commits any of the violations set forth in subdivision (a), and who knows at the time that the person thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be punished by a fine of not more than two hundred fifty thousand dollars ($250,000), imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for 5, 10, or 15 years, or by both that fine and imprisonment. A person that is an organization shall, upon conviction under this subdivision, be subject to a fine of not more than one million dollars ($1,000,000). If a conviction of a person is for a violation committed after a first conviction of the person under this subdivision, the punishment shall be by a fine of not more than five hundred thousand dollars ($500,000), by imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for 10, 20, or 30 years, or by both that fine and imprisonment. A person that is an organization shall, upon conviction for a violation committed after a first conviction of the person under this subdivision, be subject to a fine of not more than two million dollars ($2,000,000). Any fines imposed pursuant to this subdivision shall be in addition to any fines imposed pursuant to subdivision (c).

(2) In determining whether a defendant who is an individual knew that the defendant's conduct placed another person in imminent danger of death or serious bodily injury, the defendant is responsible only for actual awareness or actual belief that the defendant possessed, and knowledge possessed by a person other than the defendant, but not by the defendant personally, cannot be attributed to the defendant.

(e) Any person who knowingly makes any false statement, representation, or certification in any record, report, plan, notice to comply, or other document filed with a regional board or the state board, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required under this division shall be punished by a fine of not more than twenty-five thousand dollars ($25,000), by imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for 16, 20, or 24 months, or by both that fine and imprisonment. If a conviction of a person is for a violation committed after a first conviction of the person under this subdivision, punishment shall be by a fine of not more than twenty- five thousand dollars ($25,000) per day of violation, by imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for two, three, or four years, or by both that fine and imprisonment.

(f) For purposes of this section, a single operational upset which leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation.

(g) For purposes of this section, “organization,” “serious bodily injury,” “person,” and “hazardous substance” shall have the same meaning as in Section 309(c) of the Clean Water Act (33 U.S.C. Sec. 1319(c)), as amended.

(h)(1) Subject to paragraph (2), funds collected pursuant to this section shall be deposited in the State Water Pollution Cleanup and Abatement Account.

  

(2)(A) Notwithstanding any other provision of law, fines collected for a violation of a water quality certification in accordance with paragraph (2) of subdivision (a) or for a violation of Section 401 of the Clean Water Act (33 U.S.C. Sec. 1341) in accordance with paragraph (4) of subdivision (a) shall be deposited in the Water Discharge Permit Fund and separately accounted for in that fund.

(B) The funds described in subparagraph (A) shall be expended by the state board, upon appropriation by the Legislature, to assist regional boards, and other public agencies with authority to clean up waste or abate the effects of the waste, in cleaning up or abating the effects of the waste on waters of the state, or for the purposes authorized in Section 13443.

**Credits**

(Added by Stats.1987, c. 1189, § 14. Amended by Stats.1996, c. 775 (A.B.2937), § 5; Stats.2001, c. 869 (A.B.1664), § 8; Stats.2003, c. 683 (A.B.897), § 8; Stats.2004, c. 183 (A.B.3082), § 362; Stats.2005, c. 22 (S.B.1108), § 211; Stats.2006, c. 347 (A.B.2367), § 23; Stats.2011, c. 15 (A.B.109), § 616, eff. April 4, 2011, operative Oct. 1, 2011.)

Notes of Decisions (20)

West's Ann. Cal. Water Code § 13387, CA WATER § 13387
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13388

# § 13388. Board members; disqualification if income from person subject to requirements

Effective: June 27, 2012
Currentness

(a) Notwithstanding any other provision of this division or Section 175, and except as provided in subdivision (b), a person shall not be a member of the state board or a regional board if that person receives, or has received during the previous two years, a significant portion of his or her income directly or indirectly from any person subject to waste discharge requirements or applicants for waste discharge requirements pursuant to this chapter.

(b)(1) A person shall not be disqualified from being a member of a regional board because that person receives, or has received during the previous two years, a significant portion of his or her income directly or indirectly from a person subject to waste discharge requirements, or an applicant for waste discharge requirements, that are issued pursuant to this chapter by the state board or regional board other than the regional board of which that person is a member.

(2) Paragraph (1) shall be implemented only if the United States Environmental Protection Agency either determines that no program approval is necessary for that implementation, or approves of a change in California's National Pollutant Discharge Elimination System program, to allow the state to administer the National Pollutant Discharge Elimination System permit program consistent with paragraph (1).

**Credits**

(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972, operative March 1, 1973. Amended by Stats.2012, c. 39 (S.B.1018), § 121, eff. June 27, 2012.)

Notes of Decisions (1)

West's Ann. Cal. Water Code § 13388, CA WATER § 13388
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

West's Annotated California Codes Water Code (Refs & Annos) Division 7. Water Quality (Refs & Annos) Chapter 5.5. Compliance with the Provisions of the Federal Water Pollution Control Act as Amended in 1972 (Refs & Annos)

West's Ann.Cal.Water Code § 13389

# § 13389. Applicability of environmental impact reports

Currentness

Neither the state board nor the regional boards shall be required to comply with the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code prior to the adoption of any waste discharge requirement, except requirements for new sources as defined in the Federal Water Pollution Control Act or acts amendatory thereof or supplementary thereto.

**Credits**

(Added by Stats.1972, c. 1256, p. 2485, § 1, eff. Dec. 19, 1972.)

Notes of Decisions (3)

West's Ann. Cal. Water Code § 13389, CA WATER § 13389
Current with all laws through Ch. 870 of 2019 Reg.Sess.

**End of Document**

2014 Cal. Legis. Serv. Ch. 78 (A.B. 2403) (WEST)

CALIFORNIA 2014 LEGISLATIVE SERVICE

2014 Portion of 2013-2014 Regular Session

Additions are indicated by **Text**; deletions by
* * * .
Vetoes are indicated by ~~Text~~ ;
stricken material by ~~**Text**~~ .

# CHAPTER 78
# A.B. No. 2403
# PUBLIC IMPROVEMENTS AND PUBLIC WORKS—FEES—WATER

AN ACT to amend Section 53750 of the Government Code, relating to local government.

[Filed with Secretary of State June 28, 2014.]

## LEGISLATIVE COUNSEL'S DIGEST

AB 2403, Rendon. Local government: assessments, fees, and charges.

Articles XIII C and XIII D of the California Constitution generally require that assessments, fees, and charges be submitted to property owners for approval or rejection after the provision of written notice and the holding of a public hearing. Existing law, the Proposition 218 Omnibus Implementation Act, prescribes specific procedures and parameters for local jurisdictions to comply with Articles XIII C and XIII D of the California Constitution and defines various terms for these purposes.

This bill would modify the definition of water to mean water from any source. The bill would also make legislative findings and declarations in this regard.

The people of the State of California do enact as follows:

SECTION 1. The Legislature finds and declares all of the following:

(a) The provisions of the Proposition 218 Omnibus Implementation Act (Article 4.6 (commencing with Section 53750) of Chapter 4 of Part 1 of Division 2 of Title 5 of the Government Code) shall be liberally construed to effectuate its purposes of limiting local government revenue and enhancing taxpayer consent.

(b) This act is in furtherance of the policy contained in Section 2 of Article X of the California Constitution and the policy that the use of potable domestic water for nonpotable uses, including, but not limited to, cemeteries, golf courses, parks, highway landscaped areas, and industrial and irrigation uses, is a waste or an unreasonable use of the water within the meaning of Section 2 of Article X of the California Constitution if recycled water is available.

(c) This act is declaratory of existing law.

  

SEC. 2. Section 53750 of the Government Code is amended to read:

<< CA GOVT § 53750 >>

53750. For purposes of Article XIII C and Article XIII D of the California Constitution and this article:

(a) "Agency" means any local government as defined in subdivision (b) of Section 1 of Article XIII C of the California Constitution.

(b) "Assessment" means any levy or charge by an agency upon real property that is based upon the special benefit conferred upon the real property by a public improvement or service, that is imposed to pay the capital cost of the public improvement, the maintenance and operation expenses of the public improvement, or the cost of the service being provided. "Assessment" includes, but is not limited to, "special assessment," "benefit assessment," "maintenance assessment," and "special assessment tax."

(c) "District" means an area that is determined by an agency to contain all of the parcels that will receive a special benefit from a proposed public improvement or service.

(d) "Drainage system" means any system of public improvements that is intended to provide for erosion control, **for** landslide abatement, or for other types of water drainage.

(e) "Extended," when applied to an existing tax or fee or charge, means a decision by an agency to extend the stated effective period for the tax or fee or charge, including, but not limited to, amendment or removal of a sunset provision or expiration date.

(f) "Flood control" means any system of public improvements that is intended to protect property from overflow by water.

(g) "Identified parcel" means a parcel of real property that an agency has identified as having a special benefit conferred upon it and upon which a proposed assessment is to be imposed, or a parcel of real property upon which a proposed property-related fee or charge is proposed to be imposed.

(h)(1) "Increased," when applied to a tax, assessment, or property-related fee or charge, means a decision by an agency that does either of the following:

(A) Increases any applicable rate used to calculate the tax, assessment, fee**,** or charge.

(B) Revises the methodology by which the tax, assessment, fee**,** or charge is calculated, if that revision results in an increased amount being levied on any person or parcel.

(2) A tax, fee, or charge is not deemed to be "increased" by an agency action that does either or both of the following:

(A) Adjusts the amount of a tax**, fee,** or * * * charge in accordance with a schedule of adjustments, including a clearly defined formula for inflation adjustment that was adopted by the agency prior to November 6, 1996.

(B) Implements or collects a previously approved tax, **fee,** or * * * charge, so long as the rate is not increased beyond the level previously approved by the agency, and the methodology previously approved by the agency is not revised so as to result in an increase in the amount being levied on any person or parcel.

(3) A tax, assessment, fee**,** or charge is not deemed to be "increased" in the case in which the actual payments from a person or property are higher than would have resulted when the agency approved the tax, assessment, **fee,** or * * * charge, if those

  

higher payments are attributable to events other than an increased rate or revised methodology, such as a change in the density, intensity, or nature of the use of land.

(i) "Notice by mail" means any notice required by Article XIII C or XIII D of the California Constitution that is accomplished through a mailing, postage prepaid, deposited in the United States Postal Service and is deemed given when so deposited. Notice by mail may be included in any other mailing to the record owner that otherwise complies with Article XIII C or XIII D of the California Constitution and this article, including, but not limited to, the mailing of a bill for the collection of an assessment or a property-related fee or charge.

(j) "Record owner" means the owner of a parcel whose name and address appears on the last equalized secured property tax assessment roll, or in the case of any public entity, the State of California, or the United States, means the representative of that public entity at the address of that entity known to the agency.

(k) "Registered professional engineer" means an engineer registered pursuant to the Professional Engineers Act (Chapter 7 (commencing with Section 6700) of Division 3 of the Business and Professions Code).

(*l*) "Vector control" means any system of public improvements or services that is intended to provide for the surveillance, prevention, abatement, and control of vectors as defined in subdivision (k) of Section 2002 of the Health and Safety Code and a pest as defined in Section 5006 of the Food and Agricultural Code.

(m) "Water" means any system of public improvements intended to provide for the production, storage, supply, treatment, or distribution of water **from any source**.

**End of Document**

2017 Cal. Legis. Serv. Ch. 536 (S.B. 231) (WEST)

CALIFORNIA 2017 LEGISLATIVE SERVICE

2017 Portion of 2017-2018 Regular Session

Additions are indicated by **Text**; deletions by
* * * .
Vetoes are indicated by ~~Text~~ ;
stricken material by ~~**Text**~~ .

CHAPTER 536
S.B. No. 231
TAX ASSESSMENTS—SEWERS AND SEWER SYSTEMS

AN ACT to amend Section 53750 of, and to add Section 53751 to, the Government Code, relating to local government finance.

[Filed with Secretary of State October 6, 2017.]

**LEGISLATIVE COUNSEL'S DIGEST**

SB 231, Hertzberg. Local government: fees and charges.

Articles XIII C and XIII D of the California Constitution generally require that assessments, fees, and charges be submitted to property owners for approval or rejection after the provision of written notice and the holding of a public hearing. Existing law, the Proposition 218 Omnibus Implementation Act, prescribes specific procedures and parameters for local jurisdictions to comply with Articles XIII C and XIII D of the California Constitution and defines terms for these purposes.

This bill would define the term "sewer" for these purposes. The bill would also make findings and declarations relating to the definition of the term "sewer" for these purposes.

The people of the State of California do enact as follows:

SECTION 1. Section 53750 of the Government Code is amended to read:

<< CA GOVT § 53750 >>

53750. For purposes of Article XIII C and Article XIII D of the California Constitution and this article**, the following words have the following meanings, and shall be read and interpreted in light of the findings and declarations contained in Section 53751**:

(a) "Agency" means any local government as defined in subdivision (b) of Section 1 of Article XIII C of the California Constitution.

(b) "Assessment" means any levy or charge by an agency upon real property that is based upon the special benefit conferred upon the real property by a public improvement or service, that is imposed to pay the capital cost of the public improvement, the maintenance and operation expenses of the public improvement, or the cost of the service being provided. "Assessment"

  

includes, but is not limited to, "special assessment," "benefit assessment," "maintenance assessment," and "special assessment tax."

(c) "District" means an area that is determined by an agency to contain all of the parcels that will receive a special benefit from a proposed public improvement or service.

(d) "Drainage system" means any system of public improvements that is intended to provide for erosion control, for landslide abatement, or for other types of water drainage.

(e) "Extended," when applied to an existing tax or fee or charge, means a decision by an agency to extend the stated effective period for the tax or fee or charge, including, but not limited to, amendment or removal of a sunset provision or expiration date.

(f) "Flood control" means any system of public improvements that is intended to protect property from overflow by water.

(g) "Identified parcel" means a parcel of real property that an agency has identified as having a special benefit conferred upon it and upon which a proposed assessment is to be imposed, or a parcel of real property upon which a proposed property-related fee or charge is proposed to be imposed.

(h)(1) "Increased," when applied to a tax, assessment, or property-related fee or charge, means a decision by an agency that does either of the following:

(A) Increases any applicable rate used to calculate the tax, assessment, fee, or charge.

(B) Revises the methodology by which the tax, assessment, fee, or charge is calculated, if that revision results in an increased amount being levied on any person or parcel.

(2) A tax, fee, or charge is not deemed to be "increased" by an agency action that does either or both of the following:

(A) Adjusts the amount of a tax, fee, or charge in accordance with a schedule of adjustments, including a clearly defined formula for inflation adjustment that was adopted by the agency prior to November 6, 1996.

(B) Implements or collects a previously approved tax, fee, or charge, so long as the rate is not increased beyond the level previously approved by the agency, and the methodology previously approved by the agency is not revised so as to result in an increase in the amount being levied on any person or parcel.

(3) A tax, assessment, fee, or charge is not deemed to be "increased" in the case in which the actual payments from a person or property are higher than would have resulted when the agency approved the tax, assessment, fee, or charge, if those higher payments are attributable to events other than an increased rate or revised methodology, such as a change in the density, intensity, or nature of the use of land.

(i) "Notice by mail" means any notice required by Article XIII C or XIII D of the California Constitution that is accomplished through a mailing, postage prepaid, deposited in the United States Postal Service and is deemed given when so deposited. Notice by mail may be included in any other mailing to the record owner that otherwise complies with Article XIII C or XIII D of the California Constitution and this article, including, but not limited to, the mailing of a bill for the collection of an assessment or a property-related fee or charge.

(j) "Record owner" means the owner of a parcel whose name and address appears on the last equalized secured property tax assessment roll, or in the case of any public entity, the State of California, or the United States, means the representative of that public entity at the address of that entity known to the agency.

  

**(k) "Sewer" includes systems, all real estate, fixtures, and personal property owned, controlled, operated, or managed in connection with or to facilitate sewage collection, treatment, or disposition for sanitary or drainage purposes, including lateral and connecting sewers, interceptors, trunk and outfall lines, sanitary sewage treatment or disposal plants or works, drains, conduits, outlets for surface or storm waters, and any and all other works, property, or structures necessary or convenient for the collection or disposal of sewage, industrial waste, or surface or storm waters. "Sewer system" shall not include a sewer system that merely collects sewage on the property of a single owner.**

**(*l*)** "Registered professional engineer" means an engineer registered pursuant to the Professional Engineers Act (Chapter 7 (commencing with Section 6700) of Division 3 of the Business and Professions Code).

**(m)** "Vector control" means any system of public improvements or services that is intended to provide for the surveillance, prevention, abatement, and control of vectors as defined in subdivision (k) of Section 2002 of the Health and Safety Code and a pest as defined in Section 5006 of the Food and Agricultural Code.

**(n)** "Water" means any system of public improvements intended to provide for the production, storage, supply, treatment, or distribution of water from any source.

SEC. 2. Section 53751 is added to the Government Code, to read:

<< CA GOVT § 53751 >>

53751. The Legislature finds and declares all of the following:

(a) The ongoing, historic drought has made clear that California must invest in a 21st century water management system capable of effectively meeting the economic, social, and environmental needs of the state.

(b) Sufficient and reliable funding to pay for local water projects is necessary to improve the state's water infrastructure.

(c) Proposition 218 was approved by the voters at the November 5, 1996, statewide general election. Some court interpretations of the law have constrained important tools that local governments need to manage storm water and drainage runoff.

(d) Storm waters are carried off in storm sewers, and careful management is necessary to ensure adequate state water supplies, especially during drought, and to reduce pollution. But a court decision has found storm water subject to the voter-approval provisions of Proposition 218 that apply to property-related fees, preventing many important projects from being built.

(e) The court of appeal in Howard Jarvis Taxpayers Ass'n v. City of Salinas (2002) 98 Cal.App.4th 1351 concluded that the term "sewer," as used in Proposition 218, is "ambiguous" and declined to use the statutory definition of the term "sewer system," which was part of the then-existing law as Section 230.5 of the Public Utilities Code.

(f) The court in Howard Jarvis Taxpayers Ass'n v. City of Salinas (2002) 98 Cal.App.4th 1351 failed to follow long-standing principles of statutory construction by disregarding the plain meaning of the term "sewer." Courts have long held that statutory construction rules apply to initiative measures, including in cases that apply specifically to Proposition 218 (see People v. Bustamante (1997) 57 Cal.App.4th 693; Keller v. Chowchilla Water Dist. (2000) 80 Cal.App.4th 1006). When construing statutes, courts look first to the words of the statute, which should be given their usual, ordinary, and commonsense meaning (People v. Mejia (2012) 211 Cal.App.4th 586, 611). The purpose of utilizing the plain meaning of statutory language is to spare the courts the necessity of trying to divine the voters' intent by resorting to secondary or subjective indicators. The court in Howard Jarvis Taxpayers Ass'n v. City of Salinas (2002) 98 Cal.App.4th 1351 asserted its belief as to what most voters thought

  

when voting for Proposition 218, but did not cite the voter pamphlet or other accepted sources for determining legislative intent. Instead, the court substituted its own judgment for the judgment of voters.

(g) Neither the words "sanitary" nor "sewerage" are used in Proposition 218, and the common meaning of the term "sewer services" is not "sanitary sewerage." In fact, the phrase "sanitary sewerage" is uncommon.

(h) Proposition 218 exempts sewer and water services from the voter-approval requirement. Sewer and water services are commonly considered to have a broad reach, encompassing the provision of clean water and then addressing the conveyance and treatment of dirty water, whether that water is rendered unclean by coming into contact with sewage or by flowing over the built-out human environment and becoming urban runoff.

(i) Numerous sources predating Proposition 218 reject the notion that the term "sewer" applies only to sanitary sewers and sanitary sewerage, including, but not limited to:

(1) Section 230.5 of the Public Utilities Code, added by Chapter 1109 of the Statutes of 1970.

(2) Section 23010.3, added by Chapter 1193 of the Statutes of 1963.

(3) The Street Improvement Act of 1913.

(4) L.A. County Flood Control Dist. v. Southern Cal. Edison Co. (1958) 51 Cal.2d 331, where the California Supreme Court stated that "no distinction has been made between sanitary sewers and storm drains or sewers."

(5) Many other cases where the term "sewer" has been used interchangeably to refer to both sanitary and storm sewers include, but are not limited to, County of Riverside v. Whitlock (1972) 22 Cal.App.3d 863, Ramseier v. Oakley Sanitary Dist. (1961) 197 Cal.App.2d 722, and Torson v. Fleming (1928) 91 Cal.App. 168.

(6) Dictionary definitions of sewer, which courts have found to be an objective source for determining common or ordinary meaning, including Webster's (1976), American Heritage (1969), and Oxford English Dictionary (1971).

(j) Prior legislation has affirmed particular interpretations of words in Proposition 218, specifically Assembly Bill 2403 of the 2013–14 Regular Session (Chapter 78 of the Statutes of 2014).

(k) In Crawley v. Alameda Waste Management Authority (2015) 243 Cal.App.4th 396, the Court of Appeal relied on the statutory definition of "refuse collection services" to interpret the meaning of that phrase in Proposition 218, and found that this interpretation was further supported by the plain meaning of refuse. Consistent with this decision, in determining the definition of "sewer," the plain meaning rule shall apply in conjunction with the definitions of terms as provided in Section 53750.

(*l*) The Legislature reaffirms and reiterates that the definition found in Section 230.5 of the Public Utilities Code is the definition of "sewer" or "sewer service" that should be used in the Proposition 218 Omnibus Implementation Act.

(m) Courts have read the Legislature's definition of "water" in the Proposition 218 Omnibus Implementation Act to include related services. In Griffith v. Pajaro Valley Water Management Agency (2013) 220 Cal.App.4th 586, the Court of Appeal concurred with the Legislature's view that "water service means more than just supplying water," based upon the definition of water provided by the Proposition 218 Omnibus Implementation Act, and found that actions necessary to provide water can be funded through fees for water service. Consistent with this decision, "sewer" should be interpreted to include services necessary to collect, treat, or dispose of sewage, industrial waste, or surface or storm waters, and any entity that collects, treats, or disposes of any of these necessarily provides sewer service.

  

End of Document

# ATTACHMENT C
# FEDERAL CASES

KeyCite Yellow Flag - Negative Treatment
Distinguished by Pennsylvania Federation of Sportsmen's Clubs, Inc. v. Hess, 3rd Cir.(Pa.), July 24, 2002

112 S.Ct. 1046
Supreme Court of the United States

ARKANSAS, et al., Petitioners,
v.
OKLAHOMA et al.
ENVIRONMENTAL PROTECTION AGENCY, Petitioner,
v.
OKLAHOMA et al.

Nos. 90–1262, 90–1266.
|
Argued Dec. 11, 1991.
|
Decided Feb. 26, 1992.

**Synopsis**
Consolidated appeals were taken from the Environmental Protection Agency's (EPA) issuance to Arkansas city of discharge permit pursuant to National Pollutant Discharge Elimination System (NPDES) of the Clean Water Act. The Court of Appeals for the Tenth Circuit, 908 F.2d 595, found that the Clean Water Act did not allow permit to be issued. Certiorari was granted. The Supreme Court, Justice Stevens, held that: (1) the Clean Water Act authorized the EPA's issuance of an NPDES permit to allow an Arkansas sewage treatment plant to discharge effluent into Illinois River which ultimately reached Oklahoma, and (2) EPA's interpretation of Oklahoma's water quality standards was entitled to substantial deference.

Reversed.

Opinion on remand, 962 F.2d 996.

West Headnotes (16)

[1] **Environmental Law**
Concurrent and Conflicting Statutes or Regulations
**Environmental Law**
Federal preemption
**Nuisance**
Nature and elements of public nuisance in general
**States**
Environment; nuclear projects

In cases involving controversies between state which introduces pollutants to waterway and downstream state which objects, federal common law of nuisance and affected state's common law are preempted; only state law applicable to interstate discharge is law of state in which point source is located. Federal Water Pollution Control Act Amendments of 1972, §§ 402(b), 510, as amended, 33 U.S.C.A. §§ 1342(b), 1370.

9 Cases that cite this headnote

[2] **Environmental Law**
Permit and certification proceedings

States which are affected by another state's discharge of effluent into a waterway may not block issuance of discharge permit but must apply to Environmental Protection Agency (EPA) administrator, who has discretion to disapprove permit if he concludes that discharges will have undue impact on interstate waters. Federal Water Pollution Control Act Amendments of 1972, §§ 402(b), 510, as amended, 33 U.S.C.A. §§ 1342(b), 1370.

4 Cases that cite this headnote

[3] **Environmental Law**
Discharge of pollutants

Clean Water Act requires that permits issued by Environmental Protection Agency (EPA) allowing discharge of effluent into interstate waterway comply with requirements for permit issued under approved state plan and with section of Clean Water Act which appears to prohibit issuance of federal permit over objection of affected state unless compliance with affected state's water quality requirements can be insured. Federal Water Pollution Control Act Amendments of 1972, §§ 401(a), (a)(2), 402, 402(a), (a)(3), (b), (d)(2), as amended, 33

  

U.S.C.A. §§ 1341(a), (a)(2), 1342, 1342(a), (a)(3), (b), (d)(2).

25 Cases that cite this headnote

[4] **Environmental Law**
Conditions and limitations

Environmental Protection Agency (EPA) requirement for National Pollution Discharge Elimination System (NPDES) permit that discharge of effluent from Arkansas sewage treatment plant comply with Oklahoma's water quality standards was reasonable exercise of agency's statutory discretion; discharge into Illinois River would travel through Arkansas and over Oklahoma border. Federal Water Pollution Control Act Amendments of 1972, §§ 401(a), 402(a, b), as amended, 33 U.S.C.A. §§ 1341(a), 1342(a, b).

31 Cases that cite this headnote

[5] **Environmental Law**
Interstate pollution

Even if Clean Water Act itself did not require that discharge of effluent from one state comply with water quality standards of another, statute did not limit Environmental Protection Agency's (EPA) authority to mandate that compliance. Federal Water Pollution Control Act Amendments of 1972, §§ 401(a), 402(a, b), as amended, 33 U.S.C.A. §§ 1341(a), 1342(a, b).

23 Cases that cite this headnote

[6] **Environmental Law**
Conditions and limitations

Environmental Protection Agency (EPA) regulations, which provide that National Pollution Discharge Elimination System (NPDES) permit may not be issued if the imposition of conditions would not insure compliance with the applicable water quality requirements of all affected states, were a reasonable exercise of EPA's authority. Federal Water Pollution Control Act Amendments of 1972, §§ 101(a), 301(b)(1)(C), 402(a)(1, 2), (b), (d)(2), as amended, 33 U.S.C.A. §§ 1251(a), 1311(b)(1)(C), 1342(a)(1, 2), (b), (d)(2).

33 Cases that cite this headnote

[7] **Environmental Law**
Interstate pollution

Placing limits on affected state's direct participation in permitting decision concerning the granting of NPDES permit to discharge effluent into interstate waterways did not constrain Environmental Protection Agency's (EPA) authority to require that point source comply with downstream water quality standards. Federal Water Pollution Control Act Amendments of 1972, §§ 101(a), 301(b)(1)(C), 402(a)(1, 2), (b), (d)(2), as amended, 33 U.S.C.A. §§ 1251(a), 1311(b)(1)(C), 1342(a)(1, 2), (b), (d)(2).

32 Cases that cite this headnote

[8] **Environmental Law**
Interstate pollution

Environmental Protection Agency's (EPA) requirement that discharge of effluent from Arkansas sewage treatment plant into Illinois River basin must comply with Oklahoma's water quality standards was reasonable exercise of agency's substantial statutory discretion. Federal Water Pollution Control Act Amendments of 1972, §§ 101(a), 301(b)(1)(C), 402(a)(1, 2), (b), (d)(2), as amended, 33 U.S.C.A. §§ 1251(a), 1311(b)(1)(C), 1342(a)(1, 2), (b), (d)(2).

9 Cases that cite this headnote

[9] **Environmental Law**
Water Quality Standards or Plans

Clean Water Act does not prohibit any discharge of effluent that would reach waters already in violation of existing water quality standards; nothing in Act mandates complete ban, but rather vests in Environmental Protection Agency (EPA) and states broad authority to develop long-range, area-wide programs to alleviate and eliminate existing pollution. Federal Water

  

Pollution Control Act Amendments of 1972, § 402(h), as amended, 33 U.S.C.A. § 1342(h).

8 Cases that cite this headnote

**[10] Environmental Law**
Water pollution

Court of Appeals exceeded legitimate scope of judicial review of agency adjudication by finding that Environmental Protection Agency (EPA) had misinterpreted Oklahoma law with regard to discharge of effluent into interstate waterway Court of Appeals substituted its own reading of the law for EPA's and thus failed to give required substantial deference to agency's reasonable interpretation. Federal Water Pollution Control Act Amendments of 1972, §§ 208(b)(2), 301(b)(1)(C), 303(d), 402(h), as amended, 33 U.S.C.A. §§ 1288(b)(2), 1311(b)(1)(C), 1313(d), 1342(h).

36 Cases that cite this headnote

**[11] Environmental Law**
Power to regulate

**States**
Environment; nuclear projects

Interstate water pollution is controlled by federal law.

7 Cases that cite this headnote

**[12] Environmental Law**
Interstate pollution

Evidence supported finding by ALJ that discharge from Fayetteville, Arkansas, sewage treatment plant into interstate Illinois River basin would not violate Oklahoma water quality standards. Federal Water Pollution Control Act Amendments of 1972, §§ 208(b)(2), 301(b)(1)(C), 303(d), 402(h), as amended, 33 U.S.C.A. §§ 1288(b)(2), 1311(b)(1)(C), 1313(d), 1342(h).

61 Cases that cite this headnote

**[13] Environmental Law**
Scope of Inquiry on Review of Administrative Decision

Environmental Protection Agency (EPA) is entitled to discretion to interpret its own regulations and those regulations are entitled to appropriate level of deference.

5 Cases that cite this headnote

**[14] Administrative Law and Procedure**
Substantial evidence

Court reviewing agency's adjudication should accept agency's factual findings if those findings are supported by substantial evidence in the record as a whole; court should not supplant agency's findings merely by identifying alternate findings that could be supported by substantial evidence.

494 Cases that cite this headnote

**[15] Administrative Law and Procedure**
Review for arbitrary, capricious, unreasonable, or illegal actions in general

Administrative agency ruling is "arbitrary and capricious" if agency has entirely failed to consider important aspect of problem.

28 Cases that cite this headnote

**[16] Environmental Law**
Water pollution

Court of Appeals made policy choice beyond its authority by ruling that, even if discharge of effluent from Arkansas sewage treatment plant would have no adverse impact on water quality, discharge into Illinois River which would flow through Oklahoma could be prohibited; it was not arbitrary for Environmental Protection Agency (EPA) to conclude, given benefits to river from increased flow of relatively clean water, and benefits achieved in Arkansas by allowing new plant to operate as designed, that allowing discharge would be wiser.

7 Cases that cite this headnote

  

**1049 *Syllabus* *

The Clean Water Act provides for two sets of water quality measures: effluent limitations, which are promulgated by the Environmental Protection Agency (EPA or Agency), and water quality standards, which are promulgated by the States. The Act generally prohibits the discharge of effluent into a navigable body of water unless the point source obtains a National Pollution Discharge Elimination System (NPDES) permit from a State with an EPA-approved permit program or from the EPA itself. A Fayetteville, Arkansas, sewage treatment plant received an EPA-issued permit, authorizing it to discharge effluent into a stream that ultimately reaches the Illinois River upstream from the Oklahoma border. Respondents, Oklahoma and other Oklahoma parties, challenged the permit before the EPA, alleging, *inter alia,* that the discharge violated Oklahoma water quality standards, which allow no degradation of water quality in the upper Illinois River. The EPA's Chief Judicial Officer remanded the initial affirmance of the permit by the Administrative Law Judge (ALJ), ruling that the Act requires an NPDES permit to impose any effluent limitations necessary to comply with applicable state water quality standards, and that those standards would be violated only if the record shows by a preponderance of the evidence that the discharge would cause an actual *detectable* violation of Oklahoma's water quality standards. The ALJ then made detailed findings of fact, concluding that Fayetteville had satisfied the Chief Judicial Officer's standard, and the Chief Judicial Officer sustained the permit's issuance. The Court of Appeals reversed, ruling that the Act does not allow a permit to be issued where a proposed source would discharge effluent that would contribute to conditions currently constituting a violation of applicable water quality standards. It concluded that the Illinois River was already degraded, that the Fayetteville effluent would reach the river in Oklahoma, and that the effluent would contribute to the river's deterioration even though it would not detectably affect the river's water quality.

*92 *Held:* The EPA's action was authorized by the Clean Water Act. Pp. 1052–1061.

(a) Where interstate discharge is involved, both federal common law of nuisance, *Milwaukee v. Illinois,* 451 U.S. 304, 101 S.Ct. 1784, 68 L.Ed.2d 114, and an affected State's common law, *International Paper Co. v. Ouellette,* 479 U.S. 481, 493, 107 S.Ct. 805, 812, 93 L.Ed.2d 883, are pre-empted. Affected States may not block a permit, but must apply to the EPA Administrator, who may disapprove a plan if he concludes that the discharge will have an undue impact on interstate waters. *Id.,* at 490–491, 107 S.Ct., at 809. Pp. 1052–1054.

**1050 (b) The EPA has construed the Act as requiring that EPA-issued permits comply with the requirements for a permit issued under an approved state plan and with § 401(a) of the Act, which appears to prohibit the issuance of a federal permit over the objection of an affected State unless compliance with the affected State's water quality requirements can be insured. Pp. 1054–1055.

(c) The EPA's requirement that the Fayetteville discharge comply with Oklahoma's water quality standards is a reasonable exercise of the substantial statutory discretion Congress has vested in the Agency. There is no need to address the question whether the Act requires compliance with affected States' standards, for it clearly does not limit the EPA's authority to mandate such compliance. EPA regulations, which since 1973 have required that an NPDES permit not be issued when compliance with affected States' water quality standards cannot be insured, are a reasonable exercise of the Agency's discretion and are a well-tailored means of reaching the Act's goal of achieving state water quality standards. The EPA's authority is not constrained by the limits in *Ouellette, supra,* concerning an affected State's direct input into the permit process, does not conflict with the Act's legislative history and statutory scheme, and is not incompatible with the balance among competing policies and interests that Congress struck in the Act. Pp. 1056–1057.

(d) Contrary to the Court of Appeals' interpretation, nothing in the Act mandates a complete ban on discharges into a waterway that is in violation of existing water quality standards. Instead, the Act vests in the EPA and the States broad authority to develop long-range, area-wide programs to alleviate and eliminate existing pollution. Pp. 1057–1058.

(e) The Court of Appeals exceeded the legitimate scope of judicial review of an agency adjudication when it invalidated the EPA's issuance of the permit on the ground that the Agency misinterpreted Oklahoma's water quality standards. It substituted its own reading of the law for the EPA's. Thus, it failed to give substantial deference to the Agency's reasonable, consistently held interpretation of its own regulations, which incorporate the Oklahoma standards. It also disregarded well-established *93 standards

  

for reviewing factual findings of agencies by making its own factual findings when the ALJ's findings were supported by substantial evidence. See generally *Universal Camera Corp. v. NLRB,* 340 U.S. 474, 71 S.Ct. 456, 95 L.Ed. 456. As a result, the court's conclusion that the river's degradation was an important and relevant factor which the EPA failed to consider was based on its own erroneous interpretation of the controlling law. Had it been properly respectful of the EPA's permissible reading of the Act—that what matters is not the river's current status, but whether the proposed discharge will have a detectable effect on that status—it would not have adjudged the Agency's decision arbitrary and capricious. Pp. 1058–1061.

908 F.2d 595 (CA10 1990), reversed.

STEVENS, J., delivered the opinion for a unanimous Court.

**Attorneys and Law Firms**

Lawrence G. Wallace, Washington, D.C., for petitioner, Environmental Protection Agency.

Edward W. Warren, Washington, D.C., for petitioners, Arkansas, et al.

Robert A. Butkin, Oklahoma City, Okl., for respondents.

**Opinion**

***94** Justice STEVENS delivered the opinion of the Court.

Pursuant to the Clean Water Act, 86 Stat. 816, as amended, 33 U.S.C. § 1251 *et seq.,* the Environmental Protection Agency (EPA or agency) issued a discharge permit to a new point source in Arkansas, about 39 miles upstream from the Oklahoma state line. The question presented in this litigation is whether the EPA's finding that discharges from the new source would not cause a detectable ****1051** violation of Oklahoma's ***95** water quality standards satisfied the EPA's duty to protect the interests of the downstream State. Disagreeing with the Court of Appeals, we hold that the Agency's action was authorized by the statute.

I

In 1985, the city of Fayetteville, Arkansas, applied to the EPA, seeking a permit for the city's new sewage treatment plant under the National Pollution Discharge Elimination System (NPDES). After the appropriate procedures, the EPA, pursuant to § 402(a)(1) of the Act, 33 U.S.C. § 1342(a)(1), issued a permit authorizing the plant to discharge up to half of its effluent (to a limit of 6.1 million gallons per day) into an unnamed stream in northwestern Arkansas. [1] That flow passes through a series of three creeks for about 17 miles, and then enters the Illinois River at a point 22 miles upstream from the Arkansas–Oklahoma border.

The permit imposed specific limitations on the quantity, content, and character of the discharge and also included a number of special conditions, including a provision that if a study then underway indicated that more stringent limitations were necessary to ensure compliance with Oklahoma's water quality standards, the permit would be modified to incorporate those limits. App. 84.

Respondents challenged this permit before the EPA, alleging, *inter alia,* that the discharge violated the Oklahoma water quality standards. Those standards provide that "no degradation [of water quality] shall be allowed" in the upper Illinois River, including the portion of the river immediately downstream from the state line. [2]

***96** Following a hearing, the Administrative Law Judge (ALJ) concluded that the Oklahoma standards would not be implicated unless the contested discharge had "something more than a mere *de minimis* impact" on the State's waters. He found that the discharge would not have an "undue impact" on Oklahoma's waters and, accordingly, affirmed the issuance of the permit. App. to Pet. for Cert. in No. 90–1262, pp. 101a–103a (emphasis deleted).

On a petition for review, the EPA's Chief Judicial Officer first ruled that § 301(b)(1)(C) of the Clean Water Act "requires an NPDES permit to impose any effluent limitations necessary to comply with applicable state water quality standards." [3] *Id.,* at 116a–117a. He ****1052** then held that the Act ***97** and EPA regulations offered greater protection for the downstream State than the ALJ's "undue impact" standard suggested. He explained the proper standard as follows:

> "[A] mere theoretical impairment of Oklahoma's water quality standards—*i.e.,* an infinitesimal impairment predicted through modeling but not expected to be actually detectable or measurable—should not by itself block the issuance of the permit. In this case, the permit should be upheld if the record shows by a preponderance of the evidence that the authorized discharges would not cause

an actual *detectable* violation of Oklahoma's water quality standards." *Id.,* at 117a (emphasis in original).

On remand, the ALJ made detailed findings of fact and concluded that the city had satisfied the standard set forth by the Chief Judicial Officer. Specifically, the ALJ found that there would be no detectable violation of any of the components of Oklahoma's water quality standards. *Id.,* at 127a–143 a. The Chief Judicial Officer sustained the issuance of the permit. *Id.,* at 145a–153a.

Both the petitioners in No. 90–1262 (collectively Arkansas) and the respondents in this litigation sought judicial review. [4] Arkansas argued that the Clean Water Act did not require an Arkansas point source to comply with Oklahoma's water quality standards. Oklahoma challenged the EPA's determination that the Fayetteville discharge would not produce a detectable violation of the Oklahoma standards.

The Court of Appeals did not accept either of these arguments. ***98** The court agreed with the EPA that the statute required compliance with Oklahoma's water quality standards, see 908 F.2d 595, 602–615 (CA10 1990), and did not disagree with the Agency's determination that the discharges from the Fayetteville plant would not produce a detectable violation of those standards. *Id.,* at 631–633. Nevertheless, relying on a theory that neither party had advanced, the Court of Appeals reversed the Agency's issuance of the Fayetteville permit. The court first ruled that the statute requires that "where a proposed source would discharge effluents that would contribute to conditions currently constituting a violation of applicable water quality standards, such [a] proposed source may not be permitted." *Id.,* at 620. Then the court found that the Illinois River in Oklahoma was "already degraded," that the Fayetteville effluent would reach the Illinois River in Oklahoma, and that that effluent could "be expected to contribute to the ongoing deterioration of the scenic [Illinois R]iver" in Oklahoma even though it would not detectably affect the river's water quality. *Id.,* at 621–629.

The importance and the novelty of the Court of Appeals' decision persuaded us to grant certiorari. 499 U.S. 946, 111 S.Ct. 1412, 113 L.Ed.2d 465 (1991). We now reverse.

II

Interstate waters have been a font of controversy since the founding of the Nation. *E.g., Gibbons v. Ogden,* 9 Wheat. 1, 6 L.Ed. 23 (1824). This Court has frequently resolved disputes between States that are separated by a common river, see, *e.g., Ohio v. Kentucky,* 444 U.S. 335, 100 S.Ct. 588, 62 L.Ed.2d 530 (1980), that border the same body of water, see, *e.g.,* ****1053** *New York v. New Jersey,* 256 U.S. 296, 41 S.Ct. 492, 65 L.Ed. 937 (1921), or that are fed by the same river basin, see, *e.g., New Jersey v. New York,* 283 U.S. 336, 51 S.Ct. 478, 75 L.Ed. 1104 (1931).

**[1]** Among these cases are controversies between a State that introduces pollutants to a waterway and a downstream State that objects. See, *e.g., Missouri v. Illinois,* 200 U.S. 496, 26 S.Ct. 268, 50 L.Ed. 572 (1906). In such cases, this Court has applied principles of common law tempered by a respect for the sovereignty of the States. Compare *id.,* at 521, 26 S.Ct., at 270, with *Georgia v. Tennessee Copper Co.,* 206 U.S. 230, 237, 27 S.Ct. 618, 619, 51 L.Ed. 1038 (1907). In forging what "may ***99** not improperly be called interstate common law," *Illinois v. Milwaukee,* 406 U.S. 91, 105–106, 92 S.Ct. 1385, 1393–1394, 31 L.Ed.2d 712 (1972) (*Milwaukee I* ), however, we remained aware "that new federal laws and new federal regulations may in time pre-empt the field of federal common law of nuisance." *Id.,* at 107, 92 S.Ct. at 1395.

In *Milwaukee v. Illinois,* 451 U.S. 304, 101 S.Ct. 1784, 68 L.Ed.2d 114 (1981) (*Milwaukee II* ), we held that the Federal Water Pollution Control Act Amendments of 1972 did just that. In addressing Illinois' claim that Milwaukee's discharges into Lake Michigan constituted a nuisance, we held that the comprehensive regulatory regime created by the 1972 amendments pre-empted Illinois' federal common law remedy. We observed that Congress had addressed many of the problems we had identified in *Milwaukee I* by providing a downstream State with an opportunity for a hearing before the source State's permitting agency, by requiring the latter to explain its failure to accept any recommendations offered by the downstream State, and by authorizing the EPA, in its discretion, to veto a source State's issuance of any permit if the waters of another State may be affected. *Milwaukee II,* 451 U.S., at 325–326, 101 S.Ct., at 1796–1797.

In *Milwaukee II,* the Court did not address whether the 1972 amendments had supplanted *state* common law remedies as well as the federal common law remedy. See *id.,* at 310, n. 4. On remand, Illinois argued that § 510 of the Clean Water Act, 33 U.S.C. § 1370, expressly preserved the State's right to adopt and enforce rules that are more stringent than federal standards. [5] The Court of Appeals accepted Illinois' reading of § 510, but held that that section did "no more than ***100** to save the right and jurisdiction of a state to regulate activity occurring within the confines of its boundary waters." *Illinois*

  

*v. Milwaukee,* 731 F.2d 403, 413 (CA7 1984), cert. denied, 469 U.S. 1196, 105 S.Ct. 979, 83 L.Ed.2d 981 (1985).

**[2]** This Court subsequently endorsed that analysis in *International Paper Co. v. Ouellette,* 479 U.S. 481, 107 S.Ct. 805, 93 L.Ed.2d 883 (1987), in which Vermont property owners claimed that the pollution discharged into Lake Champlain by a paper company located in New York constituted a nuisance under Vermont law. The Court held the Clean Water Act taken "as a whole, its purposes and its history" pre-empted an action based on the law of the affected State and that the only state law applicable to an interstate discharge is "the law of the State in which the point source is located." *Id.,* at 493, 487, 107 S.Ct. at 812, 809. Moreover, in reviewing § 402(b) of the Act, the Court pointed out that when a new permit is being issued by the source State's permit-granting agency, the downstream State

> ****1054** "does not have the authority to block the issuance of the permit if it is dissatisfied with the proposed standards. An affected State's only recourse is to apply to the EPA Administrator, who then has the discretion to disapprove the permit if he concludes that the discharges will have an undue impact on interstate waters. § 1342(d)(2).... Thus the Act makes it clear that affected States occupy a subordinate position to source States in the federal regulatory program." *Id.,* at 490–491, 107 S.Ct., at 811. [6]

***101** Unlike the foregoing cases, this litigation involves not a state-issued permit, but a federally issued permit. To explain the significance of this distinction, we comment further on the statutory scheme before addressing the specific issues raised by the parties.

III

The Clean Water Act anticipates a partnership between the States and the Federal Government, animated by a shared objective: "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). Toward this end, the Act provides for two sets of water quality measures. "Effluent limitations" are promulgated by the EPA and restrict the quantities, rates, and concentrations of specified substances which are discharged from point sources. See §§ 1311, 1314. "[W]ater quality standards" are, in general, promulgated by the States and establish the desired condition of a waterway. See § 1313. These standards supplement effluent limitations "so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels." *EPA v. California ex rel. State Water Resources Control Bd.,* 426 U.S. 200, 205, n. 12, 96 S.Ct. 2022, 2025, n. 12, 48 L.Ed.2d 578 (1976).

The EPA provides States with substantial guidance in the drafting of water quality standards. See generally 40 CFR pt. 131 (1991) (setting forth model water quality standards). Moreover, § 303 of the Act requires, *inter alia,* that state authorities periodically review water quality standards and secure the EPA's approval of any revisions in the standards. If the EPA recommends changes to the standards and the State fails to comply with that recommendation, the Act authorizes the EPA to promulgate water quality standards for the State. 33 U.S.C. § 1313(c).

The primary means for enforcing these limitations and standards is the NPDES, enacted in 1972 as a critical part of Congress' "complete rewriting" of federal water pollution ***102** law. *Milwaukee II,* 451 U.S., at 317, 101 S.Ct., at 1793. Section 301(a) of the Act, 33 U.S.C. § 1311(a), generally prohibits the discharge of any effluent into a navigable body of water unless the point source has obtained an NPDES permit. Section 402 establishes the NPDES permitting regime, and describes two types of permitting systems: state permit programs that must satisfy federal requirements and be approved by the EPA, and a federal program administered by the EPA.

Section 402(b) authorizes each State to establish "its own permit program for discharges into navigable waters within its jurisdiction." 33 U.S.C. § 1342(b). Among the requirements the state program must satisfy ****1055** are the procedural protections for downstream States discussed in *Ouellette* and *Milwaukee II.* See §§ 1342(b)(3), (5). [7] Although these provisions do not authorize the downstream State to veto the issuance of a permit for a new point source in another State, the Administrator retains authority to block the issuance of any state-issued permit that is outside the guidelines and requirements of the Act. § 1342(d)(2). [8]

**[3]** ***103** In the absence of an approved state program, the EPA may issue an NPDES permit under § 402(a) of the Act. (In these cases, for example, because Arkansas had not been authorized to issue NPDES permits when the Fayetteville plant was completed, the permit was issued by the EPA itself.) The EPA's permit program is subject to the "same terms, conditions, and requirements" as a state permit program. 33 U.S.C. § 1342(a)(3). Notwithstanding this general symmetry,

  

the EPA has construed the Act as requiring that EPA-issued NPDES permits also comply with § 401(a). That section, which predates § 402 and the NPDES, applies to a broad category of federal licenses, and sets forth requirements for "[a]ny applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters." 33 U.S.C. § 1341(a). Section 401(a)(2) appears to prohibit the issuance of any federal license or permit over the objection of an affected State unless compliance with the affected State's water quality requirements can be ensured. [9]

**1056 *104 IV

[4] The parties have argued three analytically distinct questions concerning the interpretation of the Clean Water Act. First, does the Act require the EPA, in crafting and issuing a permit to a point source in one State, to apply the water quality standards of downstream States? Second, even if the Act does not *require* as much, does the Agency have the statutory authority to mandate such compliance? Third, does the Act provide, as the Court of Appeals held, that once a body of water fails to meet water quality standards no discharge that yields effluent that reach the degraded waters will be permitted?

In these cases, it is neither necessary nor prudent for us to resolve the first of these questions. In issuing the Fayetteville permit, the EPA assumed it was obligated by both the Act and its own regulations to ensure that the Fayetteville discharge would not violate Oklahoma's standards. See App. to Pet. for Cert. in No. 90–1262, pp. 116a–117a, and n. 14. As we discuss below, this assumption was permissible and reasonable and therefore there is no need for us to address whether the Act requires as much. Moreover, much of the analysis and argument in the briefs of the parties relies on statutory provisions that govern not only federal permits issued pursuant to §§ 401(a) and 402(a), but also state permits issued under § 402(b). It seems unwise to evaluate those arguments in a case such as these, which only involve a federal permit.

[5] *105 Our decision not to determine at this time the scope of the Agency's statutory *obligations* does not affect our resolution of the second question, which concerns the Agency's statutory *authority.* Even if the Clean Water Act itself does not require the Fayetteville discharge to comply with Oklahoma's water quality standards, the statute clearly does not limit the EPA's authority to mandate such compliance.

[6] Since 1973, EPA regulations have provided that an NPDES permit shall not be issued "[w]hen the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States." [10] 40 CFR § 122.4(d) (1991); see also 38 Fed.Reg. 13533 (1973); 40 CFR § 122.44(d) (1991). Those regulations—relied upon by the EPA in the issuance of the Fayetteville permit—constitute a reasonable exercise of the Agency's statutory authority.

Congress has vested in the Administrator broad discretion to establish conditions for NPDES permits. Section 402(a)(2) provides that for EPA-issued permits "[t]he Administrator shall prescribe conditions ... to assure compliance with the requirements of [§ 402(a)(1) ] and *such other requirements as he deems appropriate.*" 33 U.S.C. § 1342(a)(2) (emphasis added). Similarly, Congress preserved for the Administrator broad authority to oversee state permit programs:

> "No permit shall issue ... if the Administrator ... objects in writing to the issuance of such permit as being outside the guidelines and requirements of this chapter." § 1342(d)(2).

The regulations relied on by the EPA were a perfectly reasonable exercise of the Agency's statutory discretion. The application of state water quality standards in the interstate context is wholly consistent with the Act's broad purpose "to restore and maintain the chemical, physical, and *106 biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). Moreover, as noted above, § 301(b)(1)(C) expressly identifies the achievement of state water quality standards as one of the Act's central objectives. The Agency's regulations conditioning NPDES permits are a well-tailored means of achieving this goal.

[7] Notwithstanding this apparent reasonableness, Arkansas argues that our description **1057 in *Ouellette* of the role of affected States in the permit process and our characterization of the affected States' position as "subordinate," see 479 U.S., at 490–491, 107 S.Ct. at 810–811, indicates that the EPA's application of the Oklahoma standards was error. We disagree. Our statement in *Ouellette* concerned only an affected State's input into the permit process; that input is clearly limited by the plain language of § 402(b). Limits on an affected State's direct participation in permitting decisions, however, do not in any way constrain the *EPA's* authority

to require a point source to comply with downstream water quality standards.

Arkansas also argues that regulations requiring compliance with downstream standards are at odds with the legislative history of the Act and with the statutory scheme established by the Act. Although we agree with Arkansas that the Act's legislative history indicates that Congress intended to grant the Administrator discretion in his oversight of the issuance of NPDES permits, [11] we find nothing in that history to indicate that Congress intended to preclude the EPA from establishing a general requirement that such permits be conditioned to ensure compliance with downstream water quality standards.

Similarly, we agree with Arkansas that in the Clean Water Act Congress struck a careful balance among competing policies and interests, but do not find the EPA regulations concerning ***107** the application of downstream water quality standards at all incompatible with that balance. Congress, in crafting the Act, protected certain sovereign interests of the States; for example, § 510 allows States to adopt more demanding pollution-control standards than those established under the Act. Arkansas emphasizes that § 510 preserves such state authority only as it is applied to the waters of the regulating State. Even assuming Arkansas' construction of § 510 is correct, cf. *id.,* at 493, 107 S.Ct., at 812, that section only concerns *state* authority and does not constrain the *EPA's* authority to promulgate reasonable regulations requiring point sources in one State to comply with water quality standards in downstream States.

**[8]** For these reasons, we find the EPA's requirement that the Fayetteville discharge comply with Oklahoma's water quality standards to be a reasonable exercise of the Agency's substantial statutory discretion. Cf. *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.,* 467 U.S. 837, 842–845, 104 S.Ct. 2778, 2781–2783, 81 L.Ed.2d 694 (1984).

V

**[9]** The Court of Appeals construed the Clean Water Act to prohibit any discharge of effluent that would reach waters already in violation of existing water quality standards. [12] We find nothing in the Act to support this reading.

****1058** ***108** The interpretation of the statute adopted by the court had not been advanced by any party during the Agency or court proceedings. Moreover, the Court of Appeals candidly acknowledged that its theory "has apparently never before been addressed by a federal court." 908 F.2d, at 620, n. 39. The only statutory provision the court cited to support its legal analysis was § 402(h), see *id.,* at 633, which merely authorizes the EPA (or a state permit program) to prohibit a publicly owned treatment plant that is violating a condition of its NPDES permit from accepting any additional pollutants for treatment until the ongoing violation has been corrected. See 33 U.S.C. § 1342(h).

Although the Act contains several provisions directing compliance with state water quality standards, see, *e.g.,* § 1311(b)(1)(C), the parties have pointed to nothing that mandates a complete ban on discharges into a waterway that is in violation of those standards. The statute does, however, contain provisions designed to remedy existing water quality violations and to allocate the burden of reducing undesirable discharges between existing sources and new sources. See, *e.g.,* § 1313(d). Thus, rather than establishing the categorical ban announced by the Court of Appeals—which might frustrate the construction of new plants that would improve existing conditions—the Clean Water Act vests in the EPA and the States broad authority to develop long-range, area-wide programs to alleviate and eliminate existing pollution. See, *e.g.,* § 1288(b)(2).

To the extent that the Court of Appeals relied on its interpretation of the Act to reverse the EPA's permitting decision, that reliance was misplaced.

***109** VI

**[10]** The Court of Appeals also concluded that the EPA's issuance of the Fayetteville permit was arbitrary and capricious because the Agency misinterpreted Oklahoma's water quality standards. The primary difference [13] between the court's and the Agency's interpretation of the standards derives from the court's construction of the Act. Contrary to the EPA's interpretation of the Oklahoma standards, the Court of Appeals read those standards as containing the same categorical ban on new discharges that the court had found in the Clean Water Act itself. Although we do not believe the text of the Oklahoma standards supports the court's reading (indeed, we note that Oklahoma itself had not advanced that interpretation in its briefs in the Court of Appeals), we reject it for a more fundamental reason—namely, that the Court of Appeals exceeded the legitimate scope of judicial review of an agency adjudication. To emphasize the importance of this point, we shall first briefly assess the soundness of the EPA's interpretation and application of the Oklahoma ***110**

standards and then comment more specifically on the Court of Appeals' approach.

As discussed above, an EPA regulation requires an NPDES permit to comply "with the applicable water quality requirements of **1059 all affected States." 40 CFR § 122.4(d) (1991). This regulation effectively incorporates into federal law those state-law standards the Agency reasonably determines to be "applicable." In such a situation, then, state water quality standards—promulgated by the States with substantial guidance from the EPA [14] and approved by the Agency—are part of the federal law of water pollution control.

**[11]** Two features of the body of law governing water pollution support this conclusion. First, as discussed more thoroughly above, we have long recognized that interstate water pollution is controlled by *federal* law. See *supra,* at 1052–1054. Recognizing that the system of federally approved state standards as applied in the interstate context constitutes federal law is wholly consistent with this principle. Second, treating state standards in interstate controversies as federal law accords with the Act's purpose of authorizing the EPA to create and manage a uniform system of interstate water pollution regulation.

Because we recognize that, at least insofar as they affect the issuance of a permit in another State, the Oklahoma standards have a federal character, the EPA's reasonable, consistently held interpretation of those standards is entitled to substantial deference. Cf. *INS v. National Center for Immigrants' Rights,* 502 U.S. 183, 189–190, 112 S.Ct. 551, 556, 116 L.Ed.2d 546 (1991); *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.,* 467 U.S. 837, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984). In these cases, the Chief Judicial Officer ruled that the Oklahoma standards—which require that there be "no degradation" of the upper Illinois River—would *111 only be violated if the discharge effected an "actually detectable or measurable" change in water quality. App. to Pet. for Cert. in No. 90–1262, p. 117a.

This interpretation of the Oklahoma standards is certainly reasonable and consistent with the purposes and principles of the Clean Water Act. As the Chief Judicial Officer noted, "unless there is some method for measuring compliance, there is no way to ensure compliance." *Id.,* at 118a, n. 16 (internal quotation marks omitted; citation omitted). Moreover, this interpretation of the Oklahoma standards makes eminent sense in the interstate context: If every discharge that had some theoretical impact on a downstream State were interpreted as "degrading" the downstream waters, downstream States might wield an effective veto over upstream discharges.

**[12]** The EPA's application of those standards in these cases was also sound. On remand, the ALJ scrutinized the record and made explicit factual findings regarding four primary measures of water quality under the Oklahoma standards: eutrophication, [15] esthetics, [16] dissolved oxygen, [17] and **1060 metals. *112 [18] In each case, the ALJ found that the Fayetteville discharge would not lead to a detectable change in water quality. He therefore concluded that the Fayetteville discharge would not violate the Oklahoma water quality standards. Because we agree with the Agency's Chief Judicial Officer that these findings are supported by substantial evidence, we conclude that the Court of Appeals should have affirmed both the EPA's construction of the regulations and the issuance of the Fayetteville permit.

In its review of the EPA's interpretation and application of the Oklahoma standards, the Court of Appeals committed three mutually compounding errors.

**[13]** First, the court failed to give due regard to the EPA's interpretation of its own regulations, as those regulations incorporate the Oklahoma standards. Instead the court voiced its own interpretation of the governing law and concluded that "where a proposed source would discharge effluents that would contribute to conditions currently constituting a violation of applicable water quality standards, such [a] proposed source may not be permitted." 908 F.2d, at 620. As we have already pointed out, that reading of the law is not supported by the statute or by any EPA regulation. The Court of Appeals sat in review of an agency action and should have afforded the EPA's interpretation of the governing law an appropriate level of deference. See generally *Chevron, supra,* 467 U.S., at 842–844, 104 S.Ct., at 2781–2782.

**[14]** Second, the court disregarded well-established standards for reviewing the factual findings of agencies and instead made its own factual findings. The troubling nature of the court's analysis appears on the face of the opinion itself: At least four times, the court concluded that "there was substantial evidence before the ALJ to support" particular findings which the court thought appropriate, but which were *113 contrary to those actually made by the ALJ. 908 F.2d, at 620, 625, 627, 629. Although we have long recognized the "substantial evidence" standard in administrative law, the

court below turned that analysis on its head. A court reviewing an agency's adjudicative action should accept the *agency's* factual findings if those findings are supported by substantial evidence on the record as a whole. See generally *Universal Camera Corp. v. NLRB,* 340 U.S. 474, 71 S.Ct. 456, 95 L.Ed. 456 (1951). The court should not supplant the agency's findings merely by identifying alternative findings that could be supported by substantial evidence.

Third, the court incorrectly concluded that the EPA's decision was arbitrary and capricious. This error is derivative of the court's first two errors. Having substituted its reading of the governing law for the Agency's, and having made its own factual findings, the Court of Appeals concluded that the EPA erred in not considering an important and relevant fact —namely, that the upper Illinois River was (by the court's assessment) already degraded.

As we have often recognized, an agency ruling is "arbitrary and capricious if the agency has ... entirely failed to consider an important aspect of the problem." *Motor Vehicle Mfrs. Assn. of United States, Inc. v. State Farm Mut. Automobile Ins. Co.,* 463 U.S. 29, 43, 103 S.Ct. 2856, 2867, 77 L.Ed.2d 443 (1983). However, in these cases, the degraded status of the river is only an "important aspect" because of the Court of Appeals' novel and erroneous interpretation of the controlling law. Under the EPA's interpretation of that law, what matters is not the river's current status, but rather whether the proposed discharge will have a "detectable effect" on that status. If the Court of Appeals had been properly respectful of the Agency's permissible reading of the Act and ****1061** the Oklahoma standards, the court would not have adjudged the Agency's decision arbitrary and capricious for this reason.

**[15]** **[16]** In sum, the Court of Appeals made a policy choice that it was not authorized to make. Arguably, as that court suggested, ***114** it might be wise to prohibit any discharge into the Illinois River, even if that discharge would have no adverse impact on water quality. But it was surely not arbitrary for the EPA to conclude—given the benefits to the river from the increased flow of relatively clean water [19] and the benefits achieved in Arkansas by allowing the new plant to operate as designed—that allowing the discharge would be even wiser. It is not our role, or that of the Court of Appeals, to decide which policy choice is the better one, for it is clear that Congress has entrusted such decisions to the Environmental Protection Agency.

Accordingly, the judgment of the Court of Appeals is

*Reversed.*

**All Citations**

503 U.S. 91, 112 S.Ct. 1046, 117 L.Ed.2d 239, 34 ERC 1193, 60 USLW 4176, 22 Envtl. L. Rep. 20,552

Footnotes

* The syllabus constitutes no part of the opinion of the Court but has been prepared by the Reporter of Decisions for the convenience of the reader. See *United States v. Detroit Lumber Co.,* 200 U.S. 321, 337, 26 S.Ct. 282, 287, 50 L.Ed. 499.

1 The permit also authorized the plant to discharge the remainder of its effluent into the White River, a river that does not flow into Oklahoma; this aspect of the permit is not at issue in this litigation.

2 Section 5 of the Oklahoma water quality standards provides:
"All streams and bodies of water designated as (a) are protected by prohibition of any new point source discharge of wastes or increased load from an existing point source except under conditions described in Section 3.
"All streams designated by the State as 'scenic river areas,' and such tributaries of those streams as may be appropriate will be so designated. Best management practices for control of nonpoint source discharge should be initiated when feasible." App. 46–47.
Oklahoma has designated the portion of the Illinois River immediately downstream from the state line as a "scenic river." Okla.Stat., Tit. 82, § 1452(b)(1) (Supp.1989); see also App. 54.
Section 3 of the Oklahoma water quality standards provides, in relevant part:
"The intent of the Anti-degradation Policy is to protect all waters of the State from quality degradation. Existing instream water uses shall be maintained and protected. No further water quality degradation which would interfere with or become injurious to existing instream water uses shall be allowed. Oklahoma's waters constitute a valuable State resource and shall be protected, maintained and improved for the benefit of all the citizens.
. . . . .

  

"No degradation shall be allowed in high quality waters which constitute an outstanding resource or in waters of exceptional recreational or ecological significance. These include water bodies located in national and State parks, Wildlife Refuges, and those designated 'Scenic Rivers' in Appendix A." App. 27–28.

3 Section 301(b)(1)(C) provides, in relevant part, that
"there shall be achieved—
. . . . .
"(C) not later than July 1, 1977, any more stringent limitation, including those necessary to meet *water quality standards ... established pursuant to any State law or regulations* ... or required to implement any applicable water quality standard established pursuant to this chapter." 33 U.S.C. § 1311(b)(1)(C) (emphasis added).

4 The Arkansas petition was filed in the Court of Appeals for the Eighth Circuit and transferred to the Tenth Circuit where it was consolidated with the petition filed by the respondents.

5 Section 510 provides in relevant part:

> "Except as expressly provided in this [Act], nothing in this [Act] shall (1) preclude or deny the right of any State or political subdivision thereof or interstate agency to adopt or enforce (A) any standard or limitation respecting discharges of pollutants, or (B) any requirement respecting control or abatement of pollution [with exceptions]; or (2) be construed as impairing or in any manner affecting any right or jurisdiction of the States *with respect to the waters (including boundary waters) of such States.*" 33 U.S.C. § 1370 (emphasis added).

6 This description of the downstream State's role in the issuance of a new permit by a source State was apparently consistent with the EPA's interpretation of the Act at the time. The Government's *amicus curiae* brief in *Ouellette* stated that "the affected neighboring state [has] only an advisory role in the formulation of applicable effluent standards or limitations. The affected state may try to persuade the federal government or the source state to increase effluent requirements, but *ultimately possesses no statutory authority to compel that result, even when its waters are adversely affected by out-of-state pollution.* See 33 U.S.C. § 1341(a)(2), 1342(b)(3) and (5)...." Brief for United States as *Amicus Curiae,* O.T. 1986, No. 85–1233, p. 19 (emphasis added; footnote omitted).

7 Section 402(b) requires state permit programs
"(3) [t]o insure that ... any other State the waters of which may be affected ... receive notice of each application for a permit and to provide an opportunity for public hearing before a ruling on each such application;
. . . . .
"(5) [t]o insure that any State (other than the permitting State), whose waters may be affected by the issuance of a permit may submit written recommendations to the permitting State (and the Administrator) with respect to any permit application and, if any part of such written recommendations are not accepted by the permitting State, that the permitting State will notify such affected State (and the Administrator) in writing of its failure to so accept such recommendations together with its reasons for so doing." 33 U.S.C. § 1342(b).
Although § 402(b) focuses on state-issued permits, § 402(a)(3) requires that, in issuing an NPDES permit, the Administrator follow the same procedures required of state permit programs. See § 1342(a)(3); see also 33 U.S.C. § 1341(a)(2).

8 Section 402(d)(2) provides:
"(2) No permit shall issue (A) if the Administrator within ninety days of the date of his notification under subsection (b)(5) of this section objects in writing to the issuance of such permit, or (B) if the Administrator within ninety days of the date of transmittal of the proposed permit by the State objects in writing to the issuance of such permit as being outside the guidelines and requirements of this chapter. Whenever the Administrator objects to the issuance of a permit under this paragraph such written objection shall contain a statement of the reasons for such objection and the effluent limitations and conditions which such permit would include if it were issued by the Administrator." 33 U.S.C. § 1342(d)(2).

9 Section 401(a)(2) provides, in relevant part:
"Whenever such a discharge may affect, as determined by the Administrator, the quality of the waters of any other State, the Administrator ... shall so notify such other State, the licensing or permitting agency, and the applicant. If, within sixty days after receipt of such notification, such other State determines that such discharge will affect the quality of its waters so as to violate any water quality requirements in such State, and within such sixty-day period notifies the Administrator and the licensing or permitting agency in writing of its objection to the issuance of such license or permit and requests a

  

public hearing on such objection, the licensing or permitting agency shall hold such a hearing. The Administrator shall at such hearing submit his evaluation and recommendations with respect to any such objection to the licensing or permitting agency. Such agency, based upon the recommendations of such State, the Administrator, and upon any additional evidence, if any, presented to the agency at the hearing, shall condition such license or permit in such manner as may be necessary to insure compliance with applicable water quality requirements. If the imposition of conditions cannot insure such compliance such agency shall not issue such license or permit." 33 U.S.C. § 1341(a)(2).

10 This restriction applies whether the permit is issued by the EPA or by an approved state program. See 40 CFR § 123.25 (1991).

11 See, *e.g.,* 1 Legislative History of Water Pollution Control Act Amendments of 1972 (Committee Print compiled for the Senate Committee on Public Works by the Library of Congress), Ser. No. 93–1, pp. 322, 388–389, 814 (1973); see also 33 U.S.C. § 1342(d)(3).

12 "[W]e hold that the Clean Water Act prohibits granting an NPDES permit under the circumstances of this case (i.e., where applicable water quality standards have already been violated) and reverse EPA's decision to permit Fayetteville to discharge any part of its effluent to the Illinois River Basin." 908 F.2d 595, 616 (CA10 1990).

"Congress cannot reasonably be presumed to have intended to exclude from the CWA's 'all-encompassing program,' 451 U.S., at 318 [101 S.Ct., at 1793] a permitting decision arising in circumstances such as those of this case. It is even more unfathomable that Congress fashioned a '*comprehensive* ... policy for the *elimination* of water pollution,' *id.,* which sanctions continued pollution once minimum water quality standards have been transgressed. More likely, Congress simply never contemplated that EPA or a state would consider it permissible to authorize further pollution under such circumstances. We will not ascribe to the Act either the gaping loophole or the irrational purpose necessary to uphold EPA's action in this case." *Id.,* at 632 (footnotes omitted).

13 The court identified three errors in the EPA's reading of the Oklahoma standards. First, the court correctly observed that the ALJ and the Chief Judicial Officer misinterpreted § 4.10(c) of the standards as governing only the discharge of phosphorus into lakes, rather than the discharge of phosphorus into lakes and into all "perennial and intermittent streams." *Id.,* at 617 (emphasis omitted). This error was harmless because the ALJ found that the discharge into Lake Francis would comply with § 4.10(c) and it is undisputed that that discharge produced a greater threat to the slow-moving water of the lake than to the rapid flow in the river.

The second flaw identified by the court was the ALJ's mistaken reliance on the 1985, rather than the 1982 version, of the Oklahoma standards. We agree with the Chief Judicial Officer, who also noted this error, that the portions of the two versions relevant to this case "do not differ materially." App. to Pet. for Cert. in No. 90–1262, p. 150a. Therefore, this error was also harmless.

Because these two errors were harmless, we have focused in the text on the major difference between the court's and the EPA's readings of the Oklahoma standards: the "no degradation" provision.

14 See *supra,* at 1054. Oklahoma's water quality standards closely track the EPA's model standards in effect at that time. Compare § 3 of the Oklahoma standards with 40 CFR § 35.1550(e)(1) (1981).

15 Eutrophication is the "normally slow aging process by which a lake evolves into a bog or marsh.... During eutrophication the lake becomes so rich in nutritive compounds (especially nitrogen and phosphorus) that algae and other microscopic plant life become superabundant, thereby 'choking' the lake...." App. 57–58. With regard to eutrophication, the ALJ found that the Fayetteville plant would discharge 30 pounds of phosphorus per day, only about 6 pounds of which would reach the Arkansas/Oklahoma border, and that such a small amount would not result in an increase in eutrophication. App. to Pet. for Cert. in No. 90–1262, p. 129a.

16 With regard to esthetics, the ALJ concluded that the only discharged compound that would affect esthetics was phosphorus and that, again, the amount of that substance crossing the border would not affect the esthetic quality of Oklahoma's waters. *Id.,* at 135a–136a.

17 With regard to dissolved oxygen, the ALJ found that in the 39 miles between discharge and the border the effluent would experience "complete oxygen recovery" and therefore would not affect the dissolved oxygen levels in the river. *Id.,* at 140a.

18 With regard to metals, the ALJ concluded that the concentrations of metals would be so low as not to violate the Oklahoma standards. *Id.,* at 143a.

19 Justice Holmes recognized this potential benefit years ago:

"There is no pretence that there is a nuisance of the simple kind that was known to the older common law. There is nothing which can be detected by the unassisted senses—no visible increase of filth, no new smell. On the contrary, it is proved that the great volume of pure water from Lake Michigan which is mixed with the sewage at the start has improved the Illinois River in these respects to a noticeable extent. Formerly it was sluggish and ill smelling. Now it is a

  

comparatively clear stream to which edible fish have returned. Its water is drunk by the fisherman, it is said, without evil results." *Missouri v. Illinois,* 200 U.S. 496, 522, 26 S.Ct. 268, 270, 50 L.Ed. 572 (1906).

**End of Document**

KeyCite Yellow Flag - Negative Treatment
Opinion Amended on Denial of Rehearing by Defenders of Wildlife v. Browner, 9th Cir., December 7, 1999

191 F.3d 1159
United States Court of Appeals,
Ninth Circuit.

DEFENDERS OF WILDLIFE
and The Sierra Club, Petitioners,
v.
Carol M. BROWNER, in her official capacity
as Administrator of the United States
Environmental Protection Agency, Respondent.
City of Tempe, Arizona; City of Tucson, Arizona;
City of Mesa, Arizona; Pima County, Arizona; and
City of Phoenix, Arizona, Intervenors–Respondents.

No. 98–71080.
|
Argued and Submitted Aug. 11, 1999.
|
Decided Sept. 15, 1999.

**Synopsis**
Environmental organizations sought review of Environmental Protection Agency (EPA) decision to issue National Pollution Discharge Elimination System (NPDES) permits to five municipalities, for their separate storm sewers, without requiring numeric limitations to ensure compliance with state water-quality standards. The Court of Appeals, Graber, Circuit Judge, held that: (1) organizations had standing; (2) municipal storm-sewer discharges did not have to strictly comply with state water-quality standards; but (3) EPA had discretion to require that municipal discharges comply with such standards.

Petition denied.

West Headnotes (8)

**[1] Environmental Law**
Cognizable interests and injuries, in general

For purpose of statute authorizing any interested person to seek judicial review of Environmental Protection Agency (EPA) decision issuing or denying any National Pollution Discharge Elimination System (NPDES) permit, "any interested person" means any person that satisfies the injury-in-fact requirement for Article III standing. U.S.C.A. Const. Art. 3, § 2, cl. 1; Federal Water Pollution Control Act Amendments of 1972, § 509(b)(1)(F), 33 U.S.C.A. § 1369(b)(1)(F).

1 Cases that cite this headnote

**[2] Environmental Law**
Organizations, associations, and other groups

Environmental organizations had standing to seek judicial review of Environmental Protection Agency (EPA) decision to issue National Pollution Discharge Elimination System (NPDES) permits for municipalities' storm sewers based on allegation that organizations' members used and enjoyed ecosystems affected by storm water discharges and sources thereof governed by the permits. U.S.C.A. Const. Art. 3, § 2, cl. 1; Federal Water Pollution Control Act Amendments of 1972, § 509(b)(1)(F), 33 U.S.C.A. § 1369(b)(1)(F).

5 Cases that cite this headnote

**[3] Environmental Law**
Permit and certification proceedings

Although best practicable control technology (BPT) requirement for National Pollution Discharge Elimination System (NPDES) permits takes into account issues of practicability, the Environmental Protection Agency (EPA) also is under a specific obligation to require that level of effluent control which is needed to implement existing water quality standards without regard to the limits of practicability. Federal Water Pollution Control Act Amendments of 1972, §§ 301(b)(1)(A, C), 402(a)(1), 33 U.S.C.A. §§ 1311(b)(1)(A, C), 1342(a)(1).

13 Cases that cite this headnote

**[4] Environmental Law**
Discharge of pollutants

Water Quality Act amendments to the Clean Water Act do not require municipal storm-sewer discharges to strictly comply with state water-quality standards, in order to obtain National Pollution Discharge Elimination System (NPDES) permit, but instead prescribe separate standard requiring reduction of discharge of pollutants to maximum extent practicable, in view of Act's distinction between municipal and industrial discharges. Federal Water Pollution Control Act Amendments of 1972, §§ 301(b)(1)(C), 402(p)(3)(B)(iii), 33 U.S.C.A. §§ 1311(b)(1)(C), 1342(p)(3)(B)(iii).

17 Cases that cite this headnote

**[5] Administrative Law and Procedure**

Plain, literal, or clear meaning; ambiguity or silence

Questions of congressional intent that can be answered with traditional tools of statutory construction are still firmly within the province of the courts under *Chevron*, which governs review of an agency's interpretation of a statute.

5 Cases that cite this headnote

**[6] Statutes**

Language and intent, will, purpose, or policy

**Statutes**

Statute as a Whole; Relation of Parts to Whole and to One Another

Using traditional tools of statutory construction when interpreting a statute, courts look first to the words that Congress used, and, rather than focusing just on the word or phrase at issue, courts look to the entire statute to determine Congressional intent.

6 Cases that cite this headnote

**[7] Statutes**

Express mention and implied exclusion; expressio unius est exclusio alterius

Where Congress includes particular language in one section of a statute but omits it in another section of the same act, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion.

4 Cases that cite this headnote

**[8] Environmental Law**

Conditions and limitations

Environmental Protection Agency (EPA) is not prohibited from requiring, under Clean Water Act, that municipal storm-sewer discharges strictly comply with state water-quality standards, but has discretion to determine appropriate pollution controls. Federal Water Pollution Control Act Amendments of 1972, § 402(p)(3)(B)(iii), 33 U.S.C.A. § 1342(p)(3)(B)(iii).

14 Cases that cite this headnote

**Attorneys and Law Firms**

***1160** Jennifer Anderson and David Baron, Arizona Center for Law in the Public Interest, Phoenix, Arizona, for the petitioners.

Alan Greenberg, Attorney, U.S. Department of Justice, Environment & Natural Resources Division, Denver, Colorado, for the respondent.

Craig Reece, Phoenix City Attorney's Office, Phoenix, Arizona; Stephen J. Burg, Mesa City Attorney's Office, Mesa, Arizona; Timothy Harrison, Tucson City Attorney's Office, Tucson, Arizona; Harlan C. Agnew, Deputy County Attorney, Tucson, Arizona; and Charlotte Benson, Tempe City Attorney's Office, Tempe, Arizona, for the intervenors-respondents.

***1161** David Burchmore, Squire, Sanders & Dempsey, Cleveland, Ohio, for amici curiae.

Petition to Review a Decision of the Environmental Protection Agency. EPA No. 97–3.

Before: NOONAN, THOMPSON, and GRABER, Circuit Judges.

  

**Opinion**

GRABER, Circuit Judge:

Petitioners challenge the Environmental Protection Agency's (EPA) decision to issue National Pollution Discharge Elimination System (NPDES) permits to five municipalities, for their separate storm sewers, without requiring numeric limitations to ensure compliance with state water-quality standards. Petitioners sought administrative review of the decision within the EPA, which the Environmental Appeals Board (EAB) denied. This timely petition for review ensued. For the reasons that follow, we deny the petition.

FACTUAL AND PROCEDURAL BACKGROUND

Title 26 U.S.C. § 1342(a)(1) authorizes the EPA to issue NPDES permits, thereby allowing entities to discharge some pollutants. In 1992 and 1993, the cities of Tempe, Tucson, Mesa, and Phoenix, Arizona, and Pima County, Arizona (Intervenors), submitted applications for NPDES permits. The EPA prepared draft permits for public comment; those draft permits did not attempt to ensure compliance with Arizona's water-quality standards.

Petitioner Defenders of Wildlife objected to the permits, arguing that they must contain numeric limitations to ensure strict compliance with state water-quality standards. The State of Arizona also objected.

Thereafter, the EPA added new requirements:

> To ensure that the permittee's activities achieve timely compliance with applicable water quality standards (Arizona Administrative Code, Title 18, Chapter 11, Article 1), the permittee shall implement the [Storm Water Management Program], monitoring, reporting and other requirements of this permit in accordance with the time frames established in the [Storm Water Management Program] referenced in Part I.A.2, and elsewhere in the permit. This timely implementation of the requirements of this permit shall constitute a schedule of compliance authorized by Arizona Administrative Code, section R18–11–121(C).

The Storm Water Management Program included a number of structural environmental controls, such as storm-water detention basins, retention basins, and infiltration ponds. It also included programs to remove illegal discharges.

With the inclusion of those "best management practices," the EPA determined that the permits ensured compliance with state water-quality standards. The Arizona Department of Environmental Quality agreed:

> The Department has reviewed the referenced municipal NPDES storm-water permit pursuant to Section 401 of the Federal Clean Water Act to ensure compliance with State water quality standards. We have determined that, based on the information provided in the permit, and the fact sheet, adherence to provisions and requirements set forth in the final municipal permit, will protect the water quality of the receiving water.

On February 14, 1997, the EPA issued final NPDES permits to Intervenors. Within 30 days of that decision, Petitioners requested an evidentiary hearing with the regional administrator. *See* 40 C.F.R. § 124.74. Although Petitioners requested a hearing, they conceded that they raised only a legal issue and that a hearing was, in fact, unnecessary. Specifically, Petitioners raised only the legal question whether the Clean Water Act (CWA) requires numeric limitations to ensure strict compliance with state water-quality standards; they did not raise the factual question whether the management practices that the EPA chose would be effective.

***1162** On June 16, 1997, the regional administrator summarily denied Petitioners' request. Petitioners then filed a petition for review with the EAB. *See* 40 C.F.R. § 124.91(a). On May 21, 1998, the EAB denied the petition, holding that the permits need not contain numeric limitations to ensure strict compliance with state water-quality standards.

  

Petitioners then moved for reconsideration, *see* 40 C.F.R. § 124.91(i), which the EAB denied.

JURISDICTION

**[1]** **[2]** Title 33 U.S.C. § 1369(b)(1)(F) authorizes "any interested person" to seek review in this court of an EPA decision "issuing or denying any permit under section 1342 of this title." "Any interested person" means any person that satisfies the injury-in-fact requirement for Article III standing. *See Natural Resources Defense Council, Inc. v. EPA,* 966 F.2d 1292, 1297 (9th Cir.1992) [*NRDC II* ]. It is undisputed that Petitioners satisfy that requirement. Petitioners allege that "[m]embers of Defenders and the Club use and enjoy ecosystems affected by storm water discharges and sources thereof governed by the above-referenced permits," and no other party disputes those facts. *See Lujan v. Defenders of Wildlife,* 504 U.S. 555, 565–66, 112 S.Ct. 2130, 119 L.Ed.2d 351 (1992) ("[A] plaintiff claiming injury from environmental damage must use the area affected by the challenged activity."); *see also NRDC II,* 966 F.2d at 1297 ("NRDC claims, inter alia, that [the] EPA has delayed unlawfully promulgation of storm water regulations and that its regulations, as published, inadequately control storm water contaminants. NRDC's allegations ... satisfy the broad standing requirement applicable here.").

Intervenors argue, however, that they were not parties when this action was filed and that this court cannot redress Petitioners' injury without them. Their real contention appears to be that they are indispensable parties under Federal Rule of Civil Procedure 19. We need not consider that contention, however, because in fact Intervenors have been permitted to intervene in this action and to present their position fully. In the circumstances, Intervenors have suffered no injury.

DISCUSSIONA. *Standard of Review*

The Administrative Procedures Act (APA), 5 U.S.C. §§ 701–06, provides our standard of review for the EPA's decision to issue a permit. *See American Mining Congress v. EPA,* 965 F.2d 759, 763 (9th Cir.1992). Under the APA, we generally review such a decision to determine whether it was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A).

On questions of statutory interpretation, we follow the approach from *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.,* 467 U.S. 837, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984). *See NRDC II,* 966 F.2d at 1297 (so holding). In *Chevron,* 467 U.S. at 842–44, 104 S.Ct. 2778, the Supreme Court devised a two-step process for reviewing an administrative agency's interpretation of a statute that it administers. *See also Bicycle Trails Council of Marin v. Babbitt,* 82 F.3d 1445, 1452 (9th Cir.1996) ("The Supreme Court has established a two-step process for reviewing an agency's construction of a statute it administers."). Under the first step, we employ "traditional tools of statutory construction" to determine whether Congress has expressed its intent unambiguously on the question before the court. *Chevron,* 467 U.S. at 843 n. 9, 104 S.Ct. 2778. "If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress." *Id.* at 842–43, 104 S.Ct. 2778 (footnote omitted). If, instead, Congress has left a gap for the administrative agency to fill, we proceed to step two. *See id.* at 843, 104 S.Ct. 2778. At step two, we must uphold the administrative regulation unless it is "arbitrary, capricious, or manifestly contrary to the statute." *Id.* at 844, 104 S.Ct. 2778.

***1163** B. *Background*

The CWA generally prohibits the "discharge of any pollutant," 33 U.S.C. § 1311(a), from a "point source" into the navigable waters of the United States. *See* 33 U.S.C. § 1362(12)(A). An entity can, however, obtain an NPDES permit that allows for the discharge of some pollutants. *See* 33 U.S.C. § 1342(a)(1).

**[3]** Ordinarily, an NPDES permit imposes effluent limitations on such discharges. *See* 33 U.S.C. § 1342(a)(1) (incorporating effluent limitations found in 33 U.S.C. § 1311). First, a permit-holder "shall ... achiev [e] ... effluent limitations ... which shall require the application of the best practicable control technology [BPT] currently available." 33 U.S.C. § 1311(b)(1)(A). Second, a permit-holder "*shall ... achiev[e] ... any more stringent limitation,* including those *necessary to meet water quality standards,* treatment standards or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title)." 33 U.S.C. § 1311(b)(1)(C) (emphasis added). Thus, although the BPT requirement takes into account issues of practicability, *see Rybachek v. EPA,* 904 F.2d 1276, 1289 (9th Cir.1990), the EPA also "is under a specific obligation to require that level of effluent control which is needed to implement existing water quality standards without regard to the limits of practicability," *Oklahoma v. EPA,* 908 F.2d 595, 613 (10th Cir.1990) (internal quotation marks omitted), *rev'd on other grounds sub nom. Arkansas v. Oklahoma,* 503 U.S. 91, 112 S.Ct. 1046, 117 L.Ed.2d 239

  

(1992). *See also Ackels v. EPA,* 7 F.3d 862, 865–66 (9th Cir.1993) (similar).

The EPA's treatment of storm-water discharges has been the subject of much debate. Initially, the EPA determined that such discharges generally were exempt from the requirements of the CWA (at least when they were uncontaminated by any industrial or commercial activity). *See* 40 C.F.R. § 125.4 (1975).

The Court of Appeals for the District of Columbia, however, invalidated that regulation, holding that "the EPA Administrator does not have authority to exempt categories of point sources from the permit requirements of § 402 [33 U.S.C. § 1342]." *Natural Resources Defense Council, Inc. v. Costle,* 568 F.2d 1369, 1377 (D.C.Cir.1977). "Following this decision, [the] EPA issued proposed and final rules covering storm water discharges in 1980, 1982, 1984, 1985 and 1988. These rules were challenged at the administrative level and in the courts." *American Mining Congress,* 965 F.2d at 763.

Ultimately, in 1987, Congress enacted the Water Quality Act amendments to the CWA. *See NRDC II,* 966 F.2d at 1296 ("Recognizing both the environmental threat posed by storm water runoff and [the] EPA's problems in implementing regulations, Congress passed the Water Quality Act of 1987 containing amendments to the CWA.") (footnotes omitted). Under the Water Quality Act, from 1987 until 1994, [1] most entities discharging storm water did not need to obtain a permit. *See* 33 U.S.C. § 1342(p).

Although the Water Quality Act generally did not require entities discharging storm water to obtain a permit, it did require such a permit for discharges "with respect to which a permit has been issued under this section before February 4, 1987," 33 U.S.C. § 1342(p)(2)(A); discharges "associated with industrial activity," 33 U.S.C. § 1342(p)(2)(B); discharges from a "municipal separate sewer system serving a population of [100,000] or more," 33 U.S.C. § 1342(p)(2)(C) & (D); and "[a] discharge for which the Administrator ... determines that the stormwater discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States," 33 U.S.C. § 1342(p)(2)(E).

***1164** When a permit is required for the discharge of storm water, the Water Quality Act sets two different standards:

> (A) Industrial discharges
>
> Permits for discharges associated with industrial activity shall meet all applicable provisions of this section *and section 1311* of this title.
>
> (B) Municipal discharge
>
> Permits for discharges from municipal storm sewers—
>
> (i) may be issued on a system or jurisdiction-wide basis;
>
> (ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and
>
> (iii) *shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator ... determines appropriate for the control of such pollutants.*

33 U.S.C. § 1342(p)(3) (emphasis added).

C. *Application of Chevron*

**[4]** The EPA and Petitioners argue that the Water Quality Act is ambiguous regarding whether Congress intended for municipalities to comply strictly with state water-quality standards, under 33 U.S.C. § 1311(b)(1)(C). Accordingly, they argue that we must proceed to step two of *Chevron* and defer to the EPA's interpretation that the statute does require strict compliance. *See Zimmerman v. Oregon Dep't of Justice,* 170 F.3d 1169, 1173 (9th Cir.1999) ("At step two, we must uphold the administrative regulation unless it is arbitrary, capricious, or manifestly contrary to the statute.") (citation and internal quotation marks omitted), *cert. denied,* 531 U.S. 1189, 121 S.Ct. 1186, 149 L.Ed.2d 103, 68 USLW 3129 (1999).

Intervenors and *amici,* on the other hand, argue that the Water Quality Act expresses Congress' intent unambiguously and, thus, that we must stop at step one of *Chevron. See, e.g., National Credit Union Admin. v. First Nat'l Bank & Trust Co.,* 522 U.S. 479, 118 S.Ct. 927, 938–39, 140 L.Ed.2d 1 (1998) ( "Because we conclude that Congress has made it clear that the *same* common bond of occupation must unite each member of an occupationally defined federal credit union, we hold that the NCUA's contrary interpretation is impermissible under the first step of *Chevron.*") (emphasis in original); *Sierra Club v. EPA,* 118 F.3d 1324, 1327 (9th Cir.1997) ("Congress has spoken clearly on the subject and

the regulation violates the provisions of the statute. Our inquiry ends at the first prong of *Chevron.*"). We agree with Intervenors and *amici:* For the reasons discussed below, the Water Quality Act unambiguously demonstrates that Congress did not require municipal storm-sewer discharges to comply strictly with 33 U.S.C. § 1311(b)(1)(C). That being so, we end our inquiry at the first step of the *Chevron* analysis.

**[5]** **[6]** "[Q]uestions of congressional intent that can be answered with 'traditional tools of statutory construction' are still firmly within the province of the courts" under *Chevron. NRDC II,* 966 F.2d at 1297 (citation omitted). "Using our 'traditional tools of statutory construction,' *Chevron,* 467 U.S. at 843 n. 9, 104 S.Ct. 2778, 81 L.Ed.2d 694, when interpreting a statute, we look first to the words that Congress used." *Zimmerman,* 170 F.3d at 1173 (alterations, citations, and internal quotation marks omitted). "Rather than focusing just on the word or phrase at issue, we look to the entire statute to determine Congressional intent." *Id.* (alterations, citations, and internal quotation marks omitted).

As is apparent, Congress expressly required *industrial* storm-water discharges to comply with the requirements of 33 U.S.C. § 1311. *See* 33 U.S.C. § 1342(p)(3)(A) ("Permits for discharges associated with industrial activity *shall meet all applicable provisions of* this section and *section 1311* of this title.") (emphasis added). By incorporation, then, industrial ***1165** storm-water discharges "*shall ... achiev[e] ... any more stringent limitation,* including those necessary to meet water quality standards, treatment standards or schedules of compliance, established pursuant to any State law or regulation (under authority preserved by section 1370 of this title)." 33 U.S.C. § 1311(b)(1)(C) (emphasis added); *see also* Sally A. Longroy, *The Regulation of Storm Water Runoff and its Impact on Aviation,* 58 J. Air. L. & Com. 555, 565–66 (1993) ("Congress further *singled out* industrial storm water dischargers, all of which are on the high-priority schedule, and requires them to satisfy all provisions of section 301 of the CWA [33 U.S.C. § 1311].... Section 301 further mandates that NPDES permits include requirements that receiving waters meet water quality based standards.") (emphasis added). In other words, industrial discharges must comply strictly with state water-quality standards.

Congress chose not to include a similar provision for municipal storm-sewer discharges. Instead, Congress required municipal storm-sewer discharges "to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator ... determines appropriate for the control of such pollutants." 33 U.S.C. § 1342(p)(3)(B)(iii).

**[7]** The EPA and Petitioners argue that the difference in wording between the two provisions demonstrates ambiguity. That argument ignores precedent respecting the reading of statutes. Ordinarily, "[w]here Congress includes particular language in one section of a statute but omits it in another section of the same Act, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion." *Russello v. United States,* 464 U.S. 16, 23, 104 S.Ct. 296, 78 L.Ed.2d 17 (1983) (citation and internal quotation marks omitted); *see also United States v. Hanousek,* 176 F.3d 1116, 1121 (9th Cir.1999) (stating the same principle), *petition for cert. filed,* 68 USLW 3138 (Aug. 23, 1999). Applying that familiar and logical principle, we conclude that Congress' choice to require industrial storm-water discharges to comply with 33 U.S.C. § 1311, but not to include the same requirement for municipal discharges, must be given effect. When we read the two related sections together, we conclude that 33 U.S.C. § 1342(p)(3)(B)(iii) does not require municipal storm-sewer discharges to comply strictly with 33 U.S.C. § 1311(b)(1)(C).

Application of that principle is significantly strengthened here, because 33 U.S.C. § 1342(p)(3)(B) *is not merely silent* regarding whether municipal discharges must comply with 33 U.S.C. § 1311. Instead, § 1342(p)(3)(B)(iii) *replaces* the requirements of § 1311 with the requirement that municipal storm-sewer dischargers "reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator ... determines appropriate for the control of such pollutants." 33 U.S.C. § 1342(p)(3)(B)(iii). In the circumstances, the statute unambiguously demonstrates that Congress did not require municipal storm-sewer discharges to comply strictly with 33 U.S.C. § 1311(b)(1)(C).

Indeed, the EPA's and Petitioners' interpretation of 33 U.S.C. § 1342(p)(3)(B)(iii) would render that provision superfluous, a result that we prefer to avoid so as to give effect to all provisions that Congress has enacted. *See Government of Guam ex rel. Guam Econ. Dev. Auth. v. United States,* 179 F.3d 630, 634 (9th Cir.1999) ("This court generally refuses to interpret a statute in a way that renders a provision superfluous."), *as amended,* 1999 WL 604218 (9th Cir. Aug.12, 1999). As all parties concede, § 1342(p)(3)(B)(iii)

creates a lesser standard than § 1311. Thus, if § 1311 continues to apply to municipal storm-sewer discharges, ***1166** the more stringent requirements of that section always would control.

Contextual clues support the plain meaning of § 1342(p)(3)(B)(iii), which we have described above. The Water Quality Act contains other provisions that undeniably exempt certain discharges from the permit requirement altogether (and therefore from § 1311). For example, "[t]he Administrator shall not require a permit under this section for discharges composed entirely of return flows from irrigated agriculture." 33 U.S.C. § 1342(*l* )(1). Similarly, a permit is not required for certain storm-water runoff from oil, gas, and mining operations. *See* 33 U.S.C. § 1342(*l* )(2). Read in the light of those provisions, Congress' choice to exempt municipal storm-sewer discharges from strict compliance with § 1311 is not so unusual that we should hesitate to give effect to the statutory text, as written.

Finally, our interpretation of § 1342(p)(3)(B)(iii) is supported by this court's decision in *NRDC II.* There, the petitioner had argued that "the EPA has failed to establish substantive controls for municipal storm water discharges as required by the 1987 amendments." *NRDC II,* 966 F.2d at 1308. This court disagreed with the petitioner's interpretation of the amendments:

> Prior to 1987, municipal storm water dischargers were subject to the same substantive control requirements as industrial and other types of storm water. In the 1987 amendments, *Congress retained the existing, stricter controls for industrial storm water dischargers but prescribed new controls for municipal storm water discharge.*

*Id.* (emphasis added). The court concluded that, under 33 U.S.C. § 1342(p)(3)(B)(iii), "*Congress did not mandate a minimum standards approach.* " *Id.* (emphasis added). The question in *NRDC II* was not whether § 1342(p)(3)(B)(iii) required strict compliance with state water-quality standards, *see* 33 U.S.C. § 1311(b)(1)(C). Nonetheless, the court's holding applies equally in this action and further supports our reading of 33 U.S.C. § 1342(p).

In conclusion, the text of 33 U.S.C. § 1342(p)(3)(B), the structure of the Water Quality Act as a whole, and this court's precedent all demonstrate that Congress did not require municipal storm-sewer discharges to comply strictly with 33 U.S.C. § 1311(b)(1)(C).

D. *Required Compliance with 33 U.S.C. § 1311(b)(1)(C)*

**[8]** We are left with Intervenors' contention that the EPA may not, under the CWA, require strict compliance with state water-quality standards, through numerical limits or otherwise. We disagree.

Although Congress did not require municipal storm-sewer discharges to comply strictly with § 1311(b)(1)(C), § 1342(p)(3)(B)(iii) states that "[p]ermits for discharges from municipal storm sewers ... shall require ... *such other provisions as the Administrator ... determines appropriate for the control of such pollutants.*" (Emphasis added.) That provision gives the EPA discretion to determine what pollution controls are appropriate. As this court stated in *NRDC II,* "Congress gave the administrator discretion to determine what controls are necessary.... NRDC's argument that the EPA rule is inadequate cannot prevail in the face of the clear statutory language." 966 F.2d at 1308.

Under that discretionary provision, the EPA has the authority to determine that ensuring strict compliance with state water-quality standards is necessary to control pollutants. The EPA also has the authority to require less than strict compliance with state water-quality standards. The EPA has adopted an interim approach, which "uses best management practices (BMPs) in first-round storm water permits ... to provide for the attainment of water quality standards." The EPA applied that approach to the permits at issue here. Under 33 U.S.C. § 1342(p)(3)(B)(iii), the EPA's choice to include ***1167** either management practices or numeric limitations in the permits was within its discretion. *See NRDC II,* 966 F.2d at 1308 ("Congress did not mandate a minimum standards approach or specify that [the] EPA develop minimal performance requirements."). In the circumstances, the EPA did not act arbitrarily or capriciously by issuing permits to Intervenors.

PETITION DENIED.

**All Citations**

191 F.3d 1159, 30 Envtl. L. Rep. 20,116, 99 Cal. Daily Op. Serv. 7618, 1999 Daily Journal D.A.R. 9661, 1999 Daily Journal D.A.R. 12,369

Footnotes

1 As enacted, the Water Quality Act extended the exemption to October 1, 1992. Congress later amended the Act to change that date to October 1, 1994. *See* Pub.L. No. 102–580.

344 F.3d 832
United States Court of Appeals,
Ninth Circuit.

ENVIRONMENTAL DEFENSE CENTER, INC., Petitioner,
Natural Resources Defense Council, Inc., Petitioner–Intervenor,
v.
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent.
American Forest & Paper Association; National Association of Home Builders, Petitioners,
v.
United States Environmental Protection Agency, Respondent,
Natural Resources Defense Council, Inc., Applicant–Intervenor.
Texas Cities Coalition on Stormwater; Texas Counties Storm Water Coalition, Petitioners,
v.
United States Environmental Protection Agency, Respondent,
Natural Resources Defense Council, Inc., Respondent–Intervenor.

Nos. 00–70014, 00–70734, 00–70822.
|
Argued and Submitted Dec. 3, 2001.
|
Filed Sept. 15, 2003.

**Synopsis**

Environmental, municipal, and industry groups brought petitions for review of Environmental Protection Agency (EPA) rule mandating that discharges from small municipal storm sewers and construction sites be subject to National Pollutant Discharge Elimination System (NPDES) permitting requirements. On denial of rehearing, the Court of Appeals, James R. Browning, Circuit Judge, held that: (1) EPA had authority to impose rule; (2) rule did not violate the Tenth Amendment; (3) rule improperly failed to provide for review of notices of intent and public participation in NPDES permitting process; (4) EPA's failure to designate industrial sources of storm water pollution for permitting requirements was not arbitrary and capricious; (5) challenge to rule's exclusion of forest roads was not time-barred; (6) forestry trade association lacked standing to challenge rule; (7) EPA properly consulted with state and local officials; (8) sites subject to rule were properly designated; and (9) EPA properly retained authority to designate future sources of storm water pollution for regulation.

Petitions for review granted in part and denied in part.

Tallman, Circuit Judge, filed opinion concurring in part and dissenting in part, and would have granted petition for rehearing.

Opinion, 319 F.3d 398, vacated.

West Headnotes (33)

[1] **Environmental Law**
Sewage and sewers
**Environmental Law**
Discharge of pollutants

Storm sewers are established "point sources" subject to National Pollutant Discharge Elimination System (NPDES) permitting requirements under Clean Water Act (CWA). Federal Water Pollution Control Act Amendments of 1972, § 101 et seq., 33 U.S.C.A. § 1251 et seq.

8 Cases that cite this headnote

[2] **Environmental Law**
Substances, Sources, and Activities Regulated

Diffuse runoff, such as rainwater that is not channeled through point source, is considered "nonpoint source" pollution and is not subject to federal regulation under Clean Water Act (CWA). Federal Water Pollution Control Act Amendments of 1972, § 101 et seq., 33 U.S.C.A. § 1251 et seq.

7 Cases that cite this headnote

[3] **Constitutional Law**

Resolution of non-constitutional questions before constitutional questions

Court of Appeals avoids considering constitutionality of a rule if an issue may be resolved on narrower grounds.

5 Cases that cite this headnote

[4] **Environmental Law**

Discharge of pollutants

Environmental Protection Agency (EPA) interpretation of rule promulgated under Clean Water Act (CWA), whereby EPA would require that discharges from small municipal storm sewers and construction sites be subject to National Pollutant Discharge Elimination System (NPDES) permitting requirements, was reasonable, and thus EPA acted within its statutory mandate in formulating permit program under rule; even though permitting was not included on statutory list of elements for EPA's comprehensive program to regulate small sewer systems, list was non-exclusive, and statutory language requiring imposition of permits for "municipal storm sewers" was reasonably interpreted to extend to small systems. Federal Water Pollution Control Act Amendments of 1972, § 402(p)(6), 33 U.S.C.A. § 1342(p)(6).

14 Cases that cite this headnote

[5] **Environmental Law**

Conditions and limitations

Minimum measures set forth by rule as conditions for issuance of stormwater discharge permit to operator of small municipal storm sewers did not exceed authority of Environmental Protection Agency (EPA) under Clean Water Act (CWA), as statute's list of elements for regulatory program was nonexclusive, and rule included at least one alternative to minimum measures. Federal Water Pollution Control Act Amendments of 1972, § 402(p)(6), 33 U.S.C.A. § 1342(p)(6); 40 C.F.R. §§ 122.26(d), 122.26, 122.33(b)(1), 122.34(b), (d)(1)(i).

6 Cases that cite this headnote

[6] **States**

Surrender of state sovereignty and coercion of state

Under the Tenth Amendment, the Federal Government may not compel States to implement, by legislation or executive action, federal regulatory programs. U.S.C.A. Const.Amend. 10.

2 Cases that cite this headnote

[7] **States**

Surrender of state sovereignty and coercion of state

Under the Tenth Amendment, the federal government may not force the States to regulate third parties in furtherance of a federal program. U.S.C.A. Const.Amend. 10.

1 Cases that cite this headnote

[8] **States**

Powers of United States and Infringement on State Powers

Protections of Tenth Amendment, whereby federal government may not compel States to implement federal regulatory programs by legislation or executive action, nor force the States to regulate third parties in furtherance of a federal program, extend to municipalities. U.S.C.A. Const.Amend. 10.

1 Cases that cite this headnote

[9] **United States**

State and local governments and agencies

While federal government may not compel them to do so, it may encourage States and municipalities to implement federal regulatory programs; for example, the federal government may make certain federal funds available only to those States or municipalities that enact a given regulatory regime. U.S.C.A. Const.Amend. 10.

  

1 Cases that cite this headnote

[10] **States**

Surrender of state sovereignty and coercion of state

The crucial proscribed element under the Tenth Amendment, as to federal government's ability to have states implement federal programs, is coercion; the residents of the State or municipality must retain the ultimate decision as to whether or not the State or municipality will comply with the federal regulatory program, but as long as the alternative to implementing a federal regulatory program does not offend the Constitution's guarantees of federalism, the fact that the alternative is difficult, expensive, or otherwise unappealing is insufficient to establish a Tenth Amendment violation. U.S.C.A. Const.Amend. 10.

2 Cases that cite this headnote

[11] **Environmental Law**

Validity

**States**

Surrender of state sovereignty and coercion of state

Environmental Protection Agency (EPA) rule promulgated under Clean Water Act (CWA), whereby discharges from small municipal storm sewers and construction sites were subject to National Pollutant Discharge Elimination System (NPDES) permitting requirements, did not wrongfully compel municipalities to regulate third parties under federal law as condition of receiving permit to operate, as would contravene Tenth Amendment; although one means of obtaining permit would require municipality to adopt various enforcement procedures, permit applicants retained option of applying for Alternative Permit. U.S.C.A. Const.Amend. 10; Federal Water Pollution Control Act Amendments of 1972, § 101 et seq., 33 U.S.C.A. § 1251 et seq.; 40 C.F.R. §§ 122.26(d), 122.34.

1 Cases that cite this headnote

[12] **Constitutional Law**

Political speech, beliefs, or activity in general

**Environmental Law**

Discharge of pollutants

Environmental Protection Agency (EPA) adoption of "Public Education" and "Illicit Discharge" Minimum Measures within rules governing discharges from small municipal storm sewers and construction sites, whereby such discharges would be subject to National Pollutant Discharge Elimination System (NPDES) permitting requirements under Clean Water Act (CWA), did not wrongfully compel municipalities to deliver EPA's political messages, and thus did not violate municipalities' free speech rights under First Amendment; requiring providers of storm sewers that discharged into national waters to educate public about impacts of storm water discharge, and to inform affected parties, including public, about hazards of improper waste disposal fell short of compelling political speech, since they did not dictate specific ideological message. U.S.C.A. Const.Amend. 1; Federal Water Pollution Control Act Amendments of 1972, § 101 et seq., 33 U.S.C.A. § 1251 et seq.

11 Cases that cite this headnote

[13] **Administrative Law and Procedure**

Rule differing from published notice

In determining whether notice to interested parties was adequate under informal rulemaking strictures of Administrative Procedure Act (APA) when final regulation has varied from proposal, court must consider whether new round of notice and comment would have provided first opportunity for interested parties to offer comments that could have persuaded agency to modify its ruling. 5 U.S.C.A. § 553.

4 Cases that cite this headnote

[14] **Environmental Law**

Notice and comment

  

Environmental Protection Agency (EPA) adoption of Alternative Permit option within rules governing discharges from small municipal storm sewers and construction sites, whereby such discharges would be subject to National Pollutant Discharge Elimination System (NPDES) permitting requirements under Clean Water Act (CWA), properly complied with minimum notice and comment procedures required in informal rulemaking under Administrative Procedure Act (APA), since Alternative Permit option was logical outgrowth of comments received by EPA in response to proposed rule, and option contained no elements that were not part of proposed rule, even though it was configured differently. 5 U.S.C.A. § 553; Federal Water Pollution Control Act Amendments of 1972, § 101 et seq., 33 U.S.C.A. § 1251 et seq.

3 Cases that cite this headnote

**[15] Environmental Law**

Ripeness

Challenge to Environmental Protection Agency (EPA) rule allowing operators of small municipal storm sewers to pursue general permit option to meet National Pollutant Discharge Elimination System (NPDES) requirements under Clean Water Act (CWA) was ripe for review, as issue did not involve merits of any specific permit but was purely one of statutory interpretation that would not benefit from further factual development; issue specifically was whether EPA accomplished the substantive controls for municipal stormwater that Congress mandated in the CWA. Federal Water Pollution Control Act Amendments of 1972, § 402(p), 33 U.S.C.A. § 1342(p).

11 Cases that cite this headnote

**[16] Environmental Law**

Discharge of pollutants

General permitting scheme of Environmental Protection Agency (EPA) rules governing discharges from small municipal storm sewers and construction sites, whereby such discharges would be subject to National Pollutant Discharge Elimination System (NPDES) requirements under Clean Water Act (CWA), improperly allowed sewer system operators to design storm water pollution control programs without adequate regulatory and public oversight, and thus contravened CWA, since permitting scheme did not require EPA to review content of dischargers' notices of intent, and did not contain express requirements for public participation in NPDES permitting process. Federal Water Pollution Control Act Amendments of 1972, § 402(p)(3), 33 U.S.C.A. § 1342(p)(3); 40 C.F.R. § 122.34.

7 Cases that cite this headnote

**[17] Administrative Law and Procedure**

Contemporaneous or subsequent construction in general

**Administrative Law and Procedure**

Timing of theory and grounds asserted

Court of Appeals normally defers to an agency's interpretations of its own regulations, but it may decline to defer to the post hoc rationalizations of appellate counsel.

7 Cases that cite this headnote

**[18] Environmental Law**

Discharge of pollutants

Failure of Environmental Protection Agency (EPA) to designate industrial sources of storm water pollution for discharge permit program, whereby such discharges would become subject to National Pollutant Discharge Elimination System (NPDES) requirements, was not arbitrary and capricious, and thus did not violate Clean Water Act (CWA); rather than designating industrial discharge sources on nationwide basis under NPDES program, EPA sought to establish local and regional designation authority for such sources. Federal Water Pollution Control Act Amendments of 1972, § 101 et seq., as amended, 33 U.S.C.A. § 1251 et seq.

14 Cases that cite this headnote

  

[19] **Environmental Law**

Accrual, computation, and tolling

Petitioners' challenge to failure of Environmental Protection Agency (EPA) to regulate stormwater drainage from forest roads did not have to be raised either when EPA initially promulgated silviculture regulations excluding certain silvicultural activities from National Pollutant Discharge Elimination System (NPDES) permitting requirements, or when EPA considered amending such regulations but chose not to do so, and challenge was thus not time-barred, to extent that present challenge was made to EPA's decision not to address forest roads under later-enacted portion of Clean Water Act (CWA) directed to municipal and industrial stormwater discharges. Federal Water Pollution Control Act Amendments of 1972, §§ 402(p), 509(b)(1), 33 U.S.C.A. §§ 11342(p), 1369(b)(1); 40 C.F.R. § 122.27(b)(1).

8 Cases that cite this headnote

[20] **Environmental Law**

Water pollution

Petitioners' comments during rulemaking process in connection with Environmental Protection Agency (EPA) rule governing municipal and industrial stormwater discharges pursuant to Clean Water Act (CWA) were not so inadequate as to preclude appellate court jurisdiction to hear petitioners' subsequent challenge to rule's failure to address stormwater drainage from forest roads; comments comprised two paragraphs, with footnotes, stating objections and providing support, EPA was aware of forest road sedimentation problem at time of rulemaking, and EPA responded to comments without disputing that problem was serious. Federal Water Pollution Control Act Amendments of 1972, § 402(p), 33 U.S.C.A. § 1342(p).

2 Cases that cite this headnote

[21] **Environmental Law**

Organizations, associations, and other groups

Forestry and paper association lacked sufficient standing to challenge Environmental Protection Agency (EPA) rule mandating that discharges from small municipal storm sewers and construction sites be subject to National Pollutant Discharge Elimination System (NPDES) permitting requirements under Clean Water Act (CWA), since association's interest in avoiding future regulation of forest roads was not actually or imminently affected by rule at issue. Federal Water Pollution Control Act Amendments of 1972, § 101 et seq., 33 U.S.C.A. § 1251 et seq.

7 Cases that cite this headnote

[22] **Environmental Law**

Permit and certification proceedings

Environmental Protection Agency (EPA), in promulgating rule mandating that discharges from small municipal storm sewers and construction sites be subject to National Pollutant Discharge Elimination System (NPDES) permitting requirements, properly consulted with state and local officials, and thus did not violate Clean Water Act (CWA); draft of first report pertaining to proposed rule was circulated to states and municipalities, EPA regional offices, professional associations and other stakeholders, and rule was revised based upon comments received. Federal Water Pollution Control Act Amendments of 1972, § 402(p), 33 U.S.C.A. § 1342(p).

4 Cases that cite this headnote

[23] **Environmental Law**

Organizations, associations, and other groups

**Environmental Law**

Government entities, agencies, and officials

Home builders' association and municipalities possessed sufficient standing to challenge designation by Environmental Protection Agency (EPA) of municipal storm sewers and construction sites for regulation under Clean Water Act (CWA), whereby National Pollutant Discharge Elimination System (NPDES) permits

  

would be required for discharges by such entities, since association and municipalities were able to allege procedural harm from purported lack of notice or from effects of regulation itself. Federal Water Pollution Control Act Amendments of 1972, § 101 et seq., 33 U.S.C.A. § 1251 et seq.

**[24] Environmental Law**
Discharge of pollutants

Designation by Environmental Protection Agency (EPA) of municipal storm sewers to be subject to National Pollutant Discharge Elimination System (NPDES) permitting requirements, according to areas defined by Census Bureau as "urbanized," was not arbitrary and capricious, as would violate Clean Water Act (CWA), since EPA articulated reasoned basis for its conclusion that Census Bureau's designation was correlated to actual levels of pollution runoff in storm water; record evidence demonstrated compelling and widespread relationship between urban storm water runoff and deleterious impacts on water quality. Federal Water Pollution Control Act Amendments of 1972, § 402(p), 33 U.S.C.A. § 1342(p).

4 Cases that cite this headnote

**[25] Environmental Law**
Discharge of pollutants

Decision by Environmental Protection Agency (EPA) to subject construction sites disturbing between one and five acres of land to National Pollutant Discharge Elimination System (NPDES) permitting requirements was not arbitrary and capricious, as would violate Clean Water Act (CWA); record evidence included numerous studies of sedimentation from construction sites, which EPA specifically reviewed in promulgating challenged regulation, and EPA's extrapolation of data from studies involving larger sites had reasonable basis. Federal Water Pollution Control Act Amendments of 1972, § 402(p), 33 U.S.C.A. § 1342(p).

10 Cases that cite this headnote

**[26] Environmental Law**
Discharge of pollutants

Allowance by Environmental Protection Agency (EPA) of regulatory waivers for small construction sites not likely to cause adverse water quality impacts, as would exempt such sites from National Pollutant Discharge Elimination System (NPDES) permit requirements, was not arbitrary and capricious, as would violate Clean Water Act (CWA); EPA's waiver approach promoted fairness and efficiency in permitting process, and did not create presumption applicable to evidentiary hearing. Federal Water Pollution Control Act Amendments of 1972, § 101 et seq., 33 U.S.C.A. § 1251 et seq.

**[27] Environmental Law**
Discharge of pollutants

Decision by Environmental Protection Agency (EPA) to subject small construction sites to National Pollutant Discharge Elimination System (NPDES) permitting requirements was consistent with its decisions to exempt other potential storm water runoff sources from such requirements, notwithstanding alleged lack of quantifiable data regarding runoff, and thus was not arbitrary and capricious, as would violate Clean Water Act (CWA); record evidence demonstrated that construction sites of all sizes had greater erosion rates than almost any other land use, and thus were not similarly situated to potential polluters that EPA chose not to regulate. Federal Water Pollution Control Act Amendments of 1972, § 101 et seq., 33 U.S.C.A. § 1251 et seq.

4 Cases that cite this headnote

**[28] Environmental Law**
Substances, Sources, and Activities Regulated

Language in Clean Water Act (CWA) conferring authority to Environmental Protection Agency (EPA) to regulate "a discharge" determined to threaten water quality does not preclude EPA from designating entire categories of discharge

sources for regulation. Federal Water Pollution Control Act Amendments of 1972, § 402(p), 33 U.S.C.A. § 1342(p).

7 Cases that cite this headnote

**[29] Environmental Law**

Discharge of pollutants

Residual designation authority retained by Environmental Protection Agency (EPA) for subjecting storm water discharge sites to future regulation under National Pollutant Discharge Elimination System (NPDES) permitting system was not ultra vires as to Clean Water Act (CWA); applicable statutory sections authorized designation of class of discharges to be identified on case-by-case, location-specific bases by NPDES permitting authority, consistent with comprehensive program to protect water quality. Federal Water Pollution Control Act Amendments of 1972, § 402(p), 33 U.S.C.A. § 1342(p).

4 Cases that cite this headnote

**[30] Constitutional Law**

Environment and natural resources

**Environmental Law**

Discharge of pollutants

Residual designation authority retained by Environmental Protection Agency (EPA) for subjecting storm water discharge sites to future regulation under National Pollutant Discharge Elimination System (NPDES) permitting system under Clean Water Act (CWA) did not effect unconstitutional delegation of legislative power, since such authority manifested statutory directive to restore and maintain chemical, physical and biological integrity of national waters. U.S.C.A. Const. Art. 1, § 1; Federal Water Pollution Control Act Amendments of 1972, § 402(p), 33 U.S.C.A. § 1342(p).

2 Cases that cite this headnote

**[31] Environmental Law**

Notice and comment

Environmental Protection Agency (EPA) provided proper notice and comment for rule allowing agency to retain residual designation authority subjecting categories of storm water discharge sites to future regulation under National Pollutant Discharge Elimination System (NPDES) permitting system under Clean Water Act (CWA), even though proposed rule would have only allowed such designation on case-by-case basis, since final rule was logical outgrowth of comments received by EPA; elements in proposed rule explicitly envisioned categorical designation of sources at watershed level. Federal Water Pollution Control Act Amendments of 1972, § 402(p), 33 U.S.C.A. § 1342(p).

5 Cases that cite this headnote

**[32] Administrative Law and Procedure**

Statement of economic or social impact

Under Regulatory Flexibility Act (RFA), federal agency must prepare regulatory flexibility analysis and assessment of economic impact of proposed rule on small business entities, unless agency certifies that proposed rule will not have significant economic impact on a substantial number of small entities, and provides a factual basis for that certification. 5 U.S.C.A. § 604.

4 Cases that cite this headnote

**[33] Environmental Law**

Permit and certification proceedings

Environmental Protection Agency (EPA), in promulgating rule subjecting categories of storm water discharge sites to National Pollutant Discharge Elimination System (NPDES) permitting requirements under Clean Water Act (CWA), reasonably certified that rule would not have significant economic impact on small business entities, as required under Regulatory Flexibility Act (RFA); EPA convened small business advocacy review panel before publishing notice of proposed rule, and included provisions in rule designed to minimize impacts on such entities. 5 U.S.C.A. § 604; Federal Water Pollution Control Act

  

Amendments of 1972, § 101 et seq., 33 U.S.C.A. § 1251 et seq.

4 Cases that cite this headnote

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John C. Cruden, Daniel M. Flores and Kent E. Hanson, United States Department of Justice, Washington, DC, and Stephen J. Sweeny, United States Environmental Protection Agency, Washington, DC, for respondent United States Environmental Protection Agency.

On Petition for Review of an Order of the Environmental Protection Agency. EPA No. Clean Water 40 CFR.

Before BROWNING, REINHARDT, and TALLMAN, Circuit Judges.

Opinion by Judge JAMES R. BROWNING; Partial Concurrence and Partial Dissent by Judge TALLMAN.

ORDER AND OPINION**ORDER**

The opinion and dissent filed in this case on January 14, 2003, and published at 319 F.3d 398 are vacated. They are replaced by the Opinion and Dissent filed today.

With the filing of the new Opinion and Dissent, the panel has voted to deny the petitions for rehearing and the petition for rehearing en banc. (Judge Tallman would grant the petition for rehearing filed by ***840** the Environmental Protection Agency.) The full court has been advised of the new Opinion, new Dissent, and petition for rehearing en banc. No judge has requested a vote on the petition for rehearing en banc. Fed. R.App. P. 35.

The petitions for rehearing and the petition for rehearing en banc are DENIED. The clerk is instructed not to accept for filing any new petitions for rehearing or petitions for rehearing en banc in this case.

Each party shall bear its own costs in this appeal.

**OPINION**

JAMES R. BROWNING, Circuit Judge.

Petitioners challenge a rule issued by the United States Environmental Protection Agency pursuant to the Clean Water Act, 33 U.S.C. §§ 1251–1387, to control pollutants introduced into the nation's waters by storm sewers.

Storm sewers drain rainwater and melted snow from developed areas into water bodies that can handle the excess flow. Draining stormwater picks up a variety of contaminants as it filters through soil and over pavement on its way to sewers. Sewers are also used on occasion as an easy (if illicit) means for the direct discharge of unwanted contaminants. Since storm sewer systems generally channel collected runoff into federally protected water bodies, they are subject to the controls of the Clean Water Act.

In October of 1999, after thirteen years in process, the Environmental Protection Agency ("EPA") promulgated a final administrative rule (the "Phase II Rule" [1] or "the Rule") under § 402(p) of the Clean Water Act, 33 U.S.C. § 1342(p), mandating that discharges from small municipal separate storm sewer systems and from construction sites between one and five acres in size be subject to the permitting requirements of the National Pollutant Discharge Elimination System

("NPDES"), 33 U.S.C. §§ 1311(a), 1342. EPA preserved authority to regulate other harmful stormwater discharges in the future.

In the three cases consolidated here, petitioners and intervenors challenge the Phase II Rule on twenty-two constitutional, statutory, and procedural grounds. We remand three aspects of the Rule concerning the issuance of notices of intent under the Rule's general permitting scheme, and a fourth aspect concerning the regulation of forest roads. We affirm the Rule against all other challenges.

**I.BACKGROUNDA. The Problem of Stormwater Runoff**

Stormwater runoff is one of the most significant sources of water pollution in the nation, at times "comparable to, if not greater than, contamination from industrial and sewage sources."[2] Storm sewer waters carry suspended metals, sediments, algae-promoting nutrients (nitrogen and phosphorus), floatable trash, used motor oil, raw sewage, pesticides, and other toxic contaminants into streams, rivers, lakes, ***841** and estuaries across the United States.[3] In 1985, three-quarters of the States cited urban stormwater runoff as a major cause of waterbody impairment, and forty percent reported construction site runoff as a major cause of impairment.[4] Urban runoff has been named as the foremost cause of impairment of surveyed ocean waters.[5] Among the sources of stormwater contamination are urban development, industrial facilities, construction sites, and illicit discharges and connections to storm sewer systems.[6]

**B. Stormwater and the Clean Water Act**

Congress enacted the Clean Water Act in 1948 to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a) (originally codified as the Federal Water Pollution Control Act, 62 Stat. 1155). The Clean Water Act prohibits the discharge of pollutants from a "point source"[7] into the waters of the United States without a permit issued under the terms of the National Pollutant Discharge Elimination System, 33 U.S.C. §§ 1311(a), 1342, which requires dischargers to comply with technology-based pollution limitations (generally according to the "best available technology economically achievable," or "BAT" standard). 33 U.S.C. § 1311(b)(2)(A). NPDES permits are issued by EPA or by States that have been authorized by EPA to act as NPDES permitting authorities. 33 U.S.C. § 1342(a)-(b). The permitting authority must make copies of all NPDES permits and permit applications available to the public, 33 U.S.C. §§ 1342(j), 1342(b)(3); state permitting authorities must provide EPA notice of each permit application, 33 U.S.C. § 1342(b)(4); and a permitting authority must provide an opportunity for a public hearing before issuing any permit, 33 U.S.C. §§ 1342(a)(1), 1342(b)(3); *cf.* 33 U.S.C. § 1251(e) (requiring public participation).

**[1]** **[2]** Storm sewers are established point sources subject to NPDES permitting requirements. *Natural Res. Def. Council v. Costle,* 568 F.2d 1369, 1379 (D.C.Cir.1977) (holding unlawful EPA's exemption of stormwater discharges from NPDES permitting requirements); *Natural Res. Def. Council v. EPA,* 966 F.2d 1292, 1295 (9th Cir.1992).[8] In 1987, to better regulate pollution conveyed by stormwater runoff, Congress enacted Clean Water Act § 402(p), 33 U.S.C. § 1342(p), "Municipal and Industrial Stormwater Discharges." Sections 402(p)(2) and 402(p)(3) mandate NPDES permits for stormwater discharges "associated with industrial activity," discharges from large and medium-sized municipal storm sewer systems, and certain other discharges. Section 402(p)(4) sets out a timetable for promulgation of the first of a ***842** two-phase overall program of stormwater regulation. *Id.* at § 1342(p)(2)-(4); *Natural Res. Def. Council,* 966 F.2d at 1296. In 1990, pursuant to § 402(p)(4), EPA issued the Phase I Rule regulating large discharge sources.[9]

**C. The Phase II Stormwater Rule**

In Clean Water Act § 402(p), Congress also directed a second stage of stormwater regulation by ordering EPA to identify and address sources of pollution not covered by the Phase I Rule. Section 402(p)(1) placed a temporary moratorium (expiring in 1994) on the permitting of other stormwater discharges pending the results of studies mandated in § 402(p)(5) to identify the sources and pollutant content of such discharges and to establish procedures and methods to control them as "necessary to mitigate impacts on water quality." 33 U.S.C. § 1342(p)(5). Section 402(p)(6) required that EPA establish "a comprehensive program to regulate" these stormwater discharges "to protect water quality," following the studies mandated in § 402(p)(5) and consultation with state and local officials. *Id.* at § 1342(p)(6).

EPA proposed the Phase II Rule in January of 1998.[10] In October, 1999, Congress passed legislation precluding EPA from promulgating the new Rule until EPA submitted an additional report to Congress supporting certain anticipated aspects of the Rule.[11] EPA was also required to publish its

report in the Federal Register for public comment. Pub. L. No. 106–74, § 431(c), 113 Stat. at 1097. Later that month, EPA submitted the required ("Appropriations Act") study and promulgated the Rule. [12]

Under the Phase II Rule, NPDES permits are required for discharges from small municipal separate storm sewer systems ("small MS4s") and stormwater discharges from construction activity disturbing between one and five acres ("small construction sites"). 40 C.F.R. §§ 122.26(a)(9)(i)(A)-(B). Small MS4s may seek permission to discharge by submitting an individualized set of best-management plans in six specified categories, *id.* at § 122.34, either in the form of an individual permit application, or in the form of a notice of intent to comply with a general permit. *Id.* at § 122.33(b). Small MS4s may also seek permission to discharge through an alternative process, under which a permit may be sought without requiring the operator to regulate third parties, *id.* at §§ 122.33(b)(2)(ii), 122.26(d). [13] Small construction sites may ***843** apply for individual NPDES permits or seek coverage under a promulgated general permit. *Id.* at § 122.26(c). EPA also preserved authority to regulate other categories of harmful stormwater discharges on a regional, as-needed basis. *Id.* at § 122.26(a)(9)(i)(C)-(D).

### D. Facial Challenges to the Phase II Rule

The Rule was challenged in the Fifth, Ninth, and D.C. Circuits in three separate actions ultimately consolidated before the Ninth Circuit.

The Texas Cities Coalition on Stormwater and the Texas Counties Stormwater Coalition (collectively, "the Municipal Petitioners") assert that EPA lacked authority to require permitting, that its promulgation of the Rule was procedurally defective, that the Rule establishes categories that are arbitrary and capricious, and that the Rule impermissibly requires municipalities to regulate their own citizens in contravention of the Tenth Amendment and to communicate a federally mandated message in contravention of the First Amendment. The Natural Resources Defense Council ("NRDC") intervened on behalf of EPA.

Environmental Defense Center, joined by petitioner-intervenor NRDC ("the Environmental Petitioners"), asserts that the regulations fail to meet minimum Clean Water Act statutory requirements because they constitute a program of impermissible self-regulation, fail to provide required avenues of public participation, and neglect to address stormwater runoff associated with forest roads and other significant sources of runoff pollution.

The American Forest & Paper Association ("AF&PA") and the National Association of Home Builders ("the Industrial Petitioners") assert that promulgation of the Rule was procedurally defective and violated the Regulatory Flexibility Act, that EPA's retention of authority to regulate future sources of runoff pollution is *ultra vires,* and that the decision to regulate discharge from construction sites one to five acres in size is arbitrary and capricious. NRDC again intervened on behalf of EPA.

We have jurisdiction pursuant to section 509(b)(1) of the Clean Water Act, 33 U.S.C. § 1369(b)(1) (assigning review of EPA effluent and permitting regulations to the Federal Courts of Appeals).

## II.DISCUSSIONA. The Permit Requirements

**[3]** The Municipal Petitioners' primary contention is that the Phase II Rule compels small MS4s to regulate citizens as a condition of receiving a permit to operate, and that EPA lacks both statutory and constitutional authority to impose such a requirement. Because we avoid considering constitutionality if an issue may be resolved on narrower grounds, *Greater New Orleans Broadcasting Ass'n v. United States,* 527 U.S. 173, 184, 119 S.Ct. 1923, 144 L.Ed.2d 161 (1999), we first ask whether the Phase II Rule is supported by statutory authority.

### *1. Statutory Authority*

**[4]** The Municipal Petitioners assert that the statutory command in Clean Water Act § 402(p)(6) that EPA develop a "comprehensive program to regulate" small MS4s did not authorize a program based on NPDES permits. Petitioners argue that because § 402(p)(6) explicitly indicates elements that the program may ***844** contain (performance standards, guidelines, etc.) without mentioning "permits," Congress must have intended that the program exclude permitting. [14]

The fact that "permitting" is not included on a statutory list of elements that the program "may" include is not determinative, because the list is manifestly nonexclusive. The only constraints are that the § 402(p)(6) regulations be based on the § 402(p)(5) studies, that they be issued in consultation with state and local officials, and that—"at a minimum"—they establish priorities, requirements for state stormwater management programs, and expeditious deadlines, and constitute a comprehensive program "to

protect water quality." 33 U.S.C. § 1342(p)(6). EPA was free to adopt any regulatory program, including a permitting program, that included these elements. *See Chevron, U.S.A. v. Natural Res. Def. Council,* 467 U.S. 837, 842–43, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984) (deference to an agency's reasonable interpretation is required unless Congress expressed its intent unambiguously). It is more reasonable to interpret congressional silence about permits as an indication of EPA's flexibility not to use them than as an outright prohibition. [15]

The Municipal Petitioners further contend that their interpretation is supported by the structure of § 402(p), which expressly requires permits for large and medium sized MS4s in a separate section, § 402(p)(3)(B). [16] However, as EPA counters, the language in § 402(p)(3) requiring permits for municipal storm sewers may be interpreted to apply both to Phase I *and* Phase II MS4s. Moreover, as respondent-intervenor NRDC notes, the mere existence of the § 402(p)(1) permitting moratorium, designed to apply only to Phase II dischargers, necessarily implies that EPA has the authority to require permits from these sources after the 1994 expiration of the moratorium.

Since there would have been no need to establish a permitting moratorium for these sources if the sources could *never* be subject to permitting requirements, petitioners' interpretation violates the bedrock principle that statutes not be interpreted to render any provision superfluous. *See Burrey v. Pacific Gas & Elec. Co.,* 159 F.3d 388, 394 (9th Cir.1998). EPA's interpretation of its mandate under § 402(p)(6) was reasonable and EPA acted within its statutory authority in formulating the Phase II Rule as a permitting program.

***2. The Tenth Amendment***

The Municipal Petitioners contend that the Phase II Rule on its face compels ***845** operators of small MS4s to regulate third parties in contravention of the Tenth Amendment. We conclude that the Rule does not violate the Tenth Amendment, because it directs no unconstitutional coercion.

The Phase II Rule contemplates several avenues through which a small MS4 may obtain permission to discharge. First, if the NPDES Permitting Authority overseeing the small MS4 has issued an applicable general permit, the small MS4 may submit a notice of intent wherein the small MS4 agrees to comply with the terms of the general permit and specifies plans for implementing six "Minimum Measures" designed to protect water quality. 40 C.F.R. §§ 122.33(b)(1), 122.34(d)(1)(i), 122.34(b). Second, the small MS4 may apply for an individual permit under 40 C.F.R. § 122.34, which would again require compliance with the six Minimum Measures. *Id.* at §§ 122.33(b)(2)(i), 122.34(a), 122.34(b). Third, under an "Alternative Permit" option, the small MS4 may apply for an individualized permit under 40 C.F.R. § 122.26(d), the permitting program established by the Phase I Rule for large and medium-sized MS4s. *Id.* at §§ 122.33(b)(2)(ii), 122.26(d). [17]

**[5]** The Minimum Measures mentioned above require small MS4s to implement programs for: (1) conducting public education and outreach on stormwater impacts, *id.* at § 122.34(b)(1); (2) engaging public participation in the development of stormwater management programs, *id.* at § 122.34(b)(2); (3) detecting and eliminating illicit discharges to the MS4, *id.* at § 122.34(b)(3); (4) reducing pollution to the MS4 from construction activities disturbing one acre or more, *id.* at § 122.34(b)(4); (5) minimizing water quality impacts from development and redevelopment activities that disturb one acre or more, *id.* at § 122.34(b)(5); and (6) preventing or reducing pollutant runoff from municipal activities, *id.* at § 122.34(b)(6). [18]

***846** The Municipal Petitioners contend that the measures regulating illicit discharges, small construction sites, and development activities unconstitutionally compel small MS4 operators to regulate third parties, *i.e.,* upstream dischargers. The Illicit Discharge Detection and Elimination measure requires that a permit seeker prohibit non-stormwater discharges to the MS4 and implement appropriate enforcement procedures. 40 C.F.R. § 122.34(b)(3)(ii)(B). [19] The Construction Site Stormwater Runoff Control measure requires a permit seeker to implement and enforce a program to reduce stormwater pollutants from small construction sites. *Id.* at §§ 122.34(b)(4)(i)-(ii). [20] It mandates erosion and sedimentation controls, site plan reviews that take account of water quality impacts, site inspections, and the consideration of public comment, and requires that construction site operators implement erosion, sedimentation, and waste management best management practices. *Id.* The Post–Construction/New Development measure requires permit seekers to address post-construction runoff from new development and redevelopment projects disturbing one acre or more. *Id.* at § 122.34(b)(5)(ii)(B). [21]

Noting that most MS4s are operated by municipal governments, and that "[t]he drainage of a city in the interest of the public health and welfare is one of the most important purposes for which the police power can be exercised," *New Orleans Gaslight Co. v. Drainage Comm'n,* 197 U.S. 453, 460, 25 S.Ct. 471, 49 L.Ed. 831 (1905), the Municipal Petitioners argue that requiring operators of small MS4s to implement "through ordinance or other regulatory mechanism" the regulations required by the Minimum Measures contravenes the Tenth Amendment. *See, e.g., New York v. United States,* 505 U.S. 144, 188, 112 S.Ct. 2408, 120 L.Ed.2d 120 (1992).

EPA counters that the Phase II Rule does not violate the Tenth Amendment because operators of small MS4s may opt to avoid the Minimum Measures by seeking a permit under the Alternative Permit ***847** option, 40 C.F.R. § 122.33(b)(2)(ii). [22]

**[6]** **[7]** **[8]** Under the Tenth Amendment, "the Federal Government may not compel States to implement, by legislation or executive action, federal regulatory programs." *Printz v. United States,* 521 U.S. 898, 925, 117 S.Ct. 2365, 138 L.Ed.2d 914 (1997); *see also New York,* 505 U.S. at 188, 112 S.Ct. 2408. Similarly, the federal government may not force the States to regulate third parties in furtherance of a federal program. *See Reno v. Condon,* 528 U.S. 141, 151, 120 S.Ct. 666, 145 L.Ed.2d 587 (2000) (upholding a federal statutory scheme because it "does not require the States in their sovereign capacity to regulate their own citizens"). These protections extend to municipalities. *See, e.g., Printz* 521 U.S. at 931 n. 15, 117 S.Ct. 2365.

**[9]** **[10]** However, while the federal government may not *compel* them to do so, it may *encourage* States and municipalities to implement federal regulatory programs. *See New York,* 505 U.S. at 166–68, 112 S.Ct. 2408. For example, the federal government may make certain federal funds available only to those States or municipalities that enact a given regulatory regime. *See, e.g., South Dakota v. Dole,* 483 U.S. 203, 205–08, 107 S.Ct. 2793, 97 L.Ed.2d 171 (1987) (upholding federal statute conditioning state receipt of federal highway funds on state adoption of minimum drinking age of twenty-one). The crucial proscribed element is coercion; the residents of the State or municipality must retain "the ultimate decision" as to whether or not the State or municipality will comply with the federal regulatory program. *New York,* 505 U.S. at 168, 112 S.Ct. 2408. However, as long as "the alternative to implementing a federal regulatory program does not offend the Constitution's guarantees of federalism, the fact that the alternative is difficult, expensive or otherwise unappealing is insufficient to establish a Tenth Amendment violation." *City of Abilene v. EPA,* 325 F.3d 657, 662 (5th Cir.2003).

**[11]** With the Phase II Rule, EPA gave the operators of small MS4s a choice: either implement the regulatory program spelled out by the Minimum Measures described at 40 C.F.R. § 122.34(b), or pursue the Alternative Permit option and seek a permit under the Phase I Rule as described at 40 C.F.R. § 122.26(d). Thus, unless § 122.26(d) itself offends the Constitution's guarantees of federalism, the Phase II Rule does not violate the Tenth Amendment.

Pursuing a permit under the Alternative Permit option does require permit seekers, in their application for a permit to discharge, to propose management programs that address substantive concerns similar to those addressed by the Minimum Measures. *See* 40 C.F.R. § 122.26(d). However, § 122.26(d) lists the requirements for an *application* for a permit to discharge, not the requirements of the permit itself. Therefore, nothing in § 122.26(d) requires the operator of an MS4 to implement a federal regulatory program in order to receive a permit to discharge, because nothing in § 122.26(d) specifies the contents of the permit that will result from the application process.

*City of Abilene,* 325 F.3d 657, provides a helpful illustration. The cities of Abilene and Irving, Texas, have populations between 100,000 and 250,000, and so were ***848** required to apply for permits under the Phase I Rule, 40 C.F.R. § 122.26(d). *City of Abilene,* 325 F.3d at 659–60. Under § 122.26(d) the cities were required to submit proposed stormwater management programs. *Id.* at 660. They negotiated the terms of those programs with EPA, and EPA eventually presented the cities with proposed management permits that contained conditions requiring the implementation of stormwater regulatory programs, and potentially requiring the regulation of third parties. *Id.* But, as the Fifth Circuit noted, this did not mean that the cities had no choice but to implement a federal regulatory program. Instead:

> The Cities filed comments objecting to those conditions, and negotiations continued until the EPA offered the Cities the option of pursuing

> numeric end-of-pipe permits, which would have required the Cities to satisfy specific effluent limitations rather than implement management programs. The Cities declined this offer, electing to continue negotiations on the management permits.

*Id.* The Fifth Circuit rejected the cities' contention that the resulting permits violated the Tenth Amendment by requiring the cities to regulate third parties according to federal standards. *Id.* at 661–63. Because the cities chose to pursue the management permits despite the fact that EPA provided them with an option for obtaining permits that would not have involved implementing a management program or regulating third parties, no unconstitutional coercion occurred. *Id.* at 663. The ultimate decision to implement the federal program remained with the cities.

Any operator of a small MS4 that wishes to avoid the Minimum Measures may seek a permit under § 122.26(d), and, as *City of Abilene* demonstrates, nothing in § 122.26(d) will compel the operator of a small MS4 to implement a federal regulatory program or regulate third parties, because § 122.26(d) specifies application requirements, not permit requirements. Therefore, by presenting the option of seeking a permit under § 122.26(d), the Phase II Rule avoids any unconstitutional coercion. The Municipal Petitioners' claim that the Phase II Rule violates the Tenth Amendment therefore fails.

***3. The First Amendment and the Minimum Measures***

The Municipal Petitioners contend that the Public Education and Illicit Discharge Minimum Measures compel municipalities to deliver EPA's political message in violation of the First Amendment. The Phase II Rule's "Public Education and Outreach" Minimum Measure directs regulated small MS4s to "distribute educational materials to the community ... about the impacts of stormwater discharges on water bodies and the steps the public can take to reduce pollutants in stormwater runoff." 40 C.F.R. § 122.34(b)(1)(i). The "Illicit Discharge Detection and Elimination" measure requires regulated small MS4s to "[i]nform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste." 40 C.F.R. § 122.34(b)(3)(ii)(D).

**[12]** The Municipal Petitioners argue that the First Amendment prohibits EPA from compelling small MS4s to communicate messages that they might not otherwise wish to deliver. They further contend that EPA's interpretation of § 402(p) as authorizing these Measures does not warrant *Chevron* deference because it raises serious constitutional issues, but that even if deference were given, the resulting rule is unconstitutional because neither Congress nor EPA may dictate the speech of MS4s. They contend that municipalities are protected by the First Amendment, ***849** *Pacific Gas & Elec. v. Public Utilities Comm'n,* 475 U.S. 1, 8, 106 S.Ct. 903, 89 L.Ed.2d 1 (1986) ( "Corporations and other associations, like individuals, contribute to the [discourse] that the First Amendment seeks to foster...."), which applies as much to compelled statements of "fact" as to those of "opinion." *Riley v. Nat'l Fed. of the Blind,* 487 U.S. 781, 797–98, 108 S.Ct. 2667, 101 L.Ed.2d 669 (1988).

We conclude that the purpose of the challenged provisions is legitimate and consistent with the regulatory goals of the overall scheme of the Clean Water Act, *cf. Glickman v. Wileman Bros. & Elliott, Inc.,* 521 U.S. 457, 476, 117 S.Ct. 2130, 138 L.Ed.2d 585 (1997), and does not offend the First Amendment.[23] The State may not constitutionally require an individual to disseminate an ideological message, *Wooley v. Maynard,* 430 U.S. 705, 713, 97 S.Ct. 1428, 51 L.Ed.2d 752 (1977), but requiring a provider of storm sewers that discharge into national waters to educate the public about the impacts of stormwater discharge on water bodies and to inform affected parties, including the public, about the hazards of improper waste disposal falls short of compelling such speech.[24] These broad requirements do not dictate a specific message. They require appropriate educational and public information activities that need not include any specific speech at all. A regulation is facially unconstitutional only when every possible reading compels it, *Meinhold v. U.S. Dep't of Def.,* 34 F.3d 1469, 1476 (9th Cir.1994),[25] but this is clearly not the case here.

As in *Zauderer v. Office of Disciplinary Counsel of the Sup. Ct. of Ohio,* 471 U.S. 626, 105 S.Ct. 2265, 85 L.Ed.2d 652 (1985), where the Supreme Court upheld certain disclosure requirements in attorney advertising, "[t]he interests at stake in this case are not of the same order as those discussed in *Wooley* [invalidating a law requiring that drivers display the motto 'Live Free or Die' on New Hampshire license plates] ... and *Barnette* [forbidding the requirement that public school students salute the flag because the State may not impose on the individual 'a ceremony so touching matters

of opinion and political attitude']." *Id.* at 651. EPA has not attempted to "prescribe what shall be orthodox in politics, nationalism, religion, or other matters of opinion or force citizens to confess by word or act their faith therein." *West Virginia State Bd. of Ed. v. Barnette,* 319 U.S. 624, 642, 63 S.Ct. 1178, 87 L.Ed. 1628 (1943).

***850** Informing the public about safe toxin disposal is non-ideological; it involves no "compelled recitation of a message" and no "affirmation of belief." *PruneYard Shopping Ctr. v. Robins,* 447 U.S. 74, 88, 100 S.Ct. 2035, 64 L.Ed.2d 741 (1980) (upholding state law protecting petitioning in malls and noting that "*Barnette* is inapposite because it involved the compelled recitation of a message containing an affirmation of belief"). It does not prohibit the MS4 from stating its own views about the proper means of managing toxic materials, or even about the Phase II Rule itself. Nor is the MS4 prevented from identifying its dissemination of public information as required by federal law, or from making available federally produced informational materials on the subject and identifying them as such.

Even if such a loosely defined public information requirement could be read as compelling speech, the regulation resembles another regulation that the Supreme Court has held permissible. In *Glickman,* 521 U.S. 457, 117 S.Ct. 2130, 138 L.Ed.2d 585, the Court upheld a generic advertising assessment promulgated by the Department of Agriculture on behalf of California tree fruit growers because the order was consistent with an overall regulatory program that did not abridge protected speech:

> Three characteristics of the regulatory scheme at issue distinguish it from laws that we have found to abridge the freedom of speech protected by the First Amendment. First, the marketing orders impose no restraint on the freedom of any producer to communicate any message to any audience. Second, they do not compel any person to engage in any actual or symbolic speech. Third, they do not compel the producers to endorse or to finance any political or ideological views. Indeed, since all of the respondents are engaged in the business of marketing California nectarines, plums, and peaches, it is fair to presume that they agree with the central message of the speech that is generated by the generic program.

*Id.* at 469–70, 117 S.Ct. 2130 (footnotes omitted). Here, as in *Glickman,* the Phase II regulations impose no restraint on the freedom of any MS4 to communicate any message to any audience. They do not compel any specific speech, nor do they compel endorsement of political or ideological views. And since all permittees are engaged in the handling of stormwater runoff that must be conveyed in reasonably unpolluted form to national waters, it is similarly fair to presume that they will agree with the central message of a public safety alert encouraging proper disposal of toxic materials.[26] The Phase II regulation departs only from the second element in the *Glickman* analysis, because the public information requirement may compel a ***851** regulated party to engage in some speech at some time; but unlike the offensive messages in *Maynard* and *Barnette* (and even the inoffensive advertising messages at issue in *Glickman*) that speech is not specified by the regulation.[27]

The public information requirement does not impermissibly compel speech, and nothing else in the Phase II Rule offends the First Amendment.[28] The Rule does not compel a recitation of a specific message, let alone an affirmation of belief. To the extent MS4s are regulated by the public information requirement, the regulation is consistent with the overall regulatory program of the Clean Water Act and the responsibilities of point source dischargers.

***4. Notice and Comment on the Alternative Permit Option***

The Municipal Petitioners contend that, in adopting the Alternative Permit option, EPA did not comply with the minimum notice and comment procedures required in informal rulemaking by the Administrative Procedures Act ("APA"), 5 U.S.C. § 553. The APA requires an agency to publish notice of a proposed rulemaking that includes "either the terms or substance of the proposed rule or a description of the subjects and issues involved." *Id.* at § 553(b)(3).

**[13]** We have held that a "final regulation that varies from the proposal, even substantially, will be valid as long as it is 'in character with the original proposal and a logical outgrowth of the notice and comments.' " *Hodge v. Dalton,* 107 F.3d 705, 712 (9th Cir.1997). In determining whether

  

notice was adequate, we consider whether the complaining party should have anticipated that a particular requirement might be imposed. The test is whether a new round of notice and comment would provide the first opportunity for interested parties to offer comments that could persuade the agency to modify its rule. *Am. Water Works Ass'n v. EPA,* 40 F.3d 1266, 1274 (D.C.Cir.1994).

The Municipal Petitioners argue that the Alternative Permit option is not a logical outgrowth of EPA's proposed rule because, although numerous alternatives were discussed in the Preamble to the proposed rule, 63 Fed. Reg. at 1554–1557, the Alternative Permit option eventually adopted was not. EPA counters that the proposed rule included a supplementary alternative permitting system based on concepts similar to those in the Minimum ***852** Measures, including "simplified individual permit application requirements." [29] EPA contends that the Alternative Permit option was a logical outgrowth of the comments it received on the proposal expressing concern that the Minimum Measures might violate the Tenth Amendment. 64 Fed. Reg. at 68,765.

**[14]** The Alternative Permit option passes the *Hodge* test. The proposed rule suggested an individualized permitting option to be developed in response to comments during the notice and comment period. The Alternative option contains no elements that were not part of the original rule, even if they are configured differently in the final rule. Petitioners had, and took, their opportunity to object to the aspects of the Rule that they did not support in their comments on the Minimum Measures.

**B. The General Permit Option and Notices of Intent**

The Environmental Petitioners contend that the general permitting scheme of the Phase II Rule allows regulated small MS4s to design stormwater pollution control programs without adequate regulatory and public oversight, and that it contravenes the Clean Water Act because it does not require EPA to review the content of dischargers' notices of intent and does not contain express requirements for public participation in the NPDES permitting process.

In reviewing a federal administrative agency's interpretation of a statute it administers, we first determine whether Congress has expressed its intent unambiguously on the question before the court. *See Chevron,* 467 U.S. 837, 842–44, 104 S.Ct. 2778, 81 L.Ed.2d 694 ("If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress."). "If, instead, Congress has left a gap for the administrative agency to fill, we proceed to step two. At step two, we must uphold the administrative regulation unless it is arbitrary, capricious, or manifestly contrary to the statute." *Defenders of Wildlife v. Browner,* 191 F.3d 1159, 1162, *amended by* 197 F.3d 1035 (9th Cir.1999) (citations and internal quotations omitted).

**[15]** We conclude that the Phase II General Permit option violates the Clean Water Act's requirement that permits for discharges "require controls to reduce the discharge of pollutants to the maximum extent practicable," 33 U.S.C. § 1342(p)(3)(B)(iii). We also conclude that the Phase II General Permit option violates the Clean Water Act because it does not contain express requirements for public participation in the NPDES permitting process. We remand these aspects of the Phase II Rule. [30]

***853** ***1. Phase II General Permits and Notices of Intent***

Primary responsibility for enforcement of the requirements of the Clean Water Act is vested in the Administrator of the EPA. 33 U.S.C. § 1251(d); *see also* 33 U.S.C. § 1361(a) ("The Administrator [of EPA] is authorized to prescribe such regulations as are necessary to carry out his functions under this chapter."). The Clean Water Act renders illegal any discharge of pollutants not specifically authorized by a permit. 33 U.S.C. § 1311(a) ( "Except in compliance with this section and [other sections detailing permitting requirements] of this title, the discharge of any pollutant by any person shall be unlawful."). Under the Phase II Rule, dischargers may apply for an individualized permit with the relevant permitting authority, or may file a "Notice of Intent" ("NOI") to seek coverage under a "general permit." 40 C.F.R. § 122.33(b).

A general permit is a tool by which EPA regulates a large number of similar dischargers. Under the traditional general permitting model, each general permit identifies the output limitations and technology-based requirements necessary to adequately protect water quality from a class of dischargers. Those dischargers may then acquire permission to discharge under the Clean Water Act by filing NOIs, which embody each discharger's agreement to abide by the terms of the general permit. Because the NOI represents no more than a formal acceptance of terms elaborated elsewhere, EPA's approach does not require that permitting authorities review an NOI before the party who submitted the NOI is allowed

to discharge. General permitting has long been recognized as a lawful means of authorizing discharges. *Natural Res. Def. Council v. Costle,* 568 F.2d 1369 (D.C.Cir.1977).

The Phase II general permitting scheme differs from the traditional general permitting model. The Clean Water Act requires EPA to ensure that operators of small MS4s "reduce the discharge of pollutants to the maximum extent practicable." 33 U.S.C. § 1342(p)(3)(B). To ensure that operators of small MS4s achieve this "maximum extent practicable" standard, the Phase II Rule requires that each NOI contain information on an individualized pollution control program that addresses each of the six general criteria specified in the Minimum Measures; thus, according to the Phase II Rule, submitting an NOI and implementing the Minimum Measures it contains "constitutes compliance with the standard of reducing pollutants to the 'maximum extent practicable.' " 40 C.F.R. § 122.34(a).

Because a Phase II NOI establishes what the discharger will do to reduce discharges to the "maximum extent practicable," the Phase II NOI crosses the threshold from being an item of procedural correspondence to being a substantive component of a regulatory regime. The text of the Rule itself acknowledges that a Phase II NOI is a permit application that is, at least in some regards, functionally equivalent to a detailed application for an individualized permit. *See, e.g.,* 40 C.F.R. § 122.34(d)(1) ("In your permit application (either a notice of intent for coverage under a general permit or an individual permit application), you must identify and submit to your NPDES permitting authority the following information...."). For this reason, EPA rejected the possibility of providing a "form NOI" to Phase II permittees, explaining that "[w]hat will be required on an MS4's NOI ... is more extensive than what is usually required on ***854** an NOI, so a 'form' NOI for MS4s may be impractical." 64 Fed. Reg. at 68,764.

***2. Failure to Regulate***

The Environmental Petitioners argue that, by allowing NPDES authorities to grant dischargers permits based on unreviewed NOIs, the Rule creates an impermissible self-regulatory system.[31] Petitioners contend the Rule impermissibly fails to require that the permitting authority review an NOI to assure compliance with Clean Water Act standards, including the standard that municipal stormwater pollution be reduced to "the maximum extent practicable." 33 U.S.C. § 1342(p)(3)(B)(iii). *See* 40 C.F.R. § 123.35 (setting out requirements for permitting authorities, but not requiring review of NOI); 64 Fed. Reg. at 68,764 ("EPA disagrees that formal approval or disapproval by the permitting authority is needed").

EPA maintains that the Phase II permit system is fully consistent with the authorizing statute. It contends that § 402(p)(6) granted EPA flexibility in designing the Phase II "comprehensive program," and notes that while the statute does not require general permits, neither does it preclude them. EPA contends that Congress delegated the task of designing the program to EPA, and that EPA reasonably adopted a "flexible version" of the NPDES permit program to suit the unique needs of the Phase II program. It disputes that the general permit program creates "paper tigers," especially since EPA, States, and citizens may initiate enforcement actions. Finally, EPA argues that the Rule does not create a self-regulatory program, but that even if it did, nothing in § 402(p)(6) precludes such a program.

Reviewing the Phase II Rule under the first step of *Chevron,* we note that the plain language of § 402(p) of the Clean Water Act, 33 U.S.C. § 1342(p), expresses unambiguously Congress's intent that EPA issue no permits to discharge from municipal storm sewers unless those permits "require controls to reduce the discharge of pollutants to the maximum extent practicable."

Phase II general permits will likely impose requirements that ensure that operators of small MS4s comply with many of the standards of the Clean Water Act. Thus, general permits issued under Phase II will ordinarily contain numerous substantive requirements, just as did the permits issued under Phase I. *See* 40 C.F.R. §§ 123.35 & 123.35(a) ("§ 123.35 As the NPDES Permitting Authority for regulated small MS4s, what is my role? (a) You must comply with the requirements for all NPDES permitting authorities under Parts 122, 123, 124 and 125 of this chapter."); *see also* 40 C.F.R. § 122.28 (outlining requirements for NPDES authorities issuing general permits). And every operator of a small MS4 who files an NOI under Phase II "must comply with other applicable NPDES permit requirements, standards, and conditions established in ***855** the ... general permit." *See* 40 C.F.R. §§ 122.34 & 122.34(f).

**[16]** However, while each Phase II general permit will likely ensure that operators of small MS4s comply with certain standards of the Clean Water Act, they will not "require controls to reduce the discharge of pollutants to

the maximum extent practicable." According to the Phase II Rule, the operator of a small MS4 has complied with the requirement of reducing discharges to the "maximum extent practicable" when it implements its stormwater management program, *i.e.*, when it implements its Minimum Measures. 40 C.F.R. § 122.34(a); *see also* 64 Fed. Reg. at 68753 (stating EPA's anticipation that limitations more stringent that the minimum control measures "will be unnecessary"). Nothing in the Phase II regulations requires that NPDES permitting authorities review these Minimum Measures to ensure that the measures that any given operator of a small MS4 has decided to undertake will *in fact* reduce discharges to the maximum extent practicable. [32]

*See* 40 C.F.R. § 123.35 ("As the NPDES Permitting Authority for regulated small MS4s, what is my role?"). Therefore, under the Phase II Rule, nothing prevents the operator of a small MS4 from misunderstanding or misrepresenting its own stormwater situation and proposing a set of minimum measures for itself that would reduce discharges by far less than the maximum extent practicable.

In fact, under the Phase II Rule, in order to receive the protection of a general permit, the operator of a small MS4 needs to do nothing more than decide for itself what reduction in discharges would be the maximum practical reduction. No one will review that operator's decision to make sure that it was reasonable, or even good faith. [33] Therefore, as the Phase II Rule stands, EPA would allow permits to issue that would do less than *require* controls to reduce the discharge of pollutants to the maximum extent practicable. [34] *See* ***856** 64 Fed. Reg. at 68753 (explaining that the minimum control measures will protect water quality if they are "properly implemented"). We therefore must reject this aspect of the Phase II Rule as contrary to the clear intent of Congress. *Cf. Natural Res. Def. Council,* 966 F.2d at 1305 (rejecting as arbitrary and capricious a permitting system that allowed regulated industrial stormwater dischargers to "self-report" whether they needed permit coverage).

Involving regulated parties in the development of individualized stormwater pollution control programs is a laudable step consistent with the directive to consult with state and local authorities in the development of the § 402(p)(6) comprehensive program. But EPA is still required to ensure that the individual programs adopted are consistent with the law. Our holding should not prevent the Phase II general permitting program from proceeding mostly as planned. Our holding does not preclude regulated parties from designing aspects of their own stormwater management programs, as contemplated under the Phase II Rule. However, stormwater management programs that are designed by regulated parties must, in every instance, be subject to meaningful review by an appropriate regulating entity to ensure that each such program reduces the discharge of pollutants to the maximum extent practicable. We therefore remand this aspect of the Rule.

***3. Public Participation***

The Environmental Petitioners contend that the Phase II Rule fails to provide for public participation as required by the Clean Water Act, because the public receives neither notice nor opportunity for hearing regarding an NOI. The EPA replies on the one hand by arguing that NOIs are not "permits" and therefore are not subject to the public availability and public hearing requirements of the Clean Water Act, and on the other hand by arguing that the combination of the public involvement minimum measure, 40 C.F.R. § 122.34(b)(2), the Federal Freedom of Information Act, 5 U.S.C. § 552, and state freedom of information acts would fulfill any such requirements if NOIs were permits.

Reviewing the Phase II Rule under *Chevron* step one, we conclude that clear Congressional intent requires that NOIs be subject to the Clean Water Act's public availability and public hearings requirements. The Clean Water Act requires that "[a] copy of each permit application and each permit issued under [the NPDES permitting program] shall be available to the public," 33 U.S.C. § 1342(j), and that the public shall have an opportunity for a hearing before an permit application is approved, 33 U.S.C. § 1342(a)(1). Congress identified public participation rights as a critical means of advancing the goals of the Clean Water Act in its primary statement of the Act's approach and philosophy. *See* 33 U.S.C. § 1251(e); *see also Costle v. Pacific Legal Found.,* 445 U.S. 198, 216, 100 S.Ct. 1095, 63 L.Ed.2d 329 (1980) (noting the "general policy of encouraging public participation is applicable to the administration of the NPDES permit program"). EPA has acknowledged that technical issues relating to the issuance of NPDES permits should be decided in "the most open, accessible forum possible, ***857** and at a stage where the [permitting authority] has the greatest flexibility to make appropriate modifications to the permit." 44 Fed. Reg. 32,854, 32,885 (June 7, 1979).

As we noted above, under the Phase II Rule it is the NOIs, and not the general permits, that contain the substantive information about how the operator of a small MS4 will reduce discharges to the maximum extent practicable. Under

  

the Phase II Rule, NOIs are functionally equivalent to the permit applications Congress envisioned when it created the Clean Water Act's public availability and public hearing requirements. Thus, if the Phase II Rule does not make NOIs "available to the public," and does not provide for public hearings on NOIs, the Phase II Rule violates the clear intent of Congress. EPA's first argument—that NOIs are not subject to the public availability and public hearings requirements of the Clean Water Act—therefore fails.

We therefore reject the Phase II Rule as contrary to the clear intent of Congress insofar as it does not provide for public hearings on NOIs as required by 33 U.S.C. § 1342(a)(1). However, Congress has not directly addressed the question of what would constitute an NOI being "available to the public" as required by 33 U.S.C. § 1342(j). Under *Chevron* step two, we must defer to EPA's interpretation of "available to the public" unless it is arbitrary, capricious, or manifestly contrary to the statute.

**[17]** EPA argues that the NOIs are "available to the public" as a result of the combined effects of the public participation minimum measures, and of federal and state freedom of information acts. This argument is unconvincing. First, the public participation Minimum Measure only requires dischargers to design a program minimally consistent with State, Tribal, and local requirements. 40 C.F.R. § 122.34(b)(2). Second, the federal Freedom of Information Act only applies to documents that are actually in EPA's possession, not to documents that are in the possession of state or tribal NPDES authorities, *see* 40 C.F.R. § 2 (providing EPA's policy for releasing documents under the federal Freedom of Information Act), and nothing in the Phase II Rule provides that EPA obtain possession of every NOI that is submitted to a NPDES permitting authority. *See* 40 C.F.R. § 123.41(a) (making information provided to state NPDES authorities available to EPA only *upon request*). Thus, under the Phase II Rule, NOIs will only "be available to the public" subject to the vagaries of state and local freedom of information acts. We conclude that EPA's interpretation of 33 U.S.C. § 1342(j), as embodied in the provisions of the Phase II Rule providing for the public availability of NOIs, is manifestly contrary to the Clean Water Act, which contemplates greater scope, greater certainty, and greater uniformity of public availability than the Phase II Rule provides. We therefore reject this aspect of the Phase II Rule. [35]

***858** In sum, we conclude that EPA's failure to require review of NOIs, which are the functional equivalents of permits under the Phase II General Permit option, and EPA's failure to make NOIs available to the public or subject to public hearings contravene the express requirements of the Clean Water Act. We therefore vacate those portions of the Phase II Rule that address these procedural issues relating to the issuance of NOIs under the Small MS4 General Permit option, and remand so that EPA may take appropriate action to comply with the Clean Water Act.

**C. Failure to Designate**

We reject the Environmental Petitioners' contention that EPA's failure to designate for Phase II regulation serious sources of stormwater pollution, including certain industrial ("Group A") sources and forest roads, was arbitrary and capricious. *See Marsh v. Oregon Natural Res. Council,* 490 U.S. 360, 378, 109 S.Ct. 1851, 104 L.Ed.2d 377 (1989). [36]

***1. "Group A" Facilities***

In addition to the small MS4s and construction sites ultimately designated for regulation under the Phase II Rule, EPA evaluated a variety of other point-source discharge categories for potential Phase II regulation. One group of dischargers (referred to as the "Group A" facilities) included sources that "are very similar, or identical" to regulated stormwater discharges associated with industrial activity that were not designated for Phase I regulation for administrative reasons unrelated to their environmental impacts. [37] 64 Fed. Reg. at 68,779. EPA estimates that Group A includes approximately 100,000 facilities, including auxiliary facilities and secondary activities ("*e.g.,* maintenance of construction equipment and vehicles, local trucking for an unregulated facility such as a grocery store," *id.*) and facilities intentionally omitted from Phase I designation ("*e.g.,* publicly owned treatment works with a design flow of less than 1 million gallons per day, landfills that have not received industrial waste," *id.*).

***859** The Environmental Petitioners contend that EPA should have designated the Group A facilities for categorical Phase II regulation after finding (1) that stormwater discharges from these facilities are the same as those from the industrial sources regulated under Phase I, and (2) that such discharges may cause "adverse water quality impacts." *Id.* Petitioners argue that these findings, and EPA's failure to provide individualized analysis regarding whether any specific source category within Group A requires regulation, render EPA's decision not to regulate any of these sources

under the Rule arbitrary and capricious. They maintain that EPA's "line-drawing," which regulates some pollution sources but leaves nearly identical sources unregulated without any persuasive rationale, is necessarily arbitrary and capricious. *See Natural Res. Def. Council,* 966 F.2d at 1306 (EPA's decision not to regulate construction sites smaller than five acres was arbitrary when EPA provided no data to justify the five-acre threshold and admitted that unregulated sites could have significant water quality impacts).

Petitioners argue that § 402(p)(6) at least required EPA to make findings with respect to individual Group A categories, and that data collected from Phase I permit applications could be used to evaluate the pollutant potential of the identical Group A sources. They contend that these findings should have sufficed as a basis for designating at least some Group A sources, and that EPA's conclusion that it lacked adequate nationwide data upon which to designate any of these sources is not supported by the record evidence. Comparing EPA's identification of the serious polluting potential of some of these sources with its statutory mandate under § 402(p)(6) "to protect water quality," they argue that EPA fails even the forgiving standard of arbitrary and capricious review in that it has "offered an explanation for its decision that runs counter to the evidence before [it]" and "is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *See Motor Vehicle Mfrs.,* 463 U.S. at 43, 103 S.Ct. 2856.

EPA maintains that it considered Group A facilities' similarity to already regulated sources as only one of several criteria that it used in designating sources for regulation under Phase II, 64 Fed. Reg. at 68,780, and that sources that appear "similarly situated" under one criterion are not necessarily similarly situated under all. EPA asserts that nothing in § 402(p)(6) implied a responsibility to make individualized findings regarding each Group A subcategory, and it maintains that it simply lacked sufficient data to support nationwide designation of the Group A facilities. EPA notes that, after failing to receive requested comment providing such data, it proposed instead "to protect water quality" by allowing regional regulation of problem Group A facilities under the residual designation authority. EPA contends that agencies must be afforded deference in determining the data necessary to support regulatory decisionmaking and that it reasonably determined the quantum of data it would need to support the designation of additional sources on a nationwide basis. *See Sierra Club v. EPA,* 167 F.3d 658, 662 (D.C.Cir.1999).

**[18]** We conclude that sufficient evidence supports EPA's decision not to designate Group A sources on a nationwide basis, and instead to establish local and regional designation authority to account for these sources and protect water quality. Although we are troubled by the purely administrative basis for the distinction between facilities regulated under the Phase I Rule and the Group A facilities ***860** that remain unregulated under Phase II,[38] EPA's choice of the Phase I standard for designation is not the issue before us. Before us is whether EPA acted arbitrarily in declining to designate the Group A sources on a nationwide basis under the Phase II Rule, and we cannot say that it did.

EPA has articulated a rational connection between record facts indicating insufficient data to categorically regulate Group A facilities and its corresponding conclusion not to do so, and we defer to that decision. *See Washington v. Daley,* 173 F.3d 1158, 1169 (9th Cir.1999). In the text of the Rule, EPA explains that the process behind its decision not to nationally designate Group A sources for Phase II regulation focused not only on the likelihood of contamination from a source category, but also on the sufficiency of national data about each category and whether pollution concerns were adequately addressed by existing environmental regulations.[39] We cannot say that EPA relied on factors Congress had not intended it to consider, that it failed to consider an important aspect of the problem, or that its rationale is implausible. *See Motor Vehicle Mfrs.,* 463 U.S. at 43, 103 S.Ct. 2856. Nor did EPA's decision run counter to the evidence before it. *Id.* The Environmental Petitioners allege that its decision not to regulate Group A facilities runs counter to evidence that similar sources are highly polluting, but as EPA considered evidence beyond those similarities that persuaded it not to regulate, we cannot say that EPA's decision is unsupported by the record. Nothing in § 402(p)(6) unambiguously requires EPA to evaluate the Group A source categories individually, and we defer to EPA's interpretation of the statute it is charged with administering. *See Royal Foods Co. v. RJR Holdings,* 252 F.3d 1102, 1106 (9th Cir.2001).

***2. Forest Roads***

The Environmental Petitioners also contend that EPA arbitrarily failed to regulate forest roads under the Rule despite clear evidence in the record documenting the need for stormwater pollution control ***861** of drainage from these roads. Petitioners again contend that this agency action is

arbitrary, because EPA has offered an explanation for its decision that runs counter to the evidence before it.

Petitioners point to EPA's own conclusion that forest roads "are considered to be the major source of erosion from forested lands, contributing up to 90 percent of the total sediment production from forestry operations."[40] They note that both unimproved forest roads and construction sites create large expanses of non-vegetated soil subject to stormwater erosion, and argue that construction site data thus also support regulation of forest roads. Petitioners observe that EPA has cited no contrary evidence indicating that forest roads are not sources of stormwater pollutant discharges to U.S. waters, and they argue that Phase II regulation is necessary "to protect water quality," because proper planning and road design can minimize erosion and prevent stream sedimentation. Petitioners note that this court has previously held that, in the absence of such "supportable facts," EPA is not entitled to the usual assumption that it has "rationally exercised the duties delegated to it by Congress." *Natural Res. Def. Council,* 966 F.2d at 1305.

**[19]** EPA's response is that we have no jurisdiction to hear this challenge, chiefly because, it believes, the challenge is time-barred by Clean Water Act § 509(b)(1), 33 U.S.C. § 1369(b)(1) (providing that "application for review shall be made within 120 days from the date of [agency action]"). EPA promulgated silviculture regulations in 1976 that exclude from NPDES permit requirements certain silvicultural activities that EPA determined constitute non-point source activities, including "surface drainage, or road construction and maintenance from which there is natural runoff." 40 C.F.R. § 122.27(b)(1).[41] EPA asserts that the exclusion applies to forest roads in general, not only to "construction" and "maintenance"—an assertion disputed by Petitioners—and that any challenge to the decision not to regulate forest roads should have been brought within 120 days of the promulgation of that rule. *See* 33 U.S.C. § 1369(b)(1).

EPA's argument might be more persuasive if Petitioners' contention could be understood essentially as a direct challenge to the 1976 silviculture regulations, but this is not the case. Even were we to assume that EPA exempted forest roads from NPDES permit requirements in 1976 under 40 C.F.R. § 122.27(b)(1), that would not resolve the question whether EPA should have addressed forest roads in its "comprehensive program ... to protect ***862** water quality" under § 402(p)(6), because § 402(p)(6) was not enacted until 1987. Petitioners challenge EPA's decision not to regulate under the new portion of the statute, not the decision not to regulate under other provisions that were in effect earlier.

EPA argues in the alternative that Petitioners should have sought judicial review when EPA considered amending § 122.27(b)(1)—to delete the language that it asserts renders forest roads non-point sources—but then determined not to make the amendment. However, we are aware of no statute or legal doctrine providing that a party's failure to challenge an agency's decision *not* to amend its rules in one proceeding deprives the party of the right to challenge, in a contemporaneous proceeding, the promulgation of an entire new rule which could have, but did not, provide the full relief the party seeks. Assuming that EPA is correct that § 122.27(b)(1) defines forest roads as non-point sources, both the Phase II Rule proceedings and the proceedings in which the proposed amendment to § 122.27(b)(1) was considered and rejected were proper proceedings in which to raise the issue whether discharges from forest roads should be regulated. Petitioners chose to raise the issue in their comments to the proposed Phase II Rule, because they believed that Clean Water Act § 402(p)(6) mandates the regulation of forest roads. They did not lose their right to challenge the final Phase II Rule's failure to regulate forest roads simply because they did not also raise a challenge to EPA's failure to adopt an amendment to § 122.27(b)(1) that the agency initially proposed. (We note, incidentally, that it appears that even a successful challenge to § 122.27(b)(1) would likely not have achieved the objective the Environmental Petitioners sought: it would only have allowed case-by-case coverage for forest roads, and not for overall coverage.)

**[20]** Finally, EPA suggests that Petitioners' comments during the Phase II rulemaking process were too short to create jurisdiction in this court to hear this challenge. However, EPA exaggerates the slightness of those comments, which comprised two paragraphs, with footnotes, stating objections and providing support. We also agree with Petitioners that EPA was aware of the forest road sedimentation problem at the time of the rulemaking.[42] Indeed, EPA responded to the comments without disputing that the problem is serious. 3 EPA, *Response to Public Comments* 8 (Oct. 29, 1999). Rather, the agency relied on 40 C.F.R. § 122.27(b)(1), indicating that it was barred from acting under the Phase II Rule by § 122.27(b)(1).

EPA does not seriously address the merits of Petitioners' objections to the Rule in its brief to this court. Instead,

  

EPA relies almost entirely on its assertion that we lack jurisdiction to decide this question. It does, however, strongly imply that its failure to adopt its own proposed amendment in the proceeding pertaining to § 122.27(b)(1) relieves it of its obligation to consider including forest roads in the Phase II Rule proceedings. We reject any such contention. Petitioners' assertion that § 402(p)(6) requires that the Phase II Rule contain provisions regulating forest roads necessitates a response from EPA on the merits.

***863** Having concluded that the objections of the Environmental Petitioners are not time-barred, and that we have jurisdiction to hear them, but that EPA failed to consider those objections on the merits, we remand this issue to the EPA, so that it may consider in an appropriate proceeding Petitioners' contention that § 402(p)(6) requires EPA to regulate forest roads. EPA may then either accept Petitioners' arguments in whole or in part, or reject them on the basis of valid reasons that are adequately set forth to permit judicial review.

**D. AF&PA's Standing**

The American Forestry & Paper Association (AF&PA), a national trade association representing the forest, pulp, paperboard, and wood products industry, is one of the two Industry Petitioners asserting the remaining claims. [43] Before considering these challenges, however, we consider whether AF&PA has standing to raise them.

EPA argues that AF&PA lacks standing because it cannot show that it represents entities that suffer a cognizable injury under the Phase II Rule as promulgated. EPA argues that the interests of AF&PA entities might have supported standing had EPA decided to regulate forest roads as Phase II stormwater dischargers, but since EPA declined to do so, none of AF&PA's members are currently subject to the Rule. AF&PA contends that its members have a cognizable legal interest in the Rule because they risk becoming subject to regulation at any future time under the continuing designation authority.

**[21]** We agree that AF&PA lacks standing. A claimant meeting Article III standing requirements must show that "(1) it has suffered an 'injury in fact' ...; (2) the injury is fairly traceable to the challenged action of the defendant; and (3) it is likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision." *Friends of the Earth v. Laidlaw Envtl. Servs. (TOC),* 528 U.S. 167, 180–81, 120 S.Ct. 693, 145 L.Ed.2d 610 (2000). Standing requires an injury that is "actual or imminent, not 'conjectural or hypothetical.' " *Lujan v. Defenders of Wildlife,* 504 U.S. 555, 560, 112 S.Ct. 2130, 119 L.Ed.2d 351 (1992). AF&PA's interest in avoiding future regulation of forest roads is not actually or imminently threatened by any potential result in this case. No ripe claim about misuse of the residual authority to regulate forest road discharge, or any other kind of discharge, is before the court. Should members of AF&PA become subject to Phase II regulation through subsequent administrative action, it will have standing to challenge those actions at that time. In the meanwhile, we proceed to the merits of the remaining claims on behalf of AF&PA's co-petitioner, the National Association of Home Builders, which has established its standing to raise them.

**E. Consultation with State and Local Officials**

The Industry Petitioners contend that EPA failed to consult with the States on the Phase II Rule as required by § 402(p)(5), which instructs EPA to conduct studies "in consultation with the States," and § 402(p)(6), which instructs the Administrator to issue regulations based on these studies "in consultation with State and local officials." 33 U.S.C. §§ 1342(p)(5)-(6). We conclude that EPA satisfied its statutory duty of consultation. *See Marsh,* 490 U.S. at 378, 109 S.Ct. 1851.

***864** Petitioners concede several instances in which EPA circulated drafts of the Phase II Rule to state and local authorities, but argue that these consultations were meaningless because (1) the reports were circulated too far in advance of the actual rulemaking, (2) the rulemaking wrongfully proceeded based on other sources of input, (3) standard APA notice and comment procedures could not suffice because Congress must have intended something more when it added the consultation requirements to the language of § 402, and (4) consultation at the final stage of rulemaking was inadequate because comment was sought on the final report only after it had been submitted to Congress and the Phase II Rule had been promulgated. Petitioners provide examples of state feedback that allegedly went unheeded by EPA in its promulgation of the final Rule.

EPA maintains that it consulted extensively with States and localities in developing the Phase II Rule, discharging its obligations under §§ 402(p)(5) & (6). EPA contends that the comments Petitioners cite as unheeded by EPA demonstrate that EPA *did* consult with States concerning the Rule, even if some States did not concur in EPA's ultimate conclusion, and

that the final rule adopted a good measure of the flexibility sought by state representatives. EPA argues that Industry Petitioners cannot complain that consultation was inadequate simply because it did not result in the adoption of Petitioners' preferred views.

EPA also disputes Petitioners' allegation that while EPA did comply with the terms of the 1999 Appropriations Act (requiring EPA to defend the proposed Phase II Rule before Congress and then publish the final report for public comment), it demonstrated its failure to adequately consult by publishing the report for public comment *after* the Phase II Rule had been formally promulgated, rendering any subsequent public comment meaningless. EPA counters that these actions do not indicate that it failed to satisfy Congress's directive that it consult with state and local officials, because EPA had engaged in extensive consultation before Congress requested the Appropriations Act report, and Congress did not require further consultation when it conditioned promulgation of the Rule only on the submission of this final report. EPA claims that while Congress required it to publish the report after its submission, public comment on the report was not required before promulgation, and that the statutory deadline structure rendered any other interpretation impossible.

**[22]** We conclude that the overall record indicates EPA met its statutory duty of consultation. A draft of the first report was circulated to States, EPA regional offices, the Association of State and Interstate Water Pollution Control Administrators ("ASIWPCA"), and other stakeholders in November, 1993, and was revised based on comments received. EPA established the Urban Wet Weather Flows Federal Advisory Committee ("FACA Committee"), balancing membership between EPA's various outside stakeholder interests, including representatives from States, municipalities, Tribes, commercial and industrial sectors, agriculture, and environmental and public interest groups. 64 Fed. Reg. 68,724. The 32 members of the Phase II FACA Subcommittee, reflecting the same balance of interests, met fourteen times over three years and state and municipal representatives provided substantial input regarding the draft reports, the ultimate Phase II Rule, and the supporting data. [44] *Id.* EPA ***865** instituted the Phase II Subcommittee meetings in addition to the standard APA notice and comment procedures, which EPA also followed.

The fact that the Rule did not conform to Petitioners' hopes and expectations does not bear on whether EPA adequately consulted state and local officials. Although required to consult with States and localities, EPA was free to chart the substantive course it saw fit. EPA was not required to consult with States on the Appropriations Act report. Even if EPA should have sought further comment at that late stage, failure to do so does not outweigh the evidence demonstrating extensive consultation and cooperation with local authorities on development of the Rule.

**F. Designation of Certain Small MS4s and Construction Sites**

The Industry Petitioners contend that, in designating certain small MS4s and construction sites for regulation under the Phase II Rule, EPA failed to adhere to the statutorily required regulatory basis and misinterpreted record evidence. We disagree.

***1. Regulatory Basis***

The Industry Petitioners and the Municipal Petitioners contend that EPA violated the statutory command to base the Phase II regulations on § 402(p)(5) studies. We review EPA's interpretation of its statutory authority under the *Chevron* standard, 467 U.S. at 842–44, 104 S.Ct. 2778, and affirm.

Petitioners argue that the studies mandated by § 402(p)(5) were intended to provide the sole substantive basis for the "comprehensive program" envisioned in § 402(p)(6), but that EPA also (and thus improperly) based its designation of small MS4s and construction sites on (1) public comment received in the aftermath of judicial invalidation of the scope of construction sites regulated by the Phase I Rule, [45] and (2) additional research discussed in the Preamble to the Phase II Rule. [46]

EPA contends that the statute did not require it to base its designations exclusively on the § 402(p)(5) studies, and that it was in fact required to take account of information from other sources in promulgating the regulations. It argues that it based the Phase II Rule on conclusions reported in the § 402(p)(5) studies, but then appropriately supported these results with data described in the additional study requested by Congress in the Appropriations Act, comments submitted during the statutorily required notice-and-comment process, and other available information. To read the authorizing statute as limiting reliance to the § 402(p)(5) studies, EPA claims, would preclude it from relying on recommendations received through the separate, post-study requirement to "consult with State and local officials" under ***866** § 402(p)

(6), and through the notice and comment process mandated by the APA, 5 U.S.C. § 553(b).

Respondent-intervenor NRDC adds that the Phase II Rule is consistent with the § 402(p)(5) studies reported in 1995, and moreover, that the Industry Petitioners lack standing to raise the "regulatory basis" claim because they cannot show the requisite injury. *See Friends of the Earth,* 528 U.S. at 180–81, 120 S.Ct. 693.

***a. Standing.*** Industry Petitioners[47] contend that they have suffered injury in fact, because their members are now either automatically regulated by the permitting requirements or subject to future regulation (under the residual authority, discussed below) that otherwise would not have been authorized, and that this is a direct result of EPA's failure to adhere to the framework of the 1995 Report, which allegedly would have precluded these aspects of the Rule. NRDC contends that the Industry Petitioners lack standing because they cannot show that being subject to NPDES permitting is the causal result of the procedural injury they urge, and because they cannot base standing on hypothetical injury that may arise in the future.

NRDC argues that the injuries Petitioners allege are not consistent with the guidelines laid out in *Friends of the Earth,* 528 U.S. at 180–81, 120 S.Ct. 693. It insists that Petitioners' only possible claims of injury from the alleged "regulatory basis" violation are purported harm to members caused by the final Phase II Rule itself or harm to members caused by EPA's alleged failure to provide adequate notice of future regulatory requirements in the 1995 Report. However, NRDC contends that Petitioners have not suffered the requisite injury, because they had actual notice that EPA might regulate small construction sites, 63 Fed. Reg. at 1583, and they can show no chain of causation linking their alleged injury from the Rule itself to the actions challenged here.

NRDC's causation argument is complex. Although the Petitioners purport to challenge EPA's failure to follow all of the 1995 Report's recommendations in the final Phase II Rule, NRDC contends, they are really challenging the subsequent proceedings through which EPA developed the final Rule. Even if there were some unlawful variance between the 1995 report and final rule, NRDC continues, the cause of that variance would have been some failure to abide by rulemaking standards during administrative proceedings that produced the text of the final Rule—not EPA's attention to sources of input other than the 1995 Report. NRDC maintains that these intervening acts of rulemaking (e.g., Phase II Subcommittee activities and the notice-and-comment process) break the requisite chain of causation between EPA's alleged failure to adhere to recommendations in the 1995 report and the flaws Petitioners allege in the Phase II Rule, which NRDC claims would have been due to "purportedly unlawful EPA decisions on the merits during the subsequent administrative proceedings." *See Northside Sanitary Landfill v. Thomas,* 804 F.2d 371, 381–84 (7th Cir.1986) (finding no standing to challenge EPA statements concerning the fate of a hazardous waste facility when subsequent state administrative acts, not EPA comments, would determine the facility's actual fate).

**[23]** We note that NRDC's standing arguments apply equally to the Municipal Petitioners, who can also assert only the ***867** harms resulting to members from the Rule itself or from a lack of notice, and that we are thus not only considering the standing of the Industry Petitioners but also that of the Municipal Petitioners to raise the "regulatory basis" claim.[48] That established, we find standing for both.

NRDC essentially argues that petitioners lack standing because (1) they cannot show that being subject to NPDES permitting is the causal result of the procedural injury they urge, (2) they cannot claim any actual notice injury from the alleged procedural wrong because notice was actually given, and (3) they cannot claim standing based on hypothetical injury that may (or may not) arise from future regulation under the residual authority. We can readily agree with the latter two contentions. As discussed above, the "actual injury" requirement of Article III standing precludes judicial consideration of exactly the kind of hypothetical harm the Industry Petitioners allege may follow from use of Phase II authority for future designations of regional sources. *Friends of the Earth,* 528 U.S. at 180–81, 120 S.Ct. 693. If future Phase II designations cause identifiable injury to Petitioners, they will then be free to pursue that ripe claim. And because EPA clearly issued notice to all regulated parties that they may be subject to regulation under the proposed rule, 63 Fed. Reg. at 1568 (MS4s) and 1582 (construction), petitioners cannot show injury from lack of actual notice.

However, NRDC's causation argument is less persuasive. NRDC correctly argues that the petitioners cannot establish a definite chain of causation between the EPA's alleged failure to limit their regulatory basis to the § 402(p)(5) studies and the fact that they now must obtain permits. But this will almost always be true of petitions challenging an agency's

failure to abide by statutory procedural requirements. Because all administrative decisionmaking following an alleged procedural irregularity could always be considered an intervening factor breaking the chain of causation, NRDC's interpretation of the requisite chain of causation would dubiously shield administrative decisions from procedural review.

For this reason, we have held that the failure of an administrative agency to comply with procedural requirements in itself establishes sufficient injury to confer standing, even though the administrative result might have been the same had proper procedure been followed. *City of Davis v. Coleman,* 521 F.2d 661, 671 (9th Cir.1975) (agency's failure to comply with National Environmental Policy Act's procedural requirements constituted injury sufficient to support standing of a geographically related plaintiff regardless of potentially similar regulatory outcome). In *City of Davis,* we noted that the standing inquiry represents "a broad test, but because the nature and scope of environmental consequences are often highly uncertain before study we think it an appropriate test." *Id.* A plaintiff who shows that a causal relation is "probable" has standing, even if the chain cannot be definitively established. *Johnson v. Stuart,* 702 F.2d 193, 195–96 (9th Cir.1983) (school students and their parents had standing to challenge a statute that limited the texts that might be selected for teaching, even ***868** though it could not be shown whether any specific book had been rejected under this statute or for other reasons).

The Supreme Court has also acknowledged that standing may be established by harm resulting indirectly from the challenged acts, *Warth v. Seldin,* 422 U.S. 490, 504–05, 95 S.Ct. 2197, 45 L.Ed.2d 343 (1975), and that causation may be established if the plaintiff shows a good probability that, absent the challenged action, the alleged harm would not have occurred, *Arlington Heights v. Metro. Hous. Dev. Corp.,* 429 U.S. 252, 262–64, 97 S.Ct. 555, 50 L.Ed.2d 450 (1977).

Thus, although the petitioners cannot show with certainty that the alleged "regulatory basis" violation caused them to be wrongfully subjected to Phase II permitting requirements, we hold that they have alleged a procedural injury sufficient to support their standing to bring the claim.

***b. Merits.*** Although we resolve the standing issue in favor of the petitioners, we nevertheless affirm the Rule against their claim that EPA violated procedural constraints implied by the authorizing statute, § 402(p)(6).

Congress intended EPA to use all sources of information in developing a comprehensive program to protect water quality to the maximum extent practicable. The statute unambiguously required EPA to base its regulations both on the § 402(p)(5) studies and on consultation with state and local officials. Congress enacted § 402 with full knowledge that EPA would also be required to take account of public comments during the notice and comment phase of administrative rulemaking prescribed by the APA. [49]

***2. MS4s in Urbanized Areas***

The Municipal Petitioners contend that the designation of small MS4s for Phase II regulation according to Census Bureau defined areas of population density ("urbanized areas") is arbitrary and capricious. They argue that EPA has not established that the Census Bureau's designation of urbanized areas is correlated with actual levels of pollution runoff in stormwater, and that EPA adopted the designations simply for administrative convenience. We affirm, because the record reflects a reasoned basis for EPA's decision. *See Marsh,* 490 U.S. at 378, 109 S.Ct. 1851.

Conceding that the Preamble cites studies purporting to establish "a high correlation between the degree of development/urbanization and adverse impacts on receiving waters due to stormwater," 64 Fed. Reg. at 68,751, the Municipal Petitioners nevertheless contend that the record contains no "demonstrably correlated, *quantified* basis on which EPA may reasonably have concluded that any particular population, or any population density, *per se* establishes that all urban areas having that same characteristic in gross are necessarily appropriate for inclusion as Phase II sources." Pointing to *Leather Industries of America v. EPA,* 40 F.3d 392, 401 (D.C.Cir.1994) (rejecting as arbitrary EPA's regulation of pollutant levels in the absence of data supporting a relationship between the caps and level of risk), Petitioners argue that EPA simply assumed the relationship Congress contemplated it would establish by the § 402(p)(5) studies.

EPA responds that it extensively documented the relationship between urbanization and harmful water quality impacts from stormwater runoff, pointing to its findings that the degree of surface imperviousness in an area directly corresponds ***869** to the degree of harmful downstream pollution from stormwater runoff, 64 Fed. Reg. at 68,724–27, and that it articulated a rational connection between these record facts and its decision to designate small MS4s serving areas of

high population density ("urbanized areas") to protect water quality.

**[24]** We treat EPA's decision with great deference because we are reviewing the agency's technical analysis and judgments, based on an evaluation of complex scientific data within the agency's technical expertise. *See Baltimore Gas & Elec. Co. v. NRDC,* 462 U.S. 87, 103, 103 S.Ct. 2246, 76 L.Ed.2d 437 (1983); *see also Chem. Mfrs. Ass'n v. EPA,* 919 F.2d 158, 167 (D.C.Cir.1990) ("It is not the role of courts to 'second-guess the scientific judgments of the EPA....' "). We conclude that the record supports EPA's choice.

The statute simply called upon EPA to "designate stormwater discharges," other than those designated in Phase I, "to be regulated to protect water quality." 33 U.S.C. § 1342(p)(6). EPA did so, based on record evidence showing a compelling and widespread correlation between urban stormwater runoff and deleterious impacts on water quality. Petitioners' assertion that EPA failed to establish a "quantified" basis for its designation is inapposite. The statute did not require EPA to establish with pinpoint precision a numeric population threshold within urbanized areas that would justify regulation under Phase II. In areas implicating technical expertise and judgment, courts do not require "perfect stud[ies]" or data. *Sierra Club,* 167 F.3d at 662. EPA satisfied the *Leather Industries* standard by adopting a threshold consistent with the criterion of "protecting water quality," and did not assume, but instead sufficiently documented, the relationship between urbanization and harmful stormwater discharge.

***3. Small Construction Sites***

Industry and Municipal Petitioners also argue that EPA's decision to regulate under Phase II all construction sites disturbing between one and five acres of land ("small construction sites") is arbitrary and unsupported by the record. We do not agree. *See Marsh,* 490 U.S. at 378, 109 S.Ct. 1851.

***a. Record Evidence.*** Municipal Petitioners claim that EPA arrived at the one-acre standard based not on factual findings in the record but instead as a reaction to the earlier Ninth Circuit remand of the Phase I five-acre designation. They allege that the one-acre standard is no more based on supporting data than the rejected five-acre standard, and is thus quantitatively arbitrary.

Industry Petitioners argue that EPA's findings do not support regulation of *all* small construction sites, but indicate only that small construction sites, taken cumulatively, may cause effects similar to large sites in a given area. They contend that EPA's conclusion that adverse effects are possible under certain circumstances cannot support categorical designation of all small construction sites nationwide, and that the Rule is arbitrary because (1) it is based on an analysis that fails to take account of the frequency of negative impacts, (2) it fails to take account of acknowledged factors that determine whether small construction activities cumulatively cause harm (such as the degree of development in a watershed at any given time), and (3) EPA has acknowledged that the actual water quality impact of construction sites of all sizes varies widely from area to area depending on climatological, geological, geographical, ***870** and hydrological influences. [50]

Industry Petitioners further contend that the record does not support the designation of small sites, because almost all of the technical papers EPA relied on focused on larger sites or failed to take account of size, [51] and because the lack of an adequate factual basis for nationwide regulation of small sites makes the Phase II Rule arbitrary and capricious. *Am. Petroleum Inst. v. EPA,* 216 F.3d 50, 58 (D.C.Cir.2000) (invalidating a solid waste rule because EPA "failed to provide a rational explanation for its decision" declining to exclude oilbearing waste waters from the statutory definition of solid waste).

EPA maintains that construction sites regulated under the Phase II Rule degrade water quality across the United States and that the administrative record unambiguously documents that harm. EPA disputes Petitioners' assertion that it failed to establish the need to regulate small sites nationwide, but also contends that it is not required to base every administrative decision on a precise quantitative analysis. *See Sierra Club,* 167 F.3d at 662 ("EPA typically has wide latitude in determining the extent of data-gathering necessary to solve a problem.").

EPA also disputes petitioners' assertions that data from studies involving larger construction sites are irrelevant to the Phase II Rule. EPA explains that discharges of sediment due to erosion are the result of the interaction of several factors including soils, slope, precipitation, and vegetation:

> For construction sites that are one acre or more, none of the environmental factors contributing to sediment discharges is dependent on the size

> of the site disturbed. A one-acre site can have the same combination of soils, slope, degree of disturbance and precipitation as a 100–acre site, and consequently can lose soil at the same rate ... and discharge sediments in the same concentrations ... as a 100–acre site.

EPA contends that it is thus reasonable to extrapolate data about small sites from studies of larger ones—and that such an extrapolation may even be forgiving, since small sites are currently less likely to have effective erosion and sedimentation control plans. [52]

***871** Indeed, EPA argues that although adverse water quality impacts of small construction sites have been widely recognized, effective local erosion and sedimentation control programs have not been adopted in many areas. [53] Though not all watersheds are currently adversely effected by small construction sites, [54] EPA notes that the Phase II Rule acts "to protect water quality" both remedially and preventively, and argues that it need not quantify the cumulative effects of discharges from these sites or identify all watersheds that are currently harmed before acting to limit pollution from small sites. [55]

**[25]** We reverse under the arbitrary and capricious standard only if the agency has relied on factors Congress did not intend it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision contrary to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise. *Motor Vehicle Mfrs. Ass'n,* 463 U.S. at 43, 103 S.Ct. 2856. Petitioners' contention that EPA relied on factors Congress did not intend it to consider was rejected in our earlier discussion of the regulatory basis challenge. They submit no evidence that EPA failed to consider an important aspect of the problem. We cannot say that EPA's designation of small construction sites is implausible (especially given the support of twenty-some-odd studies of sedimentation from construction sites that EPA reviewed in promulgating the challenged regulations, 64 Fed. Reg. 68,728–31). We could remand this aspect of the Rule only if, as the petitioners urge, EPA's explanation for its decision to regulate small construction sites were contrary to the record evidence, and it is not.

Petitioners' primary contention is that evidence in the record suggests it is not possible to provide an explicit, quantitative link between small construction sites and an adverse effect on water quality. But even if this were so, EPA's decision to regulate preventively small construction sites "to protect water quality" is not inconsistent with the record. Petitioners contend that EPA's reliance on data from studies of large construction sites is insufficient to support EPA's designation of small sites, but EPA has adequately supported its contention that experts can reasonably ***872** extrapolate projected water quality impacts from large to small sites. We apply the substantial evidence standard when reviewing the factual findings of an agency, *Dickinson v. Zurko,* 527 U.S. 150, 156–58, 119 S.Ct. 1816, 144 L.Ed.2d 143 (1999), [56] and find it satisfied here.

Moreover, EPA is not required to conduct the "perfect study." *Sierra Club,* 167 F.3d at 662. We defer to an agency decision not to invest the resources necessary to conduct the perfect study, and we defer to a decision to use available data unless there is no rational relationship between the means EPA uses to account for any imperfections in its data and the situation to which those means are applied. *Id.; Am. Iron & Steel Inst. v. EPA,* 115 F.3d 979, 1004 (D.C.Cir.1997). The record indicates a reasoned basis for EPA's decision that regulating small construction sites was necessary "to protect water quality" as required by § 402(p)(6).

**[26]** ***b. Waivers.*** Industry Petitioners further contend that EPA's allowance of regulatory waivers for small construction sites not likely to cause adverse water quality impacts inappropriately supplements the permitting regulations.

Petitioners argue that EPA has the burden of establishing a comprehensive program to control sources as necessary to protect water quality, and that shifting the burden to individual contractors, businesses, and homeowners to prove they do not harm water quality falls short of meeting this statutory obligation. Citing *National Mining Association v. Babbitt,* 172 F.3d 906, 910 (D.C.Cir.1999), they argue that EPA's rebuttable regulatory presumption of water quality impact from small construction activity is unreasonable because the agency has established no scientific likelihood that any given small site will affect water quality. EPA defends the waiver approach as fair and efficient, and argues that the Industrial Petitioners are confusing arguments about the limits of presumptions in evidentiary hearings conducted under the APA. [57]

  

EPA is correct; the Phase II Rule creates no presumption applicable to an evidentiary hearing, and a regulation creating exemptions by waiver is reviewed under the familiar arbitrary and capricious standard. The use of waivers to allow permit exemptions for small sites unlikely to cause adverse impacts is reasonable under that standard.

[27] ***c. Consistency.*** Industry Petitioners also argue that EPA's decision to regulate all small construction sites under the Phase II Rule is arbitrary and capricious because EPA applied a different standard in regulating small construction projects than it applied to other potential sources of stormwater runoff subject to Phase II regulation.

Petitioners contend that EPA decided not to designate other potential sources identified in the § 402(p)(5) studies because it determined that there are not "sufficient data ... available at this time on which to make a determination of potential adverse water quality impacts for the category of sources." 64 Fed. Reg. at 68,780. Petitioners contend this standard should have been applied to small construction sites as well, but EPA opted to ***873** regulate these sources despite an alleged lack of coherent data on small site impacts as a general category.

EPA counters, once again, that it did have adequate data to regulate small construction sites. It contends that construction sites of all sizes have greater erosion rates than almost any other land use, and thus are not similarly situated to the potential polluters that EPA chose not to regulate at this time. [58] These sources include secondary industrial activities (for example, maintenance of construction equipment or local trucking for an unregulated facility such as a grocery store) and other unregulated commercial activities (for example, car and truck rental facilities). 64 Fed. Reg. at 68,779. EPA reports that it decided not to categorically regulate these potential sources based both on available data about water quality impacts and on the extent to which potentially adverse water quality impacts are mitigated by existing regulations to which these sources are already subject. *Id.* at 68,780.

We find no error. *See Marsh,* 490 U.S. at 378, 109 S.Ct. 1851. EPA acted reasonably in designating all small construction sites for Phase II regulation, and Industry Petitioners point to no record evidence that the nature of pollutant contributions from small construction site discharge is sufficiently similar to pollutants from the non-regulated sources to support the analogy they seek to draw. *New Orleans Channel 20 v. FCC,* 830 F.2d 361, 366 (D.C.Cir.1987) (an agency does not act irrationally when it treats parties differently, unless the parties are similarly situated). Sufficient evidence supports EPA's conclusion that small construction sites are not similar enough to these "other sources" to support petitioner's challenge.

**G. Continuing ("Residual") Designation Authority**

The Industry Petitioners argue that EPA acted improperly in retaining authority to designate future sources of stormwater pollution for Phase II regulation as needed to protect federal waters. We disagree.

The Phase II Rule preserves authority for EPA and authorized States to designate currently unregulated stormwater dischargers as requiring permits under the Rule if future circumstances indicate that they warrant regulation "to protect water quality" under the terms of § 402(p)(6). 40 C.F.R. § 122.26(a)(9). In the Phase II Preamble, EPA explains this aspect of the Rule:

> Under today's rule, EPA and authorized States continue to exercise the authority to designate remaining unregulated discharges composed entirely of stormwater for regulation on a case-by-case basis.... Individual sources are subject to regulation if EPA or the State, as the case may be, determines that the stormwater discharge from the source contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States. This standard is based on the text of section CWA 402(p). In today's rule, EPA believes, as Congress did in drafting section CWA 402(p)(2)(E), that individual instances of stormwater discharge might warrant special regulatory attention, but do not fall neatly into a discrete, predetermined category. Today's rule preserves the regulatory authority ***874** to subsequently address a source (or category of sources) of stormwater discharges of concern on a localized or regional basis.

64 Fed. Reg. 68,781. The text of the Rule requires a discharger to obtain a permit if the NPDES permit authority determines that "stormwater controls are needed for the discharge based on wasteload allocations that are part of 'total maximum daily loads' (TMDLs [59]) that address the pollutant(s) of concern" or that "the discharge, or category of discharges within a geographic area, contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States." 40 C.F.R. §§ 122.26(a)(9)(i)(C)-(D).

***1. Statutory Authority***

The Industry Petitioners contend that this "residual" designation authority, which would allow a NPDES permitting authority to require at any future time a permit from any stormwater discharge not already regulated, is *ultra vires.* Although they concede that Congress authorized case-by-case designation in § 402(p)(2)(E), [60] they argue that this authority attached only during the permitting moratorium that ended in 1994, prior to the Phase II rulemaking. They object that EPA has impermissibly designated a category of "not yet identified" sources and preserved authority to regulate them on a case-by-case basis indefinitely into the future. [61]

**[28]** Petitioners contend that § 402(p)(6) [62] cannot rescue the residual authority because it does not authorize case-by-case identification of discharges to be regulated, and that Congress, had it intended otherwise, would have included language in § 402(p)(6) similar to the case-by-case authority explicitly granted in § 402(p)(2)(E). [63] They also contend that ***875** continuing authority to designate sources based on waste load allocations that are part of TMDLs exceeds the scope of authority in § 402(p)(2), which nowhere mentions TMDLs. Finally, they argue that the categorical designation authorized by § 402(p)(6) is only permissible when based on the § 402(p)(5) studies and carried out in consultation with state and local authorities, but that the Rule allows future designations based on agency discretion unaccompanied by adequate demonstration that the source itself is a significant threat to water quality.

EPA counters that § 402(p)(6) authorized the designation, made on the basis of statutorily required sources of input and in consultation with the States, of a third class of discharges to be identified on location-specific bases by the NPDES permitting authority. EPA contends that Petitioners mistake the source of its authority for continuing designations as arising only from § 402(p)(2), discounting the full scope of its authority under § 402(p)(6). EPA argues that it permissibly interpreted § 402(p)(6) as allowing the residual designation authority because its language does not expressly preclude it, and because such authority is consistent with (and arguably required by) that section's mandate to establish a "comprehensive program" to protect water quality from adverse stormwater discharges. EPA maintains that the structure of § 402(p) reflects "Congress' intent to assure regulation of all problematic stormwater discharges as expeditiously as reasonably possible—not to limit EPA to a one-time-only opportunity to designate discharges for regulation."

**[29]** We review EPA's interpretation of the statute it administers with deference, *Royal Foods Co.,* 252 F.3d at 1106, and affirm this aspect of the Phase II Rule as a legitimate exercise of regulatory authority conferred by § 402(p). The residual designation authority is grounded both on § 402(p)(6), which broadly authorizes a comprehensive program to protect water quality, and on § 402(p)(2)(5), which authorizes case-by-case designation of certain polluters and categories of polluters.

While not a blank check, § 402(p)(6) authorizes a comprehensive program that allows regional designation of polluting discharges that compromise water quality locally, even if they have not been established as compromising water quality nationally at the time Phase II was promulgated. In allowing continuing designation authority, EPA permissibly designated a third category of dischargers subject to Phase II regulation—those established locally as polluting U.S. waters—following all required studies and consultation with state and local officials. EPA reasonably determined that discharges other than those from small MS4s and construction sites were likely to require regulation "to protect water quality" in satisfaction of the § 402(p)(6) mandate. EPA reasonably determined that, although it lacked sufficient data to support nationwide, categorical ***876** designation of these sources, particularized data might support their designations on a more localized basis. EPA reasonably interpreted § 402(p)(6) as authorizing regional designation of sources and regional source categories, based on water quality standards including TMDLs.

Petitioners' § 402(p)(2)(5) argument (that EPA could not draw support for the residual designation authority from § 402(p)(2)(5) because such authority expired in 1994) is contradicted by the plain language of the statute. Respondent-intervenor NRDC correctly notes that § 402(p)(1) sets forth a permitting

moratorium for stormwater discharges prior to 1994, and that § 402(p)(2) exempts certain categories of sources from that permitting moratorium, including those to be regulated on a case-by-case basis under § 402(p)(2)(5). Specifically, the statute provides that the 1994 date "shall not apply" to the five categories of discharges listed in § 402(p)(2). The termination of a moratorium that "shall not apply" to the continuing designation authority under § 402(p)(2)(5) cannot rescind EPA's authority to regulate sources in that category. Nothing in § 402(p) suggests that authority to designate these sources ends at any time, and EPA remains free to designate § 402(p)(2)(E) dischargers.

Finally, although Petitioners may be legitimately concerned that a permitting authority may designate a source without adequately establishing its eligibility, this issue must be addressed in the context of an actual case or controversy. Whether a NPDES authority may impose permitting requirements on a discharger without an adequate finding of polluting activity is not yet ripe for judicial review. *Thomas v. Anchorage Equal Rights Comm'n,* 220 F.3d 1134, 1141 (9th Cir.2000) ("A concrete factual situation is necessary to delineate the boundaries of what conduct the government may or may not regulate.").

***2. Nondelegation Doctrine***

**[30]** Industry Petitioners contend that EPA's interpretation of § 402(p) to allow the residual designation authority must be rejected because it would render the statute unconstitutional under the nondelegation doctrine. We deny petitioners' claim, both because it is not properly raised and because it rests on an interpretation explicitly overturned by the United States Supreme Court.

Petitioners base their contention on *American Trucking Ass'ns v. EPA,* 175 F.3d 1027, 1034 (D.C.Cir.1999),[64] in which the D.C. Circuit remanded a regulation under the nondelegation doctrine because, although EPA had applied reasonable factors in establishing the air quality standards in question, the agency had articulated no "intelligible principle" to channel its application of these factors. *Id.* Petitioners argue that if § 402(p) authorizes a NPDES permitting authority to require Phase II permitting of any stormwater source deemed to be a "significant contributor" of pollutants to U.S. waters, then that grant of authority likewise constitutes an unconstitutional delegation of legislative authority because—as did the *American Trucking* delegation—it "leaves [EPA] free to pick any point" at which a regulatory burden will attach. *Id.* at 1037.

However, in reversing *American Trucking,* the Supreme Court rejected the notion that an agency has the power to interpret a statute so as to either save it from being, or transform it into, an unconstitutional delegation. *Whitman v. Am. Trucking* ***877** *Ass'ns,* 531 U.S. 457, 473, 121 S.Ct. 903, 149 L.Ed.2d 1 (2001). Whether a statute delegates legislative power "is a question for the courts, and an agency's [interpretation] has no bearing upon the answer." *Id.* Petitioner's argument to the contrary rests on the very reasoning in *American Trucking* that was overturned in *Whitman.* The relevant question is not whether EPA's interpretation is unconstitutional, but whether the statute itself is unconstitutional—a challenge Industry Petitioners do not raise.

But even if the challenge were properly raised, § 402(p) would, like the Clean Air Act standard-setting provision at issue in *Whitman,* survive constitutional review. The Supreme Court has upheld against nondelegation attacks many similar statutes establishing nonquantitative standards. *Am. Power & Light Co. v. SEC,* 329 U.S. 90, 104, 67 S.Ct. 133, 91 L.Ed. 103 (1946) (upholding statute giving SEC authority to modify corporate structures so that they are not "unduly or unnecessarily complicate[d]" and do not "unfairly or inequitably distribute voting power among security holders"); *Yakus v. United States,* 321 U.S. 414, 419–20, 423–27, 64 S.Ct. 660, 88 L.Ed. 834 (1944) (upholding statute giving agency power to set prices that "will be generally fair and equitable"). In *Yakus,* the Court held that a statutory command to "effectuate the purposes" of the overall statutory scheme withstood scrutiny. *Id.* Section 402(p)(6)'s directive "to protect water quality" summarizes the central purpose of the Clean Water Act, "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters," 33 U.S.C. § 1251(a). It establishes a determinate criterion of the kind the Supreme Court upheld in *Yakus* and *American Power & Light.*

***3. Notice and Comment***

**[31]** Industry Petitioners also contend that, to the extent it allows the designation of entire categories of sources, rather than individual sources, the residual designation authority violates the APA, 5 U.S.C. § 553(b)(3), because EPA did not provide public notice that it was considering such a rule. *Ober v. EPA,* 84 F.3d 304, 315 (9th Cir.1996) (invalidating EPA rule where it deviated from proposal); *Shell Oil Co. v. EPA,* 950 F.2d 741, 746–47 (D.C.Cir.1991). Petitioners

contend that while the proposed rule would have allowed case-by-case designation where an authority "determines that the discharge contributes to a violation," 63 Fed. Reg. at 1635 (proposing 40 C.F.R. § 122.26(a)(9)(i)(D)), the final rule authorizes case-by-case designation where "the discharge, or category of discharges within a geographic area, contributes to a violation," 40 C.F.R. § 122.26(a)(9)(i)(D).

EPA notes that it had proposed to promulgate continuing designation authority in some form, and points to elements in the proposed rule that explicitly envision the categorical designation of sources at the local/watershed level. [65]

***878** According to the "logical outgrowth" standard, a final regulation must be "in character with the original proposal and a logical outgrowth of the notice and comments." *Hodge,* 107 F.3d at 712. EPA emphasized that it was considering continuing designations based on watershed data rather than designating these sources on a national basis, and invited comment regarding this proposal. 63 Fed. Reg. at 1536. This supports the necessary relationship between the proposed and final rule.

**H. Regulatory Flexibility Act**

The Industry Petitioners contend that the Phase II Rule will impose substantial compliance costs on their members and other small entities, but that EPA failed to conduct the analysis required by the Regulatory Flexibility Act ("RFA"), 5 U.S.C. §§ 601–11. They argue that EPA seeks to excuse its noncompliance by falsely certifying that the Rule does not have a significant impact on a substantial number of small entities. 64 Fed. Reg. at 68,800. We are not persuaded.

**[32]** The RFA requires a federal agency to prepare a regulatory flexibility analysis and an assessment of the economic impact of a proposed rule on small business entities, 5 U.S.C. § 604, unless the agency certifies that the proposed rule will not have a "significant economic impact on a substantial number of small entities" and provides a factual basis for that certification, *id.* at § 605; *N.W. Mining Ass'n v. Babbitt,* 5 F.Supp.2d 9, 15–16 (D.D.C.1998).

EPA did certify that the Phase II Rule would not yield "significant impacts," 64 Fed. Reg. at 68,800, but Petitioners contend this certification is erroneous because (1) EPA treats as "not significant" costs that are in fact significant, and (2) EPA failed to account for the entire universe of small entities affected (including small home construction contractors) and all significant costs to those entities. They urge that the failure to consider a significant segment of the affected small entity community requires invalidation of the Rule, citing *North Carolina Fisheries Ass'n v. Daley,* 27 F.Supp.2d 650, 659 (E.D.Va.1998) (certification failed to comply with RFA where agency ignored several categories of affected small entities), and *Northwest Mining,* 5 F.Supp.2d at 15 (RFA was violated where improper definition of small entity excluded analysis of affected entities).

EPA maintains that its certification was appropriate, and, moreover, that it has already voluntarily followed the additional RFA procedures that the Industry Petitioners now request. EPA argues that Petitioners have incorrectly specified the costs that the small entities they represent will bear, referring erroneously to EPA's total annual compliance costs estimates for all entities, rather than to costs estimated for small entities as defined under the RFA. EPA maintains that it did consider economic impacts on small home construction contractors who might be denied discharge permits, and that it evaluated the annual costs of Phase II compliance associated with any land disturbance between one and five acres. 64 Fed. Reg. at 68,800–01.

Respondent-intervenor NRDC contends that Petitioners' reliance on measures of the aggregate impact of the Rule on small entities to determine compliance with the threshold test under the RFA fails as a matter of law because aggregate measures are not consistent with the statutory language setting out that test. NRDC notes that the plain language of § 605(b) sets out a three-component test indicating that EPA need not perform a regulatory flexibility analysis if it finds that the proposed ***879** rule will not have: (1) "a significant economic impact" on (2) "a substantial number" of (3) "small entities." 5 U.S.C. § 605(b). NRDC contends that EPA satisfied the statutory test, and that Petitioners' interpretation, which rewrites the test to omit the "substantial number" component, is erroneous.

**[33]** We believe NRDC correctly interprets the statute, *Marsh,* 490 U.S. at 378, 109 S.Ct. 1851, and that EPA reasonably certified that the Phase II Rule would not have a significant economic impact in compliance with the Regulatory Flexibility Act. We also conclude that, even if EPA had failed to properly comply with the procedural requirements of the RFA, its actual assessment of the Rule's economic impacts renders any defective compliance harmless error. In granting relief under RFA § 611, a court may order an agency "to take corrective action consistent with" the RFA

and APA, including remand to the agency, 5 U.S.C. § 611(a)(4)(A), but EPA has already conducted the economic analyses Petitioners seek when it convened the "Small Business Advocacy Review Panel" before publishing notice of the proposed rule. 64 Fed. Reg. at 68,801. That Panel evaluated the Rule and considered the comments of small entities on a number of issues, consistent with the procedures described in RFA § 603. *Id.* Appendix 5 of EPA's preamble to the proposed rule explained provisions that had been designed to minimize impacts on small entities, based on advice and recommendations from the Panel. 63 Fed. Reg. 1615, 64 Fed. Reg. 68,811. Modifications for small entities included alternative compliance and reporting mechanisms responsive to the resources of small entities, simplified procedures, performance rather than design standards, and waivers.

Any hypothetical noncompliance would thus have been harmless, since the available remedy would simply require performance of the economic assessments that EPA actually made. Like the Notice and Comment process required in administrative rulemaking by the APA, the analyses required by RFA are essentially procedural hurdles; after considering the relevant impacts and alternatives, an administrative agency remains free to regulate as it sees fit. We affirm the Rule against this challenge. [66]

**III.CONCLUSION**

We conclude that the EPA's failure to require review of NOIs, which are the functional equivalents of permits under the Phase II General Permit option, and its failure to make NOIs available to the public or subject to public hearings contravene the express requirements of the Clean Water Act. We therefore remand these aspects of the Small MS4 General Permit option so that EPA may take appropriate action to comply with the Clean Water Act. We also remand so that EPA may consider in an appropriate proceeding the Environmental Petitioners' contention that § 402(p)(6) requires EPA to regulate forest roads. We affirm all other aspects of the Phase II Rule against the statutory, administrative, and constitutional challenges raised in this action.

***880** Petitions for Review GRANTED IN PART and DENIED IN PART.

TALLMAN, Circuit Judge, concurring in part and dissenting in part:

I concur in most of the majority's opinion, but I dissent from Section II.B, which remands the Phase II Rule because its system of general permits is "arbitrary and capricious." I believe EPA's design of a system of general permits supported by notices of intent was a reasonable exercise of EPA's administrative discretion. We must give deference to EPA's interpretation of the laws it is charged with enforcing, so long as EPA's reading of those laws is permissible. Because EPA acted reasonably in designing a National Pollutant Discharge Elimination System ("NPDES") based on general permits and supported by NOIs, I respectfully dissent from the court's decision to remand this portion of the Phase II Rule.

**I**

As the majority concedes, we evaluate EPA's interpretation of the Clean Water Act with deference. Majority Op. 13796. If Congress's intent is unclear as to whether a system of general permits supplemented by NOIs is allowed, we simply ask "whether EPA's interpretation is permissible." *Ober v. Whitman,* 243 F.3d 1190, 1193 (9th Cir.2001).

**II**

As an initial matter, then, we must ask if Congress was clear in its intent concerning the propriety of a system of general permits augmented by NOIs.

Five legislative commands guide this inquiry. First, 33 U.S.C. § 1342(p)(6) charges EPA with creating a system to regulate stormwater discharges. Plainly, nothing in this section speaks to whether EPA may utilize a general permit approach in regulating stormwater discharge.

Second, 33 U.S.C. § 1311(a) makes it illegal to discharge pollutants "except as in compliance" with several sections of the Clean Water Act. Again, nothing in this section addresses whether EPA may make use of general permits reinforced by NOIs.

Third, 33 U.S.C. § 1342 in general (as opposed to the limited charge in section 1342(p)(6) discussed above) authorizes EPA to issue NPDES permits, provided that the permits satisfy several conditions. But nothing in section 1342 prohibits the use of a system of general permits.

Fourth, the Clean Water Act mandates that "a copy of each permit application and each permit issued under" the NPDES

permitting program be made available to the public for inspection and photocopying. 33 U.S.C. § 1342(j). The Act does not elaborate on this naked requirement. There is no explanation of the manner in which NPDES permits and applications are to be made publicly available. Nor does the Act define what constitutes a "permit" that would trigger these requirements.

And fifth, the Clean Water Act authorizes the issuance of an NPDES "permit" "after opportunity for public hearing." 33 U.S.C. § 1342(a)(1). The Act does not provide a definition of "permit," nor does it further detail what triggers the requirement of a public hearing.

In short, the Clean Water Act fails to address the propriety of a general permit system, or whether NOIs ought to be considered "permits." Therefore, we should uphold EPA's creation of a system of general permits buttressed by NOIs so long as it is "permissible." *See* ***881** *Chevron, U.S.A., Inc. v. Natural Resources Defense Council,* 467 U.S. 837, 843–44, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984). Our duty to defer to EPA in such a situation is based on sound policy. Given the overwhelming challenge and complexity of the programs administered by federal agencies today, it is sensible to trust agencies with the design of those programs so long as the programs are reasonable interpretations of congressional mandates.

The central issues regarding EPA's general permit system are whether the Clean Water Act allows such a system and whether NOIs should be considered "permits." The resolution of these issues requires a complicated weighing of policies (e.g., administrative streamlining vs. robust inquiry) that is precisely what agencies are designed to do and courts are without the resources or expertise to do. "[I]f the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency's answer is based on a permissible construction." *Chevron,* 467 U.S. at 843, 104 S.Ct. 2778.

**III**

The Phase II Rule promulgates a system of general permits. EPA contemplated that these general permits will be issued on a watershed basis, with individual stormwater dischargers then filing NOIs to operate under general permits. The federal regulations implementing this system repeatedly emphasize that "[t]he use of general permits, instead of individual permits, reduces the administrative burden of permitting authorities, while also limiting the paperwork burden on regulated parties." 64 Fed. Reg. 68,722, 68,737, 68,762 (Dec. 8, 1999).

The use of a general permit system for the administration of the NPDES system has been considered and approved before. In *NRDC v. Costle,* 568 F.2d 1369 (D.C.Cir.1977), the District of Columbia Circuit considered a challenge to EPA's regulations under the Federal Water Pollution Control Act, which was the precursor to the Clean Water Act. In *Costle,* EPA sought approval of its design for the NPDES system. EPA had issued regulations exempting broad categories of point sources from the requirement that an NPDES permit be obtained before discharging into federal waters. Part of EPA's rationale in creating the exempted categories was that otherwise EPA would be overwhelmed by the administrative burden of issuing NPDES permits. *Id.* at 1377–79. The *Costle* court affirmed the lower court's rejection of these exemptions because the legislation in question plainly required that all point sources obtain some kind of NPDES permit. *Id.* But in rejecting EPA's regulations, the *Costle* court discussed the options available to EPA in promulgating an NPDES system that was considerate of the enormous burden such a system could impose on EPA. *Id.* at 1380–81. In particular, the court recommended "the use of area or general permits. *The Act allows such techniques.* Area-wide regulation is one well-established means of coping with administrative exigency." *Id.* at 1381 (emphasis added).

Against this backdrop, EPA's creation of a general permit system was entirely permissible. And if the creation of a general permit system is permissible, then it does not matter whether NOIs are given a public airing.

The majority contends that the general permit system prevents EPA from fulfilling its duty to make sure that municipalities do not discharge pollutants in violation of the Clean Water Act. The majority reasons that by failing to require EPA review of NOIs, the Rule fails to ensure that a regulated MS4's stormwater pollution control program will satisfy the Clean Water Act requirement that the MS4 "reduce ***882** discharges to the maximum extent practicable." Majority Op. 855. But the majority's analysis ignores the effects of the general permit. By filing an NOI, a discharger obligates itself to comply with the limitations and controls imposed by the general permit under which it intends to operate. EPA mandates that all permits (including general permits) condition their issuance on satisfaction of pollution limitations imposed by the Clean Water Act. 40 C.F.R. §

122.44. In particular, EPA requires permits to satisfy the restrictions imposed by Clean Water Act section 307(a). *Id.* at § 122.44(b)(1). Therefore, the *general permit* imposes the obligations with which the discharger must comply (including applicable Clean Water Act standards), and EPA's decision not to review every NOI is not a failure to insure compliance with the Clean Water Act.

The majority also objects to EPA's general permit system because it fails to allow for sufficient public participation in the NOIs. Majority Op. 856–858. The majority's position fails to give deference to EPA and imposes the majority's own wishes instead. EPA would have been justified in creating a system entirely reliant on general or area permits. Its imposition of NOIs is an indulgence to certain policy prerogatives, namely public involvement and the collection of additional information. But the power to create a general permit system necessarily implies the power to require subordinate steps for NOIs that do not quite reach the level of inquiry associated with actual permits.

## IV

We function as an adjudicator of disputes, not as a policy-making body. Where an agency promulgates rules after a deliberative process, it is incumbent upon us to respect the agency's decisions or else risk trivializing the function of that agency. In this case, EPA made a permissible decision to create a general permit program supported by NOIs. Therefore, I respectfully dissent from Section II.B of the majority's opinion.

### All Citations

344 F.3d 832, 57 ERC 1039, 33 Envtl. L. Rep. 20,269, 03 Cal. Daily Op. Serv. 8398, 2003 Daily Journal D.A.R. 10,479

Footnotes

1 The “Phase II Rule” reviewed here is the product of the second stage of EPA's two-phase stormwater rulemaking effort. The “Phase I Rule,” governing larger-scale stormwater discharges, was issued in 1990 and reviewed by this court in *Natural Res. Def. Council v. EPA,* 966 F.2d 1292 (9th Cir.1992).

2 Richard G. Cohn–Lee and Diane M. Cameron, *Urban Stormwater Runoff Contamination of the Chesapeake Bay: Sources and Mitigation,* THE ENVIRONMENTAL PROFESSIONAL, Vol. 14, p. 10, at 10 (1992); *see also Natural Res. Def. Council,* 966 F.2d at 1295 (citing a study by the Nationwide Urban Runoff Program).

3 Regulation for Revision of the Water Pollution Control Program Addressing Storm Water, 64 Fed. Reg. 68,722, 68,724, 68,727 (Dec. 8, 1999) (codified at 40 C.F.R. pts. 9, 122, 123, and 124).

4 *Id.* at 68,726.

5 *Id.*

6 *Id.* at 68,725–31.

7 A point source is “any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.” 33 U.S.C. § 1362(14).

8 Diffuse runoff, such as rainwater that is not channeled through a point source, is considered nonpoint source pollution and is not subject to federal regulation. *Oregon Natural Desert Ass'n v. Dombeck,* 172 F.3d 1092, 1095 (9th Cir.1998).

9 National Pollutant Discharge Elimination System Permit Application Regulations for Stormwater Discharges, 55 Fed. Reg. 47,990 (Nov. 16, 1990) (codified at 40 C.F.R. pt. 122–124). The Phase I rule was challenged in this court in *Natural Res. Def. Council,* 966 F.2d at 1292. We held, *inter alia,* that EPA must impose deadlines for permit approvals, *id.* at 1300, that EPA's decision to regulate construction sites only over five acres in size was arbitrary and capricious, *id.* at 1306, and that EPA did not act capriciously in defining “municipal,” *id.* at 1304, or in placing differently-sized municipalities on different permitting schedules, *id.* at 1301.

10 Proposed Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges, 63 Fed. Reg. 1536 (proposed Jan. 9, 1998).

11 Pub. L. No. 106–74, § 431(a), 113 Stat. 1047, 1096 (1999) ( “Appropriations, 2000—Department of Veterans Affairs and Housing and Urban Development, and Independent Agencies”).

12 Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges, 64 Fed. Reg. 68,722 (Dec. 8, 1999) (codified at 40 C.F.R. pts. 9, 122, 123, and 124).

13 The Rule also allows a small MS4 to be regulated under an individual NPDES permit covering a nearby large or medium MS4, with provisions adapted to address the small MS4. 40 C.F.R. § 122.33(b)(3).

  

14 The text of that section reads: "Not later than October 1, 1993, [EPA], in consultation with state and local officials, shall issue regulations (based on the results of the studies conducted under paragraph (5)) which designate stormwater discharges, other than those discharges described in paragraph (2), to be regulated to protect water quality and shall establish a comprehensive program to regulate such designated sources. The program shall, at a minimum, (A) establish priorities, (B) establish requirements for State stormwater management programs, and (C) establish expeditious deadlines. The program may include performance standards, guidelines, guidance, and management practices and treatment requirements, as appropriate." 33 U.S.C. § 1342(p)(6).

15 The lesser category of "permits" may also be implied by the inclusion of "performance standards" in the list of possible program features.

16 "Where Congress includes particular language in one section of a statute but omits it in another section of the same Act, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion." *Bates v. United States,* 522 U.S. 23, 29–30, 118 S.Ct. 285, 139 L.Ed.2d 215 (1997).

17 The Phase II Rule also allows a small MS4 to be regulated under an NPDES permit covering a nearby large or medium-sized MS4, with provisions adapted to address the small MS4. 40 C.F.R. § 122.33(b)(3).

18 The Municipal Petitioners argue that the Minimum Measures exceed EPA's statutory authority under § 402(p) of the Clean Water Act. We disagree. The list of elements for a regulatory program that appears in § 402(p)(6) is nonexclusive, and EPA's adoption of the Minimum Measures represents a permissible interpretation of its authority under § 402(p)(6). *See Chevron,* 467 U.S. at 843–44, 104 S.Ct. 2778.

The Municipal Petitioners argue that EPA is not entitled to *Chevron* deference, and that the Minimum Measures must be rejected absent a clear statement of congressional intent that EPA enact the Minimum Measures. The Municipal Petitioners argue that this clear statement requirement arises because there are "significant constitutional questions" about the permissibility of the Minimum Measures under the Tenth Amendment, and because the Minimum Measures alter "the federal-state framework by permitting federal encroachment upon a traditional state power." *Solid Waste Agency of N. Cook County v. Army Corps of Eng'rs,* 531 U.S. 159, 173, 121 S.Ct. 675, 148 L.Ed.2d 576 (2001).

As we explain, because the Phase II Rule includes at least one alternative to the Minimum Measures, *i.e.*, the option of seeking a permit under 40 C.F.R. § 122.26(d), the Minimum Measures do not present significant Tenth Amendment problems demanding a clear statement of congressional intent. Nor does the Phase II Rule alter the federal-state balance. To the contrary, the option of seeking a permit under 40 C.F.R. § 122.26(d) maintains precisely the same federal-state balance as existed prior to the Phase II Rule. *See, e.g., Natural Res. Def. Council v. EPA,* 966 F.2d 1292 (9th Cir.1992) (reviewing Phase I Rule); *Natural Res. Def. Council v. Costle,* 568 F.2d 1369, 1379 (D.C.Cir.1977) (denying EPA authority to exempt MS4s from regulation under the Clean Water Act). Furthermore, even if a clear statement of congressional intent were necessary, § 402(p) of the Clean Water Act is replete with clear statements that Congress intended EPA to require MS4s either to obtain NPDES permits or to stop discharging stormwater.

19 This subsection provides that permit seekers must, "[t]o the extent allowable under State, Tribal, or local law, effectively prohibit, through ordinance or other regulatory mechanism, non-stormwater discharges into your storm sewer systems and implement appropriate enforcement procedures and actions...." 40 C.F.R. § 122.34(b)(3)(ii)(B).

20 This subsection provides that permit seekers "must develop, implement, and enforce a program to reduce pollutants in any storm water runoff to your small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre.... [The] program must include the development and implementation of, at a minimum: (A) An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State, Tribal, or local law; (B) Requirements for construction site operators to implement appropriate erosion and sediment control best management practices; (C) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality; (D) Procedures for site plan review which incorporate consideration of potential water quality impacts; (E) Procedures for receipt and consideration of information submitted by the public, and (F) Procedures for site inspection and enforcement control measures." 40 C.F.R. §§ 122.34(b)(4)(i)-(ii).

21 This subsection provides that permit seekers must "[u]se an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects [disturbing one acre or more] to the extent allowable under State, Tribal or local law." 40 C.F.R. §§ 122.34(b)(5)(ii)(B).

22 EPA and NRDC also argue that the Minimum Measures are facially constitutional, and that the Phase II Rule presents no Tenth Amendment difficulties because operators of small MS4s may avoid stormwater regulation entirely by electing not to discharge stormwater into federal waters in the first place. In light of our holding with regard to the Alternative Permit option, we do not consider these arguments.

  

23 We decline to address two further arguments raised by EPA: first, that municipalities do not receive full First Amendment protections, under *Muir v. Alabama Educational Television Commission,* 688 F.2d 1033, 1038 n. 12 (5th Cir.1982) (*en banc*) ("Government expression, being unprotected by the First Amendment, may be subject to legislative limitation which would be impermissible if sought to be applied to private expression ...."), and *Aldrich v. Knab,* 858 F.Supp. 1480, 1491 (W.D.Wash.1994) (holding that "unlike private broadcasters, the state itself does not enjoy First Amendment rights"), and second, that even if the First Amendment were fully applicable, the Phase II regulations would satisfy them because MS4s may avoid the compulsion to speak by seeking a permit under the Alternative option, 40 C.F.R. § 122.26(d)(2)(iv), rather than under the Minimum Measures.

24 As a subsidiary matter, we note that it also falls short of compelling the MS4 to "regulate" third parties in contravention of the Tenth Amendment. Dispensing information to facilitate public awareness about safe disposal of toxic materials constitutes "encouragement," not regulation.

25 "When the constitutional validity of a statute or regulation is called into question, it is a cardinal rule that courts must first determine whether a construction is possible by which the constitutional problem may be avoided." *Meinhold,* 34 F.3d at 1476.

26 In its most recent treatment of compelled speech, the Supreme Court held that a generic advertising campaign violated free speech where the message was specific and antagonistic to the preferred advertising message of the plaintiff, and the regulation compelling participation was not part of a broader regulatory apparatus already constraining the plaintiff's autonomy in the relevant arena. *United States Dep't. of Agriculture v. United Foods,* 533 U.S. 405, 410–17, 121 S.Ct. 2334, 150 L.Ed.2d 438 (2001). The court distinguished this advertising program from the one in *Glickman* on the latter point: "[t]he program sustained in *Glickman* differs from the one under review in a most fundamental respect. In *Glickman* the mandated assessments for speech were ancillary to a more comprehensive program restricting market autonomy." *Id.* at 411, 121 S.Ct. 2334. Although the Phase II Rule is not an advertising or marketing regulation, it constitutes a "comprehensive program" restricting the autonomy of MS4s in the relevant arena of controlling toxic discharges to storm sewers that drain to U.S. waters.

27 In deciding the similar question of whether a regulation impermissibly compelled speech by requiring manufacturers of mercury-containing products to inform consumers how to dispose safely of the toxic material, the Second Circuit held that "mandated disclosure of accurate, factual, commercial information does not offend the core First Amendment values of promoting efficient exchange of information or protecting individual liberty interests." *Nat'l Elec. Mfrs. Ass'n v. Sorrell,* 272 F.3d 104, 114 (2d Cir.2001). What speech may follow from the Phase II directive will not be "commercial" in the same sense that manufacturer labeling is, but it will be similar in substance to *Sorrell* to the extent that it informs the public how to dispose safely of toxins. We think the policy considerations underlying the commercial speech treatment of labeling requirements, *see, e.g.,* the Federal Cigarette Labeling and Advertising Act, 15 U.S.C. §§ 1333–39, apply similarly in the context of the market-participant municipal storm sewer provider.

28 The Alternative option contains a public education requirement that is similar but even less specific, and therefore even less burdensome, than the requirements in the Minimum Measures. *See* § 122.26(d)(2)(iv)(B)(6) (requiring permit seekers to propose programs to counter illicit discharges, including a "description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials").

29 Municipal Petitioners concede that "simplified individual permit application requirements" were discussed, but they contend that the permit requirements discussed are not sufficiently similar to those promulgated to establish a logical outgrowth.

30 EPA argues that the Environmental Petitioner's challenge is not ripe for review because "the question of whether some general permit somewhere might fail to assure that pollutants are reduced to the maximum extent practicable is not ripe for review." But we are not addressing the merits of any specific permit. Rather, the question before us "is purely one of statutory interpretation that would not benefit from further factual development of the issues presented." *Whitman v. American Trucking,* 531 U.S. 457, 479, 121 S.Ct. 903, 149 L.Ed.2d 1 (2001). Specifically, we are addressing whether EPA, in promulgating the Phase II Rule, has accomplished the substantive controls for municipal stormwater that Congress mandated in § 402(p) of the Clean Water Act. As we held in *Natural Resources Defense Council v. EPA,* 966 F.2d at 1296–97, 1308, this question is ripe for review.

31 Petitioners suggest that EPA should be held to the standard it espoused to procure judicial approval for the Phase I program. In 1991, responding to NRDC's assertion that the Phase I Rule failed to set "hard criteria" for review of MS4 stormwater programs, EPA responded that "inadequate proposals will result in the denial of permit applications." Respondent's Brief at 67, *Natural Res. Def. Council v. EPA,* 966 F.2d 1292 (9th Cir.1992) (Nos. 91–70200, 91–70176,

& 90–70671). Petitioners contend that this court relied on that representation in ruling for EPA on that issue. *Natural Res. Def. Council v. EPA,* 966 F.2d at 1308 n. 17 ("Individual NPDES permit writers ... will decide whether application proposals are adequate....").

32 That the Rule allows a permitting authority to review an NOI is not enough; every permit must comply with the standards articulated by the Clean Water Act, and unless every NOI issued under a general permit is reviewed, there is no way to ensure that such compliance has been achieved.

The regulations do require NPDES permitting authorities to provide operators of small MS4s with "menus" of management practices to assist in implementing their Minimum Measures, *see* 40 C.F.R. § 123.35(g), but again, nothing requires that the combination of items that the operator of a small MS4 selects from this "menu" will have the combined effect of reducing discharges to the maximum extent practicable.

Nor is the availability of citizen enforcement actions a substitute for EPA's enforcement responsibility, especially because, as discussed below, the Rule does not require that NOIs be publicly available. Absent review on the front end of permitting, the general permitting regulatory program loses meaning even as a procedural exercise.

33 EPA identifies no other general permitting program that leaves the choice of substantive pollution control requirements to the regulated entity, and we are not persuaded by the analogy it urges to the traditional model of general permitting (where NOIs routinely are not reviewed), because, as we have noted, the Phase II general permit model is substantially dissimilar.

34 In its petition for rehearing, EPA argues for the first time that because the regulations require NPDES Permitting Authorities to include in general permits "any additional measures necessary" to ensure that the maximum extent practicable standard is met, 40 C.F.R. §§ 123.35(h)(1), 123.35(f) (incorporating by reference the "maximum extent practicable" requirement of 40 C.F.R. §§ 122.34(a)), 122.34(f) (requiring small MS4s to comply with additional measures), the Phase II Rule ensures that discharges will be reduced to the maximum extent practicable.

The trouble with EPA's reasoning is that the Phase II Rule defines the "maximum extent practicable" standard in such a way that no "additional measures" will ever be necessary under § 123.35(h)(1). While a Permitting Authority may impose additional measures, nothing compels it to do so because, merely by implementing the best management practices that the operator of a small MS4 has chosen for itself, that small MS4 will already have met the "maximum extent practicable" standard. *See* 40 C.F.R. § 122.34(a).

35 EPA argues for the first time in its petition for rehearing that NOIs will be publicly available under 40 C.F.R. § 122.34(g)(2). Addressing operators of regulated small MS4s, this section provides: "You must make your records, including a description of your storm water management program, available to the public at reasonable times during regular business hours." While this section does seem to provide for the public availability of a small MS4's records, we are troubled that nothing in EPA's initial briefs indicated that EPA considered NOIs to be subject to this section. We normally defer to an agency's interpretations of its own regulations, but we may decline to defer to the *post hoc* rationalizations of appellate counsel. *See, e.g., Martin v. Occupational Safety and Health Review Commission,* 499 U.S. 144, 150, 156, 111 S.Ct. 1171, 113 L.Ed.2d 117 (1991). If EPA intends this section to provide for the public availability of NOIs—for example because it intends NOIs to be among the records subject to this section—it may clarify on remand.

36 Agency determinations based on the record are reviewed under the "arbitrary and capricious" standard. 5 U.S.C. § 706(2)(A). The standard is narrow and the reviewing court may not substitute its judgment for that of the agency. *Marsh,* 490 U.S. at 378, 109 S.Ct. 1851. However, the agency must articulate a rational connection between the facts found and the conclusions made. *Washington v. Daley,* 173 F.3d 1158, 1169 (9th Cir.1999). The reviewing court must determine whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment. *Marsh,* 490 U.S. at 378, 109 S.Ct. 1851. The court may reverse under the "arbitrary and capricious" standard only if the agency:

> has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

*Motor Vehicle Mfrs. Ass'n,* 463 U.S. at 43, 103 S.Ct. 2856.

37 EPA explains that the Group A facilities were not regulated with the other Phase I sources because EPA used Standard Industrial Classification Index (SIC) codes in defining the universe of regulated industrial activities: "By relying on SIC codes, a classification system created to identify industries rather than environmental impacts from these industries [sic] discharges, some types of storm water discharges that might otherwise be considered 'industrial' were not included in the existing NPDES storm water program." 64 Fed. Reg. at 68,779.

  

38 As discussed in footnote 37, Group A facilities were not regulated with other Phase I industrial sources based on a government coding system used to distinguish different types of industry (without reference to their similar environmental impacts). *See* 64 Fed. Reg. at 68,779.

39 "In identifying potential categories of sources for designation in today's notice, EPA considered designation of discharges from Group A and Group B facilities. EPA applied three criteria to each potential category in both groups to determine the need for designation: (1) The likelihood for exposure of pollutant sources included in that category, (2) whether such sources were adequately addressed by other environmental programs, and (3) whether sufficient data were available at this time on which to make a determination of potential adverse water quality impacts for the category of sources. As discussed previously, EPA searched for applicable nationwide data on the water quality impacts of such categories of facilities...."

> "EPA's application of the first criterion showed that a number of Group A and B sources have a high likelihood of exposure of pollutants.... Application of the second criterion showed that some categories were likely to be adequately addressed by other programs."

"After application of the third criterion, availability of nationwide data on the various storm water discharge categories, EPA concluded that available data would not support any such nationwide designations. While such data could exist on a regional or local basis, EPA believes that permitting authorities should have flexibility to regulate only those categories of sources contributing to localized water quality impairments.... If sufficient regional or nationwide data become available in the future, the permitting authority could at that time designate a category of sources or individual sources on a case-by-case basis." 64 Fed. Reg. at 68,780.

40 *Guidance Specifying Management Measures For Sources of Nonpoint Pollution in Coastal Waters,* EPA guidance paper 840–B–93–001c (Jan. 1993), *available at* http:// www.epa.gov/owow/nps/mmgi/index.html (last visited Sept. 18, 2002) ("Coastal Waters").

41 The provision provides in full as follows:

> Silvicultural point source means any discernible, confined and discrete conveyance related to rock crushing, gravel washing, log sorting, or log storage facilities which are operated in connection with silvicultural activities and from which pollutants are discharged into waters of the United States. The term does not include non-point source silvicultural activities such as nursery operations, site preparation, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, or road construction and maintenance from which there is natural runoff. However, some of these activities (such as stream crossing for roads) may involve point source discharges of dredged or fill material which may require a CWA section 404 permit (See 33 CFR 209.120 and part 233).

40 C.F.R. § 122.27(b)(1).

42 Nonpoint Source Pollution: The Nation's Largest Water Quality Problem, EPA841–F–96–004A ("Pointer # 1") ("The latest *National Water Quality Inventory* indicates that agriculture is the leading contributor to water quality impairments, degrading 60 percent of the impaired river miles and half of the impaired lake acreage surveyed by states, territories, and tribes.").

43 The Municipal Petitioners join in asserting the "regulatory basis" claim at Part II(F)(1).

44 NRDC argues that this claim is not only meritless for the reasons stated by EPA, but also frivolous, since industry petitioner National Association of Home Builders, as a member of the FACA Phase II Subcommittee, participated in and affirmed that such consultation took place.

45 *See Natural Res. Def. Council,* 966 F.2d at 1306 (remanding EPA's decision to regulate only construction sites disturbing more than five acres, after EPA had initially proposed to regulate all sites disturbing more than one acre).

46 The Industry Petitioners contend that EPA lacked authority to issue the Phase II regulation of construction sites based on a process EPA itself characterized as "separate and distinct" from the development of the Report to Congress. 64 Fed. Reg. at 68,732. They add that the Phase II Rule was not "based on" the 1999 Report ultimately requested by Congress in the Appropriations Act, since EPA's report in response was released on the very day that the final Phase II Rule was published.

47 Since we have already determined that AF & PA lacks standing to raise any of its claims, *see* Section D above, this discussion pertains to the remaining Industry Petitioner, National Association of Home Builders.

  

48 Although the issue of Municipal Petitioners' standing has not been raised by the parties, we are obliged to consider it to determine whether the case-or-controversy requirement of Article III is satisfied. *See, e.g., Boeing Co. v. Van Gemert,* 444 U.S. 472, 488 n. 4, 100 S.Ct. 745, 62 L.Ed.2d 676 (1980); *Juidice v. Vail,* 430 U.S. 327, 331, 97 S.Ct. 1211, 51 L.Ed.2d 376 (1977).

49 Even if the statute *were* ambiguous, we would defer to EPA's reasonable interpretation. *Chevron,* 467 U.S. at 843–44, 104 S.Ct. 2778.

50 The Industrial Petitioners argue that although the Phase I authorizing statute required EPA to regulate all sources associated with "industrial activity," Congress expressly directed that the Phase II regulatory program be focused on sources that require regulation "to protect water quality." They assert that because EPA's rule ignores the variability of water quality impacts nationwide, the Rule is not appropriately targeted on the protection of water quality.

51 Petitioners heavily critique two studies relied on by EPA that dealt specifically with the water quality impacts of small construction sites, noting that one concludes it is impossible to generalize about the impacts of small sites, Lee H. MacDonald, *Technical Justification for Regulating Construction Sites 1–5 Acres in Size,* July 22, 1997, and that the other merely concludes that small sites "can have" significant effects if erosion controls are not implemented, David W. Owens, et al., *Soil Erosion from Small Construction Sites.* Petitioners contend that the latter study was managed with no erosion controls, intentionally producing worst-case sediment runoff and unreasonable estimates of actual sediment yields for small sites nationwide. EPA vigorously defends the studies.

52 NRDC adds that notwithstanding the clear interest of the National Association of Home Builders ("NAHB," one of the Industry Petitioners), NAHB's multi-year participation in the FACA Phase II Subcommittee Small Construction and No–Exposure Sites Work Group, and NAHB's own submission of detailed comments on the proposed Rule, NAHB failed to enter into the administrative record any study contradicting the proposition that small construction sites cause water quality problems. NRDC points to the record's showing that NAHB had itself proposed that regulation of construction sites of two acres or greater was appropriate, and contends that this is thus not a dispute over whether small construction sites should be regulated on a nationwide basis, but instead a technical disagreement over whether EPA should establish a one-acre threshold or a different threshold on a similar small scale.

53 Whitney Brown and Deborah Caraco, *Controlling Stormwater Runoff Discharges from Small Construction Sites: A National Review,* Task 5 Final Report submitted by the Center for Watershed Protection to the EPA Office of Wastewater Management, March 1997, IP E.R. 633, 643.

54 EPA adds that operators of small sites in areas unlikely to suffer adverse impacts may apply for a permit waiver if little or no rainfall is expected during the period of construction (the "rainfall erosivity waiver") or if regulation is unnecessary based on a location-specific evaluation of water quality (the "water quality waiver"). 64 Fed. Reg. at 68,776.

55 EPA also implies permission to regulate for potential cumulative impacts of small sites from the past directive of this court. When the Phase I industrial discharge regulations were challenged, we found no record data to support that rule's exemption of construction activities on less than five acres and held that small sites did not categorically qualify for a *de minimis* exemption because "even small construction sites can have a significant impact on local water quality." *Natural Res. Def. Council,* 966 F.2d at 1306.

56 The "substantial evidence" standard requires a showing of such relevant evidence as a reasonable mind might accept as adequate to support a conclusion. *Edlund v. Massanari,* 253 F.3d 1152, 1156 (9th Cir.2001).

57 EPA further argues that even if the waiver provision were properly characterized as an evidentiary presumption, it should be sustained because the record demonstrates that the presumed fact of the water quality impact of small sites is more likely true than not.

58 EPA notes that the Phase II Rule empowers regional permitting authorities to regulate local sources of these types known to be responsible for harmful water quality impacts via the continuing "residual designation" authority (an aspect of the Rule that Petitioners also challenge).

59 TMDLs are pollutant loading limits established by NPDES permitting authorities under the Clean Water Act for waters that do not meet a water quality standard due to the presence of a pollutant. *See* 33 U.S.C. § 1313(d).

60 This section enables a NPDES permitting authority to designate for regulation: "[a] discharge for which the Administrator or the State, as the case may be, determines that the stormwater discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States." 33 U.S.C. § 1342(p)(2)(E).

61 Notably, Industry Petitioner NAHB itself took the position during Phase II Subcommittee proceedings that the power to designate additional sources survived the promulgation of the Phase II Rule. In a 1996 comment letter to EPA, NAHB asserted its understanding that "[t]he permitting authority still reserves the right to designate additional sources if they are shown to be a contributor of water quality impairment." NRDC Supplemental Excerpts of Record at 58.

62 The full text of § 402(p)(6), which specifically authorizes the Phase II program, reads: "Not later than October 1, 1993, the Administrator, in consultation with State and local officials, shall issue regulations (based on the results of the studies conducted under paragraph (5)) which designate stormwater discharges, other than those discharges described in paragraph (2), to be regulated to protect water quality and shall establish a comprehensive program to regulate such designated sources. The program shall, at a minimum, (A) establish priorities, (B) establish requirements for State stormwater management programs, and (C) establish expeditious deadlines. The program may include performance standards, guidelines, guidance, and management practices and treatment requirements, as appropriate." 33 U.S.C. § 1342(p)(6).

63 Petitioners further argue that even if EPA could preserve the case-by-case authority conferred in § 402(p)(2)(E), that section confers authority only to regulate "a discharge" determined to threaten water quality, not a category of discharges. However, we agree with respondent-intervenor NRDC's argument that § 402(p)(2)(E) does not preclude EPA from designating entire categories of sources. Petitioners' argument follows from its reliance on the fact that § 402(p)(2)(E) refers to "discharge" in the singular rather than the plural to conclude that EPA may only designate sources meeting the § 402(p)(2)(E) description on a case-by-case basis. But all five of the § 402(p)(2)(5) categories refer to "discharge" in the singular, even in reference to discharges clearly intended for categorical regulation, like "a discharge from a municipal separate storm sewer system serving a population of 250,000 or more." 33 U.S.C. § 1342(p)(2)(C). The error in petitioners' interpretation is exposed by 1 U.S.C. § 1, which provides that "[i]n determining the meaning of any Act of Congress, unless the context indicates otherwise—words importing the singular include and apply to several persons, parties, or things."

64 This case was reversed in relevant part by the Supreme Court in *Whitman v. Am. Trucking Ass'ns,* 531 U.S. 457, 476, 121 S.Ct. 903, 149 L.Ed.2d 1 (2001).

65 "[T]oday's proposal would encourage [voluntary] control of stormwater discharges ... unless the discharge (or category of discharges) is individually or locally designated as described in the following section. The necessary data to support designation could be available on a local, regional, or watershed basis and would allow the NPDES permitting authority to designate a category of sources or individual sources on a case-by-case basis. If sufficient nationwide data [becomes] available in the future, EPA could at that time designate additional categories of industrial or commercial sources on a national basis. EPA requests comment on the three-pronged analysis used to assess the need to designate additional industrial or commercial sources and invites suggestions regarding watershed-based designation." 63 Fed. Reg. at 1588.

66 Our consideration of the issue at all may be gratuitous, since petitioners failed to submit timely comment disputing the adequacy of EPA's consideration of economic impacts on small businesses proposed at 63 Fed. Reg. at 1605–07. *United States v. L.A. Tucker Truck Lines,* 344 U.S. 33, 37, 73 S.Ct. 67, 97 L.Ed. 54 (1952) ("[C]ourts should not topple over administrative decisions unless the administrative body not only has erred but has erred against objection made at the time appropriate under its practice.").

# ATTACHMENT D
# STATE CASES

24 Cal.4th 830, 14 P.3d 930, 102 Cal.Rptr.2d 719, 01 Cal. Daily Op. Serv. 209, 2001 Daily Journal D.A.R. 237

APARTMENT ASSOCIATION OF LOS ANGELES COUNTY, INC., et al., Plaintiffs and Appellants,
v.
CITY OF LOS ANGELES,
Defendant and Respondent.

No. S082645.
Supreme Court of California
Jan. 8, 2001.

## SUMMARY

A city council, seeking to establish and fund a program to remedy substandard housing conditions, adopted an ordinance that required the owners of all residential rental properties subject to inspection under the program to pay a fee. An apartment association and other groups with similar interests brought an action for declaratory and injunctive relief against the city, alleging that the fee ordinance was unconstitutional and therefore void as a charge upon real property under Prop. 218 (Cal. Const., art. XIII D). The trial court sustained the city's demurrer without leave to amend, finding that the fee was not subject to the constitutional requirements, and entered judgment for the city. (Superior Court of Los Angeles County, No. BC195216, Charles W. McCoy, Jr., Judge.) The Court of Appeal, Second Dist., Div. One, No. B130243, reversed.

The Supreme Court reversed the judgment of the Court of Appeal. The court held that this ordinance did not fall within the scope of Cal. Const., art. XIII D, which only restricts fees imposed directly on property owners in their capacity as such. The inspection fee was not imposed on landlords in their capacity as property owners, but rather in their capacity as business owners. This constitutional provision does not refer to fees imposed on an incident of property ownership, but rather to fees imposed on a parcel or a person as an incident of property ownership; this distinction was crucial to this case. According to its plain meaning, Cal. Const., art. XIII D applies only to exactions levied solely by virtue of property ownership. This inspection fee was imposed because the property was being rented; it ceased along with the business operation, whether or not ownership remained in the same hands. (Opinion by Mosk, J., with George, C. J., Kennard, Werdegar, and Chin, JJ., concurring. Dissenting opinion by Brown, J., with Baxter, J., concurring (see p. 845).) ***831**

## HEADNOTES

### Classified to California Digest of Official Reports

(1)
Appellate Review § 145--Scope of Review--Questions of Law and Fact-- Interpretation of Constitutional Provision.
The interpretation of a constitutional provision, passed by voter initiative, is a question of law for the appellate courts to decide on independent review of the facts.

(2a, 2b, 2c)
Property Taxes § 7.6--Real Property Tax Limitation--Proposition 218--Construction--In Context of Proposition 13.
Prop. 218, which added Cal. Const., art. XIII C and art. XIII D, can best be understood against its historical background, which began in 1978 with the adoption of Prop. 13, the purpose of which was to cut local property taxes. Prop. 218 buttressed the limitations in Prop. 13 on ad valorem property taxes and special taxes by placing analogous restrictions on assessments, fees, and charges. Prop. 218 must be construed in the context of Prop. 13. Prop. 218 focuses on exactions, whether they be called taxes, fees, or charges, that are directly associated with property ownership.

(3a, 3b, 3c, 3d, 3e)
Property Taxes § 7.6--Real Property Tax Limitation--Proposition 218:Municipalities § 54--Ordinances--Fee Imposed on Owners of Residential Rental Properties--Validity.
A city ordinance that required payment of a fee by the owners of all residential rental properties subject to inspection under a program designed to remedy substandard housing conditions did not fall within the scope of Prop. 218 (Cal. Const., art. XIII D), which only restricts fees imposed directly on property owners in their capacity as such. The inspection fee was not imposed on landlords in their capacity as property owners, but rather in their capacity as business owners. This constitutional provision does not refer to fees imposed on an incident of property ownership, but rather to fees imposed on a parcel or a person as an incident of property ownership. That distinction was crucial to this case. According to its plain meaning, Cal.

Const., art. XIII D applies only to exactions levied solely by virtue of property ownership. This inspection fee was imposed because the property was being rented; it ceased along with the business operation, whether or not ownership remained in the same hands.

[See 9 Witkin, Summary of Cal. Law (9th ed. 1989) Taxation, §§ 110A, 110B.] ***832**

(4)
Real Property § 4--Incidents of Ownership--Right of Alienation.
Ownership of property in fee simple absolute is the greatest possible estate. Among the panoply of lesser estates are such nonfreehold chattels real as leases for a specific term and periodic tenancies-in common parlance, rentals or leases of limited duration. Among the incidents of estates in land are the so-called bundle of rights that flow from such tenure. Among them is the fundamental right to alienate one's property held in fee simple. That incident, or right, has been called inseparable, indispensable, and necessary. The power to alienate property or a property right is not limited to the right to sell or assign it. It means generally the power to transfer or convey it to another. The conveyance need not be of the whole fee. The right of alienation applies when fee holders seek to convey lesser estates. The power or right of alienation incident to the ownership of an estate in fee simple includes the power or right to dispose of property held in fee by lease, mortgage, or other mode of conveyance.

(5)
Taxation § 3--Construction--Distinguished from Regulatory Fees.
Regulatory fees are those charged in connection with regulatory activities, which do not exceed the reasonable cost of providing services necessary to the activity for which the fee is charged, and which are not levied for unrelated revenue purposes.

(6)
Statutes § 27--Construction--Liberality:Constitutional Law § 11-- Construction--Liberality.
As a rule, a command that a constitutional provision or a statute be liberally construed does not license either enlargement or restriction of the evident meaning of the provision.

COUNSEL

California Apartment Law Information Foundation, Trevor Grimm and Craig Mordoh for Plaintiffs and Appellants.
Sharon L. Browne and Stephen R. McCutcheon, Jr., for Pacific Legal Foundation as Amicus Curiae on behalf of Plaintiffs and Appellants.
James K. Hahn, City Attorney, Pedro B. Echeverria, Chief Assistant City Attorney, Ronald Tuller, Assistant City Attorney, and Miguel A. Dager, Deputy City Attorney, for Defendant and Respondent.
Hart, King & Coldren, Robert S. Coldren and C. William Dahlin for Western Manufactured Housing Communities Association as Amicus Curiae on behalf of Defendant and Respondent. ***833**
Gibson, Dunn & Crutcher, James P. Clark, Joel M. Tantalo; Western Center on Law & Poverty, Richard Rothschild; Bet Tzedek Legal Services and Lauren Saunders for the Los Angeles Blue Ribbon Citizens' Committee on Slum Housing, Bet Tzedek Legal Services, the Inner City Law Center, Los Angeles Center for Law and Justice, Legal Aid Foundation of Los Angeles, Legal Services of Northern California, Los Angeles Housing Law Project, Public Counsel, San Fernando Valley Neighborhood Legal Services, Western Center on Law and Poverty, Esperanza Community Housing Corporation, Southern California Association of Non-Profit Housing, Southern California Mutual Housing Association, the Coalition for Economic Survival, Inquilinos Unidos, the St. Francis Center, the Fair Housing Congress of Southern California and SEIU Local 347 as Amici Curiae on behalf of Defendant and Respondent.
Richard Doyle, City Attorney (San Jose), George Rios, Assistant City Attorney, and Robert Fabela, Deputy City Attorney, for the City of San Jose, 89 Additional California Cities, the California State Association of Counties and the California Association of Sanitation Agencies as Amici Curiae on behalf of Defendant and Respondent.

**MOSK, J.**

We granted review to decide whether a city ordinance imposing an inspection fee on private landlords violates article XIII D of the California Constitution (article XIII D), added by initiative measure, Proposition 218, in 1996. We conclude that it does not.

In July 1998, the City of Los Angeles put into effect the Los Angeles Housing Code. It is codified as article 1 of chapter XVI of the Los Angeles Municipal Code (§ 161.101 et seq.). Later that month, plaintiffs sued the city for declaratory and injunctive relief, alleging that Los Angeles Municipal Code section 161.352, imposing an inspection fee on private

landlords, is unenforceable because it was enacted without complying with section 6 of article XIII D. The city demurred. The trial court sustained the demurrer without leave to amend, finding that the fee was not subject to the constitutional requirements. It entered judgment for the city.

In its statement of decision, the trial court recognized that the inspection fee "appears arguably to fall within the wide range of assessments which Proposition 218 was apparently written to encompass." But it added, "In *Pennell v. City of San Jose* (1986) 42 Cal.3d 365, 375 [ ***834** 228 Cal.Rptr. 726, 721 P.2d 1111], the California Supreme Court held that a fee charged to cover the costs of operating San Jose's rent control ordinances, and not used to raise general revenue, is not subject to Article XIII A of the California Constitution. The City's ordinance here fits squarely within both the reason and rule of *Pennell*. The ordinance levies only property used for residential apartment rentals, and the money is used only to pay for regulat[ing such] rentals to insure, among other things, that they do not degenerate into what is commonly called 'slum conditions.' The assessment is not imposed on all property owners-only a subset of owners who rent apartments."

The Court of Appeal reversed, holding that the state constitutional provision invalidated the city ordinance. The court wrote: "There is nothing in Proposition 218 that exempts regulatory fees imposed on residential rental properties. It thus adds nothing to say, as does the City, that the fees are not 'imposed upon property owners in general, but only those who voluntarily engage in the business of renting, generate the risks of slum housing, and specially benefit from regular inspections as they contribute to the overall reputability and safety of the housing provided.' Quite plainly, Proposition 218 applies to any 'fee' or 'charge,' both of which are defined to mean 'any levy other than an ad valorem tax, a special tax, or an assessment, imposed by an agency upon a parcel or upon a person as an incident of property ownership, including a user fee or charge for a property-related service.' (Art. XIII D, § 2, subd. (e) ....) However well intentioned the City's program to abolish slum housing may be, we find it impossible to say that a fee imposed upon the owners of rental units so the City can locate and eradicate substandard housing is anything other than a user fee or charge for a property-related service." (Italics and fn. omitted.)

**I.A.**

Section 161.102 of the Los Angeles Municipal Code states the reason for enacting the Los Angeles Housing Code: "It is found and declared that there exist in the City of Los Angeles substandard and unsanitary residential buildings and dwelling units the physical conditions and characteristics of which render them unfit or unsafe for human occupancy and habitation, and which conditions and characteristics are such as to be detrimental to or jeopardize the health, safety and welfare of their occupants and of the public.

"It is further found and declared that the existence of such substandard buildings as dwelling units threatens the physical, social and economic stability of sound residential buildings and areas, and of their supporting ***835** neighborhood facilities and institutions; necessitates disproportionate expenditures of public funds for remedial action; impairs the efficient and economical exercise of governmental powers and functions; and destroys the amenity of residential areas and neighborhoods and of the community as a whole."

Los Angeles Municipal Code section 161.301, entitled Scope, declares that the Los Angeles Housing Code applies to "all residential rental properties with two or more dwelling units on the same lot, the land, buildings and structures appurtenant thereto," but not to owner-occupied units, on-campus dormitory housing, hotels, motels, or certain other types of housing also specifically exempted.

Division 3.5 of the Los Angeles Housing Code (§ 161.351 et seq.) is entitled Housing Inspection Fees. Section 161.351 limits the scope of division 3.5 to "residential rental properties with two or more dwellings subject to the provisions of this Code." Those properties "will be subject to regular inspection by the General Manager or an authorized representative. Inspections may also be complaint-based." (*Ibid.*)

Section 161.352 of the Los Angeles Municipal Code, at issue here, sets forth the inspection fee schedule. It provides, in its entirety: "Owners of all buildings subject to inspection shall pay a service fee of $12.00 per unit per year. The fee will be used to finance the cost of inspection and enforcement by the Housing Department. Should the owner fail to pay the required fee, the City of Los Angeles will recover it, plus accrued interest, utilizing any remedies provided by law including nuisance abatement or municipal tax lien procedures established by ordinance or state law. This fee shall be known as the 'Systematic Code Enforcement Program Fee.' " (*Ibid.*, boldface omitted.)

  

**B.**

In November 1996 the voters approved Proposition 218, the Right to Vote on Taxes Act. (Ballot Pamp., Gen. Elec. (Nov. 5, 1996) text of Prop. 218, § 1, p. 108; reprinted as Historical Notes, 2A West's Ann. Cal. Const. (2001 supp.) foll. art. XIII C, § 1, p. 33.) The proposition amended the California Constitution, adding article XIII D. Section 3, subdivision (a)(3) of article XIII D provides that, with certain exceptions not relevant here, "No tax, assessment, fee, or charge shall be assessed by any agency upon any parcel of property or upon any person as an incident of property ownership except: [¶] ... [¶] ... as provided by this article." An agency is a local or regional governmental entity. (*Id.*, § 2, subd. (a); Cal. Const., art. XIII C, § 1, subd. (b).) ***836**

Section 1 of article XIII D provides that it applies to "all assessments, fees and charges, whether imposed pursuant to state statute or local government charter authority." Fees and charges are defined in subdivision (e) of section 2 thereof. " 'Fee' or 'charge' means any levy other than an ad valorem tax, a special tax, or an assessment, imposed by an agency upon a parcel or upon a person as an incident of property ownership, including a user fee or charge for a property-related service." (*Ibid.*)

"Property-related service" is further defined. It "means a public service having a direct relationship to property ownership." (Art. XIII D, § 2, subd. (h).)

Thus, and in summary, article XIII D applies, with certain exceptions not relevant here, to "any levy ... upon a parcel or upon a person as an incident of property ownership, including a user fee or charge for a property-related service." (Art. XIII D, § 2, subd. (e).) As will appear, the outcome of this case turns on the meaning of this language.

**C.**

() Before us is "a question of law for the appellate courts to decide on independent review of the facts." (*Sinclair Paint Co. v. State Bd. of Equalization* (1997) 15 Cal.4th 866, 874 [64 Cal.Rptr.2d 447, 937 P.2d 1350].) Though our reasoning turns on the language of the constitutional stricture, it may be helpful to explain, as did the Court of Appeal in *Howard Jarvis Taxpayers Assn. v. City of Riverside* (1999) 73 Cal.App.4th 679 [86 Cal.Rptr.2d 592] (*Howard Jarvis*), the reasons that led to placing Proposition 218 on the ballot.

() "Proposition 218 can best be understood against its historical background, which begins in 1978 with the adoption of Proposition 13. 'The purpose of Proposition 13 was to cut local property taxes. [Citation.]' [Citation.] Its principal provisions limited ad valorem property taxes to 1 percent of a property's assessed valuation and limited increases in the assessed valuation to 2 percent per year unless and until the property changed hands. (Cal. Const., art. XIII A, §§ 1, 2.)

"To prevent local governments from subverting its limitations, Proposition 13 also prohibited counties, cities, and special districts from enacting any special tax without a two-thirds vote of the electorate. (Cal. Const., art. XIII A, § 4; *Rider v. County of San Diego* (1991) 1 Cal.4th 1, 6-7 [2 Cal.Rptr.2d 490, 820 P.2d 1000].) It has been held, however, that a special assessment is not a special tax within the meaning of Proposition 13. (*Knox v. City of* ***837** *Orland* (1992) 4 Cal.4th 132, 141 [14 Cal.Rptr.2d 159, 841 P.2d 144], and cases cited.) Accordingly, a special assessment could be imposed without a two-thirds vote.

"In November 1996, in part to change this rule, the electorate adopted Proposition 218, which added articles XIII C and XIII D to the California Constitution. Proposition 218 allows only four types of local property taxes: (1) an ad valorem property tax; (2) a special tax; (3) an assessment; and (4) a fee or charge. (Cal. Const., art. XIII D, § 3, subd. (a)(1)-(4); see also [*id.*], § 2, subd. (a).) It buttresses Proposition 13's limitations on ad valorem property taxes and special taxes by placing analogous restrictions on assessments, fees, and charges." (*Howard Jarvis*, *supra*, 73 Cal.App.4th 679, 681-682.)

**D.**

() The Court of Appeal explained the parties' differing views of the effect of article XIII D on the city ordinance. "As viewed by [plaintiffs], the fee is imposed 'upon a parcel or upon a person as an incident of property ownership' and is, therefore, subject to the procedural requirements of Proposition 218. As viewed by the City, the fee is imposed upon a business activity (the rental of residential dwellings), separate and apart from property ownership, and purely for regulatory purposes, and it is therefore not subject to Proposition 218." (Italics omitted.)

Adhering before us to their point of view, plaintiffs contend that "nothing in Proposition 218 ... support[s] the contention that [it] was not meant to affect the ability of local

governments to impose and collect business 'regulatory fees.' " The city also adheres to its position, devoting much of its briefing to an argument that because its inspection fee is a regulatory fee on business operations, it falls outside the purview of article XIII D. Examining the ballot arguments for and against Proposition 218 and the Legislative Analyst's analysis of the measure, the city also contends that article XIII D was intended only to restrict fees imposed directly on property owners in their capacity as such. A regulatory fee imposed on residential rental businesses, the city argues, necessarily falls outside article XIII D's ambit, even if the fee bears some relation to ownership of real property. [1]

As will appear, neither party is entirely correct. The relevant language of article XIII D does not compel a conclusion in plaintiffs' favor; rather, it ***838** compels the opposite. The city also misses the mark when it contends (or at least implies) that a regulatory fee or a levy on the operation of a business necessarily falls outside the scope of article XIII D.

But both parties are partly correct. Plaintiffs accurately state that the constitutional provision does not speak of regulatory fees or levies on business operations. Hence, the mere fact that a levy is regulatory (as this inspection fee clearly is) or touches on business activities (as it clearly does) is not enough, by itself, to remove it from article XIII D's scope. But the city is correct that article XIII D only restricts fees imposed directly on property owners in their capacity as such. The inspection fee is not imposed solely because a person owns property. Rather, it is imposed because the property is being rented. It ceases along with the business operation, whether or not ownership remains in the same hands. For that reason, the city must prevail.

**II.**

Section 2 of Proposition 218 stated the measure's purpose. "The people of the State of California hereby find and declare that Proposition 13 was intended to provide effective tax relief and to require voter approval of tax increases. However, local governments have subjected taxpayers to excessive tax, assessment, fee and charge increases that not only frustrate the purposes of voter approval for tax increases, but also threaten the economic security of all Californians and the California economy itself. This measure protects taxpayers by limiting the methods by which local governments exact revenue from taxpayers without their consent." (Ballot Pamp., Gen. Elec., *supra*, text of Prop. 218, § 2, p. 108; reprinted as Historical Notes, 2A West's Ann. Cal. Const., *supra*, foll. art. XIII C, § 1, p. 33.)

The repeated references to taxes and taxpayers suggest an intent to prohibit unratified exactions imposed on property owners as such, rather than on the business of renting or leasing apartments-i.e., "residential rental properties with two or more dwellings" (L.A. Mun. Code, § 161.351).

() As explained in *Howard Jarvis*, *supra*, 73 Cal.App.4th 679, Proposition 218 is Proposition 13's progeny. Accordingly, it must be construed in that context. ( ***839** *People ex rel. Lungren v. Superior Court* (1996) 14 Cal.4th 294, 301 [58 Cal.Rptr.2d 855, 926 P.2d 1042].) Specifically, because Proposition 218 was designed to close government-devised loopholes in Proposition 13, the intent and purpose of the latter informs our interpretation of the former. Proposition 13 was directed at taxes imposed on property owners, in particular homeowners. The text of Proposition 218, the ballot arguments (both in favor and against), the Legislative Analyst's analysis, and the annotations of the Howard Jarvis Taxpayers Association, which drafted Proposition 218, all focus on exactions, whether they are called taxes, fees, or charges, that are directly associated with property ownership.

() The Legislative Analyst's analysis, printed in the November 1996 ballot pamphlet, is illustrative. It explained that Proposition 218 "would constrain local governments' ability to impose fees, assessments, and taxes," meaning "property-related" fees, including fees for water, sewer and refuse collection, but excluding gas and electricity charges (see Cal. Const., art. XIII D, § 3, subd. (b)) and development fees (see *id*., § 1, subd. (b)). (Ballot Pamp., Gen. Elec., *supra*, Legis. Analyst's analysis, p. 73.) It did not refer to levies linked more indirectly to property ownership.

() The ballot arguments for Proposition 218 are also illustrative. "Proposition 218 guarantees your right to vote on local tax increases-even when they are called something else, like 'assessments' or 'fees' and imposed on homeowners." (Ballot Pamp., Gen. Elec., *supra*, argument in favor of Prop. 218, p. 76.) "After voters passed Proposition 13, politicians created a loophole in the law that allows them to raise taxes without voter approval by calling taxes 'assessments' and 'fees.' " (*Ibid.*) "There are now over 5,000 local districts which can impose fees and assessments without the consent of local voters. Special districts have increased assessments by over 2400% over 15 years. Likewise, cities have increased utility taxes 415% and raised benefit

  

assessments 976%, a ten-fold increase." (*Ibid.*) "To confirm the impact of fees and assessments on you, look at your property tax bill. You will see a growing list of assessments imposed without voter approval. The list will grow even longer unless Proposition 218 passes." (*Ibid.*)

() The ballot arguments identify what was perhaps the drafter's main concern: tax increases disguised via euphemistic relabeling as "fees," "charges," or "assessments." But in fairness to plaintiffs, it cannot be denied that the text of article XIII D does not limit its scope to taxes and taxpayers. We turn to the definitive language: restrictions on *any* levy imposed "upon a parcel or upon a person as an incident of property ownership." (Art. XIII D, § 2, subd. (e).)

The foregoing language means that a levy may not be imposed on a property owner as such-i.e., in its capacity as property owner-unless it ***840** meets constitutional prerequisites. In this case, however, the fee is imposed on landlords not in their capacity as landowners, but in their capacity as business owners. The exaction at issue here is more in the nature of a fee for a business license than a charge against property. It is imposed only on those landowners who choose to engage in the residential rental business, and only while they are operating the business.

The contrary reasoning of the Court of Appeal, and of plaintiffs, stems from a reliance on the word "incident," leaving aside that the constitutional provision does not refer to fees imposed *on* an incident of property ownership, but on a parcel or a person *as* an incident of property ownership. As amicus curiae for the city persuasively argue, the distinction is crucial.

Were the principal words *parcel* and *person* missing, and were *as* replaced with *on*, so that article XIII D restricted the city's ability to impose fees "on an incident of property ownership," plaintiffs' argument might have merit. () For among the incidents [2] of estates in land are the so-called bundle of rights that flow from such tenure. (31 C.J.S. (1996) Estates § 12, pp. 28-30; *id.*, § 14, pp. 32, 34; *id.*, § 31, p. 58.) Among them is the fundamental right to alienate one's property held in fee simple. (E.g., *id.*, § 12, p. 30; *Holien v. Trydahl* (N.D. 1965) 134 N.W.2d 851, 856; *Davis v. Geyer* (1942) 151 Fla. 362, 369 [9 So.2d 727, 728]; ***841** *Hardy v. Galloway* (1892) 111 N.C. 519, 523 [15 S.E. 890]; see also *Yee v. City of Escondido* (1992) 503 U.S. 519, 528 [112 S.Ct. 1522, 1528-1529, 118 L.Ed.2d 153].) That incident, or right, has been called "inseparable" (*Holien*, *supra*, 134 N.W.2d at p. 856; *Hardy*, *supra*, 15 S.E. at p. 890), "indispensable" (*Dukes v. Crumpton* (1958) 233 Miss. 611, 620 [103 So.2d 385, 388]), and "necessary" (*Re Collier* (Nfld. 1966) 60 D.L.R.2d 70, 75 [52 M.P.R. 211, 216] (per Puddester, J.)).

The power to alienate property or a property right is not limited to the right to sell or assign it. It means generally the power "to transfer or convey [it] to another." (Black's Law Dict., *supra*, p. 73, col. 1.) The conveyance need not be the whole fee. The right of alienation applies when fee holders seek to convey lesser estates. [3] " '[T]he power or right of alienation' " " 'incident to the ownership of an estate in fee-simple' " " 'include[s] the power or right to dispose of property held in fee ... by *lease*, mortgage, or other mode of conveyance ....' " (*Porter v. Barrett* (1925) 233 Mich. 373, 379-380 [206 N.W. 532, 535], quoting *Manierre v. Welling* (1911) 32 R.I. 104, 140 [78 A. 507, 522], italics added here.)

() Accordingly, *if* article XIII D restricted the city's ability to impose a "tax, assessment, fee, or charge on an incident of property ownership" (cf. *id.*, §§ 2, subd. (e), 3), plaintiffs' argument might be persuasive. The business of renting apartments is an incident of owning them, an activity necessarily dependent on that ownership but not vice versa. One can own apartments without renting them, but no one can rent them without owning them. (See fn. 2, *ante*, at p. 840.) [4]

But the language of article XIII D is materially dissimilar. As stated, article XIII D, section 3 provides that "[n]o tax, assessment, fee, or charge ***842** shall be assessed by any agency upon any parcel of property or upon any person as an incident of property ownership except ... [¶] ... [¶] ... as provided by this article." (See also *id.*, § 2, subd. (e).) In other words, taxes, assessments, fees, and charges are subject to the constitutional strictures when they burden landowners *as landowners*. The ordinance does not do so: it imposes a fee on its subjects by virtue of their ownership of a business-i.e., because they are landlords. [5] What plaintiffs ask us to do is to alter the foregoing language-changing "as an incident of property ownership" to "on an incident of property ownership." But to do so would be to ignore its plain meaning-namely, that it applies only to exactions levied solely by virtue of property ownership. We may not interpret article XIII D as if it had been rewritten. (Accord, *People ex rel. Lungren v. Superior Court*, *supra*, 14 Cal.4th 294, 301.)

The language of article XIII D, sections 2, subdivision (e), and 3, shows that it applies to levies imposed on a person or on property strictly as an incident of property ownership. Had

the law included levies imposed on incidents of the ownership or use of residential real property (as relevant ***843** here, the exercise of the right to rent one's property), its text would have said so. But it did not. And although the plain language of the relevant constitutional provisions requires us not to consider extrinsic evidence of the voters' intent, we reiterate, purely as an aside, that neither the ballot arguments nor the Legislative Analyst's analysis suggested that article XIII D was intended to encompass fees of the type at issue here.

The subordinate clause in section 2, subdivision (e), of article XIII D, as clarified in section 2, subdivision (h), supports our conclusion. It may be recalled that among the fees or charges covered by article XIII D, section 2, subdivision (e), is "a user fee or charge for a property-related service." Such a service "means a public service having a direct relationship to property ownership." (*Id.*, § 2, subd. (h).) In this case, the relationship between the city's inspection fee and property ownership is indirect-it is overlain by the requirement that the landowner be a landlord.

As stated, the foregoing clause is subordinate. It does not include all possible fees and charges that fall within the ambit of article XIII D. ()**(See fn. 6.)** But it does provide additional evidence of the scope of the constitutional provision. [6]

() At oral argument, plaintiffs emphasized article XIII D's exemptions for existing development fees and all charges to provide gas and electrical ***844** service. (Art. XIII D, §§ 1, subd. (b), 3, subd. (b).) They assert that a developer fee is a fee on an incident of property-the right to improve it-and that there would have been no need to exempt such fees if other fees imposed on incidents of property did not fall within article XIII D's scope. Similarly, they argue that one can own property without having utility service, and that if article XIII D applied strictly to levies that are imposed solely on the basis of property ownership, there would have been no need to exempt such utility charges in the constitutional provision.

We note, however, that the provision regarding development fees refers only to those existing at the time of article XIII D's enactment. Moreover, it is unclear to us whether a fee to provide gas or electricity service is the same as a fee imposed on the consumption of electricity or gas. In any event, we believe that the aforementioned exemptions may have been included in an abundance of caution in case court interpretations of article XIII D similar to the Court of Appeal's should prevail. Finally, we do not believe that any incongruity can trump the plain language we have discussed herein. In short, we are unpersuaded.

Similarly unpersuasive is plaintiffs' contention, also emphasized at oral argument, that the city's ability to enforce payment of the inspection fee by imposing a lien on the property shows that the fee is property-related, not business-related. The fact is that the city is simply availing itself of all possible means to collect the fee. Property liens may be precipitated by at least one cause unconnected to land ownership (except ownership of the land on which the lien is imposed): the cost of removing graffiti. (Gov. Code, § 38772.) A lien may be imposed on parents' land to defray the cost of removing graffiti their child has scrawled on that belonging to another. (*Id.*, subd. (b).)

Plaintiffs also advert to section 5 of Proposition 218, which requires that "[t]he provisions of this act shall be liberally construed to effectuate its purposes of limiting local government revenue and enhancing taxpayer consent." (Ballot Pamp., Gen. Elec., *supra*, text of Prop. 218, § 5, p. 109; reprinted as Historical Notes, 2A West's Ann. Cal. Const., *supra*, foll. art. XIII C, p. 33.) But "[l]iberal construction cannot overcome the plain language of Proposition 218 limiting [its] scope ... to [levies] based on real property." (*Howard Jarvis Taxpayers Assn. v. City of San Diego* (1999) 72 Cal.App.4th 230, 237-238 [84 Cal.Rptr.2d 804].) () As a rule, a command that a constitutional provision or a statute be liberally construed "does not license either enlargement or restriction of its evident meaning" (*People v. Cruz* (1974) 12 Cal.3d 562, 566 [116 Cal.Rptr. 242, 526 P.2d 250]). Thus, ***845** given that article XIII D's scope is, as we have explained, unambiguously limited to burdens on landowners as such, " 'no resort to this command [of liberal construction] is required' " (*Howard Jarvis*, *supra*, 73 Cal.App.4th 679, 687, quoting *Buhlert Trucking v. Workers' Comp. Appeals Bd.* (1988) 199 Cal.App.3d 1530, 1533, fn. 4 [247 Cal.Rptr. 190]) or even permitted.

**III.**

The Court of Appeal's judgment is reversed.

George, C. J., Kennard, J., Werdegar, J., and Chin, J., concurred.

**BROWN, J.**

I respectfully dissent.

Under the provisions of Proposition 218, affected property owners must approve the imposition of any new or increased fee, which is "any levy other than an ad valorem tax, a special tax, or an assessment, imposed by an agency upon a parcel or upon a person as an incident of property ownership, including a user fee or charge for a property-related service." (Cal. Const., art. XIII D, § 2, subd. (e) (article XIII D).) The dispositive determination in this case is whether a rental inspection fee is imposed "upon a person as an incident of property ownership." (*Ibid.*) To find that it is not, the majority concludes the Court of Appeal erroneously substituted "on" for "as." It is the majority that errs, however, in assuming "incident" denotes "the so-called bundle of rights that flow from [estates in land]." (Maj. opn., *ante*, at p. 840; see maj. opn., *ante*, at pp. 840-841.) In my view, the voters did not intend the courts to look any further than a standard dictionary in applying the terms of article XIII D.

"A constitutional amendment should be construed in accordance with the natural and ordinary meaning of its words. [Citation.]" (*Amador Valley Joint Union High Sch. Dist. v. State Bd. of Equalization* (1978) 22 Cal.3d 208, 245 [149 Cal.Rptr. 239, 583 P.2d 1281]; *People ex rel. Lungren v. Superior Court* (1996) 14 Cal.4th 294, 302 [58 Cal.Rptr.2d 855, 926 P.2d 1042].) Nothing in the ballot arguments in favor of or against Proposition 218 or in the Legislative Analyst's analysis implies that a different rule should obtain with respect to "incident," or that the voters intended it to have other than a plain meaning. The dictionary defines an "incident" as "something incident to something else," that is, "dependent upon or involved in something else." (Webster's New World Dict. (3d college ed. 1988) p. 682; see also Black's Law Dict. (4th ed. 1968) p. 904, col. 2 ["Used as a noun, [incident] denotes anything which inseparably belongs to, or is connected with, or inherent in, another thing .... Also, less strictly, it denotes anything which is usually ***846** connected with another, or connected for some purposes, though not inseparably"].) In other words, if the imposition of a fee depends upon one's ownership of property, it comes within the purview of article XIII D unless otherwise excepted.

The fee at issue here plainly meets this definition. Pursuant to its police powers, the City of Los Angeles (City) enacted a Housing Code (L.A. Mun. Code, § 161.101 et seq.), which provides that residential rental properties are subject to regular inspection for substandard and unsanitary conditions. Under the Housing Code, funding for these inspections devolves to a particular class of property owners, the landlords of the rental units, who must pay a $12 fee for every unit owned. (*Id.*, § 161.352.)[1] As the majority acknowledges, "no one can rent [apartments] without owning them." (Maj. opn., *ante*, at p. 841; see also *Nash v. City of Santa Monica* (1984) 37 Cal.3d 97, 105 [207 Cal.Rptr. 285, 688 P.2d 894].) And no one is subject to the rental inspection fee without owning them. This exaction is thus imposed "as an incident of property ownership" (art. XIII D, § 2, subd. (e)); that is, it is dependent upon such ownership. (Cf. Off. of Legis. Analyst, Understanding Proposition 218 (Dec. 1996) p. 30 ["Generally, we think these fees would be considered property-related if there were no practical way that the owner could avoid the fee, short of selling the property or fundamentally changing its use"].) Moreover, "[s]hould the owner fail to pay the required fee, the City of Los Angeles will recover it, plus accrued interest, utilizing any remedies provided by law including nuisance abatement or municipal tax lien procedures established by ordinance or state law." (L.A. Mun. Code, § 161.352.) The use of tax lien procedures is a typical enforcement mechanism for delinquent levies imposed against property.

The majority avoids this result in part by finding the City "imposes a fee on its subjects by virtue of their ownership of a business-i.e., because they are landlords." (Maj. opn., *ante*, at p. 842.) The last portion of this statement proves too much: Landlords are property owners. Imposition of the fee is an incident of, i.e., depends upon, that status and thereby runs afoul of article XIII D. As for the first portion of the statement, it ignores or disregards what the majority elsewhere concedes, that the business at issue is inseparable from property ownership. No amount of parsing can change that ineluctable fact. ***847**

The majority also concludes "neither the ballot arguments nor the Legislative Analyst's analysis suggested that article XIII D was intended to encompass fees of the type at issue here." (Maj. opn., *ante*, at p. 843.) Ultimately, the terms of the measure as enacted control our interpretation (see *Kopp v. Fair Pol. Practices Com.* (1995) 11 Cal.4th 607, 673 [47 Cal.Rptr.2d 108, 905 P.2d 1248] (conc. opn. of Mosk, J.)); and their plain meaning does not support the majority's reasoning. But the ballot materials also belie the majority's conclusion. While those materials do not specifically mention rental inspection fees, such an intention is readily discernable from any fair reading. The Legislative Analyst warned generally that "[t]his measure would constrain local governments' ability to impose fees" and "[r]educe the amount of fees ... businesses pay." (Ballot Pamp., Gen. Elec. (Nov.

5, 1996), analysis of Prop. 218 by the Legis. Analyst, p. 73 (Ballot Pamphlet).) More particularly, the Legislative Analyst's list of "most likely fees and assessments affected by these provisions" (*id.* at p. 74) easily encompasses this type of exaction: "park and recreation programs, fire protection, lighting, ambulance, business improvement programs, library, and water service." (*Ibid.*) The argument in favor of Proposition 218 reminded the electorate that "[a]fter voters passed Proposition 13, politicians created a loophole in the law that allows them to raise taxes without voter approval by calling taxes 'assessments' and 'fees.' " (Ballot Pamp., *supra*, argument in favor of Prop. 218, p. 76.) "Proposition 218 guarantees your right to vote on local tax increases-even when they are called something else, like 'assessments' or 'fees' ...." (*Ibid.*) The argument did not limit the type of "fee" that would be subject to a vote under article XIII D but instead promised, "Proposition 218 ... stops politicians' end-runs around Proposition 13." (Ballot Pamp., *supra*, rebuttal to argument against Prop. 218, p. 77.) Particularly in light of its timing, the City's rental inspection fee appears to be just the kind of evasive maneuver at which proponents aimed Proposition 218. (See generally *Huntington Park Redevelopment Agency v. Martin* (1985) 38 Cal.3d 100, 105 [211 Cal.Rptr. 133, 695 P.2d 220] [purpose, in part, of Prop. 13 was "to prevent the government from recouping its losses from decreased property taxes by imposing or increasing other taxes"].)

In this regard, the majority also fails to accord any significance to two important provisions of Proposition 218. In any action challenging imposition of a new or increased fee or charge, the initiative assigns to the agency "the burden ... to demonstrate compliance with this article" (art. XIII D, § 6, subd. (b)(5)), thereby reversing the usual deference accorded governmental action in such matters and making it more difficult to defend its legitimacy. (See Ballot Pamp., *supra*, analysis of Prop. 218 by the Legis. ***848** Analyst, p. 74; see also art. XIII D, § 4, subd. (f) [imposing same burden for assessments].) The voters also expressly provided that Proposition 218 "shall be liberally construed to effectuate its purposes of limiting local government revenue and enhancing taxpayer consent." (Ballot Pamp., *supra*, text of Prop. 218, § 5, p. 109, also reprinted as Historical Notes, 2A West's Ann. Cal. Const. (2000 supp.) foll. art. XIII C, § 1, p. 25.) The majority's construction frustrates both these goals.

The City argues that conditioning imposition of its rental inspection fee on compliance with the procedures set forth in article XIII D would allow landlords to defeat regulation of their businesses. This argument misses two critical points: First and generally, since the City has decided its rental inspections are necessary to eradicate "substandard and unsanitary residential buildings and dwelling units the physical conditions and characteristics of which ... are such as to be detrimental to or jeopardize the health, safety and welfare of their occupants and of the public" (L.A. Mun. Code, § 161.102), it can reasonably expect the public to pay for the program.

Second and specifically, the Los Angeles Municipal Code already provides substantial enforcement authority to prosecute landlords who violate the City's Housing Code. If a property owner fails to correct violations, the City may recover its administrative as well as abatement costs (L.A. Mun. Code, § 161.206.2), may seek criminal penalties including fines and imprisonment (*id.*, § 161.206.3), and may pursue civil remedies as provided in the Health and Safety Code (L.A. Mun. Code, § 161.206.4).

When the voters passed Proposition 13 in 1978, they sought to restrict the ability of government to impose taxes and other charges on property owners without their approval. For almost two decades, however, they witnessed politicians evade this constitutional limitation. The message of Proposition 218 is that they meant what they said. With the majority turning a deaf ear to that message, we may well expect a future effort to "stop[] politicians' end-runs around Proposition 13." (Ballot Pamp., *supra*, rebuttal to argument against Prop. 218, p. 77.)

Baxter, J., concurred. ***849**

## Footnotes

1 We have also received several amicus curiae briefs. Along with one of them is a request to judicially notice three purported local mobilehome park rent control ordinances and two other documents regarding that topic. The request is denied. The five documents have no bearing on the question before us.
Amici curiae also include a printed discussion issued by the Legislative Analyst in December 1996 and entitled Understanding Proposition 218. This document contains material relevant to the question at bench, and we grant the request for judicial notice regarding it. (Evid. Code, §§ 452, subd. (c), 459, subd. (a).)

  

2 Over time, “incident” has meant many things. As a noun, the meanings include the burden of the risk of a diminution of the value of real property during condemnation proceedings (*Agins v. City of Tiburon* (1980) 447 U.S. 255, 263, fn. 9 [100 S.Ct. 2138, 2143, 65 L.Ed.2d 106]), the “ 'burdens and disabilities' ” of slavery prohibited by the Thirteenth Amendment to the United States Constitution (*Jones v. Mayer Co*. (1968) 392 U.S. 409, 441 [88 S.Ct. 2186, 2204, 20 L.Ed.2d 1189]), or, in earlier times, the monetary obligations imposed by the king or a mesne lord (McPherson, *Revisiting the Manor of East Greenwich* (1998) 42 Am. J. Legal Hist. 35, 39; see also 2 Coke (1641) Institutes of the Lawes of England (Butler & Hargrave's Notes ed.) 69a, § 95, fn. 7). And, in a more general sense, the meanings of “incident” include benefits or duties that appertain to some greater right or interest, i.e., the principal. (Civ. Code, §§ 662, 1084, 3540; *Owsley v. Hamner* (1951) 36 Cal.2d 710, 716-717 [227 P.2d 263, 24 A.L.R.2d 112]; *Fender v. Waller* (1941) 139 Neb. 612, 616 [298 N.W. 349, 351]; *Harris v. Elliott* (1836) 35 U.S. (10 Pet.) 25, 54 [9 L.Ed. 333].) In its fourth edition (1897), Bouvier's Law Dictionary defined “incident” as a term “used both substantively and adjectively of a thing which, either usually or naturally and inseparably depends upon, appertains to, or follows another that is more worthy. For example, ... the right of alienation is necessarily incident to a fee-simple at common law ....” (*Id.* at p. 1006, col. 1.) Many cases have followed the Bouvier's Law Dictionary definition, or ones similar to it. (E.g., *Watts v. Copeland* (1933) 170 S.C. 449, 452 [170 S.E. 780]; *Moccasin State Bank v. Waldron* (1928) 81 Mont. 579, 586 [264 P. 940].) “Thus, timber trees are incident to the freehold, and so is a right of way.” (*In re Estate of Bellesheim* (N.Y. Surr. 1888) 1 N.Y.S. 276, 278 [dictum]; accord, *Harris v. Elliott*, *supra*, 35 U.S. (10 Pet.) at p. 54 [9 L.Ed. at p. 344] [easements]; Black's Law Dict. (7th ed. 1999) p. 765, col. 1 [“the utility easement is incident to the ownership of the tract”].)

3 It is, of course, axiomatic in Anglo-American law that ownership of real property in fee simple absolute is the greatest possible estate (1 Coke (1628) Institutes of the Lawes of England (Butler & Hargrave's Notes ed.) 18a, § 11), and among the panoply of lesser estates are such nonfreehold chattels real as leases for a specific term and periodic tenancies (*Pacific Southwest Realty Co. v. County of Los Angeles* (1991) 1 Cal.4th 155, 162 [2 Cal.Rptr.2d 536, 820 P.2d 1046])-in common parlance, rentals or leases of limited duration. (1 Tiffany, The Law of Real Property (3d ed. 1939) § 76, pp. 112-113; *Wilgus v. Commonwealth* (1873) 72 Ky. (9 Bush.) 556, 557 [1873 WL 6660], citing 2 Blackstone, Commentaries 143 [“ 'An estate for years in land is regarded in law as inferior to an estate for life or an inheritance' ”]; *Brydges v. Millionair Club* (1942) 15 Wash.2d 714, 719 [132 P.2d 188, 190]; see also *Williams v. R. R.* (1921) 182 N.C. 267, 272 [108 S.E. 915, 918].)

4 In *Acme Freight Lines v. City of Vidalia* (1942) 193 Ga. 334 [18 S.E.2d 540] (*Acme Freight*), similar statutory language favored an analogous argument-that a tax on an incident of the trucking business was a tax on a trucking company's ancillary delivery business.

In *Acme Freight*, a trucking company sought an injunction against a city's practice of imposing a business tax on those ancillary operations. The firm relied on this law: “ 'No subdivision of this State ... shall levy any excise, license, or occupation tax of any nature *on* ... *any incidents* of said motor carrier business, or on a motor common carrier.' ” (*Acme Freight, supra*, 193 Ga. 334, 335 [18 S.E.2d 540, 541], italics added.)

The city, Vidalia, acknowledged “its lack of authority to levy any tax against the plaintiff in reference to its transportation of freight as a motor common carrier .... Justification for the tax is founded upon the fact that, in addition to the operation of trucks for the transportation of freight ..., the plaintiff carries on ... a 'pick-up and delivery service' in and around the city. The trial judge ruled that this 'is not a *necessary* incident to the operation of a common carrier,' and that as to it 'the plaintiff is not a motor common carrier, but is engaged in a special and distinct business in the City of Vidalia, and is taxable as such.' This formula interpolates before the word 'incidents,' used in the statute, the word 'necessary' so as to require, as a condition of tax immunity, that the operation be a necessary incident of the business of a motor common carrier. This appears to us to be erroneous. [Rather,] ... an incident of the business of a motor common carrier of freight would be something naturally associated as pertinent to such transportation and necessarily dependent upon it, but without which the business of transportation might nevertheless be carried on. In other words, the incidental operation would be necessarily dependent upon the transportation, but the business of transportation would not be necessarily dependent upon the incidental operation.... As we understand the evidence adduced in this case, the plaintiff's operations against which the tax is said to be levied is of the above-described character; and accordingly we conclude that the tax is illegal, and should have been enjoined.” (*Acme Freight*, *supra*, 193 Ga. 334, 335-336 [18 S.E.2d 540, 541].)

5 We acknowledge that landlords may rent because they wish to keep the property occupied in their absence, for philanthropic reasons, or to a family member for a nominal charge. Such arrangements are not rare, and may lie within the province of the ordinance, which refers to “residential rental properties.” But even nonprofit or charitable purposes are business purposes under broad constructions of the term, and we believe that as long as the property is being rented for consideration, it is being conveyed for a business purpose. (Cf. *Marin Municipal Water Dist. v. Chenu* (1922) 188 Cal.

  

734, 738 [207 P. 251] [" 'business' " has "a narrower meaning applicable to occupation or employment for livelihood or gain, and to mercantile or commercial enterprises or transactions"].)

6 We turn to discuss briefly the authorities on which the city chiefly relies. They consist of two cases: *Sinclair Paint Co. v. State Bd. of Equalization*, *supra*, 15 Cal.4th 866; and *Pennell v. City of San Jose* (1986) 42 Cal.3d 365 [228 Cal.Rptr. 726, 721 P.2d 1111] (affd. *sub nom*. *Pennell v. San Jose* (1988) 485 U.S. 1 [108 S.Ct. 849, 99 L.Ed.2d 1]). They are inapposite. In *Sinclair* we held that an exaction on sources of lead contamination to remediate the effects of lead poisoning was a fee, not a tax. In *Pennell*, we held that a $3.75 charge on each residential rental unit, imposed by a rent control ordinance to fund its hearing process, also was a fee, not a tax. In *Sinclair* and *Pennell*, we defined such fees, which are similar to the city's inspection charge, as regulatory in nature. Regulatory fees are those " ' "charged in connection with regulatory activities[,] which fees do not exceed the reasonable cost of providing services necessary to the activity for which the fee is charged and which are not levied for unrelated revenue purposes." ' " (*Sinclair Paint Co. v. State Bd. of Equalization*, *supra*, 15 Cal.4th 866, 876, quoting *Pennell v. City of San Jose*, *supra*, 42 Cal.3d 365, 375, in turn quoting *Mills v. County of Trinity* (1980) 108 Cal.App.3d 656, 659-660 [166 Cal.Rptr. 674], bracketed material added here.)

We have stated that the city's inspection fee is a regulatory fee. And we have concluded that it does not fall within article XIII D's ambit. But *Sinclair* and *Pennell* do not concern themselves with the issue we confront here. Indeed, in *Sinclair* we cautioned that "We are not here concerned with issues arising under constitutional amendments effected by a recent initiative measure (Proposition 218) adopted at the November 5, 1996, General Election. That measure contains new restrictions on local agencies' power to impose fees and assessments." (*Sinclair Paint Co. v. State Bd. of Equalization*, *supra*, 15 Cal.4th 866, 873, fn. 2.) In *Pennell v. City of San Jose, supra*, 42 Cal.3d 365, we could not have written a similar caveat, for article XIII D did not exist at the time. But it applies just as well.

1 Los Angeles Municipal Code section 161.352 provides: "*Owners* of all buildings subject to inspection shall pay a service fee of $12.00 per unit per year. The fee will be used to finance the cost of inspection and enforcement by the Housing Department. Should the *owner* fail to pay the required fee, the City of Los Angeles will recover it, plus accrued interest, utilizing any remedies provided by law including nuisance abatement or municipal tax lien procedures established by ordinance or state law. This fee shall be known as the 'Systematic Code Enforcement Program Fee.' " (Italics added.)

39 Cal.4th 205
Supreme Court of California

BIGHORN–DESERT VIEW WATER AGENCY,
Plaintiff, Cross-defendant and Respondent,
v.
Kari VERJIL, as Registrar of Voters,
etc., Defendant and Cross-defendant;
E.W. Kelley, Real Party in Interest,
Cross-complainant and Appellant.

No. S127535.
|
July 24, 2006.

**Synopsis**

**Background:** Local public water district sought declaratory judgment invalidating proposed county initiative measure that would reduce domestic water rates and require voter preapproval of any subsequent rate increases. The Superior Court, San Bernardino County, No. SCV97005, Tara Reilly, J., entered judgment for district. Proponent of voter initiative appealed. The Court of Appeal affirmed. The Supreme Court granted review and transferred the case for reconsideration back to the Court of Appeal, which again affirmed. The Supreme Court again granted review, superseding the opinions of the Court of Appeal.

**Holdings:** The Supreme Court, Kennard, J., held that:

[1] portion of measure that would reduce district's charges for delivering domestic water to existing customers was not subject to state constitutional restrictions, disapproving *Howard Jarvis Taxpayers Assn. v. City of Los Angeles,* 85 Cal.App.4th 79, 101 Cal.Rptr.2d 905; but

[2] portion of measure that would require voter preapproval for future increases was constitutionally prohibited; and

[3] due to invalidity of latter portion, initiative was properly withheld from county ballot.

Affirmed.

Opinions, 8 Cal.Rptr.3d 485, 15 Cal.Rptr.3d 911, superseded.

West Headnotes (9)

**[1] Water Law**
Water Rates, Rents, Connection Fees, and Other Charges

County initiative measure that would reduce a local public water district's charges for delivering domestic water to existing customers was protected by state constitutional guarantee against prohibition of initiative proposing reduction of local "fee or charge"; disapproving *Howard Jarvis Taxpayers Assn. v. City of Los Angeles,* 85 Cal.App.4th 79, 101 Cal.Rptr.2d 905. West's Ann.Cal. Const. Art. 13C, § 3.

*See 7 Witkin, Summary of Cal. Law (10th ed. 2005) Constitutional Law, § 159; 9 Witkin, Summary of Cal. Law (10th ed. 2005) Taxation, § 131 et seq.*

22 Cases that cite this headnote

**[2] Constitutional Law**
Intent in general

When interpreting a provision of the state Constitution, the Supreme Court's aim is to determine and effectuate the intent of those who enacted the constitutional provision at issue.

9 Cases that cite this headnote

**[3] Constitutional Law**
Intent in general

When the voters enacted a state constitutional provision, their intent governs the Supreme Court's construction of the provision.

3 Cases that cite this headnote

**[4] Constitutional Law**
Meaning of Language in General

**Constitutional Law**
Plain, ordinary, or common meaning

To determine the voters' intent in enacting a state constitutional provision, the Supreme Court begins by examining the constitutional text, giving the words their ordinary meanings.

8 Cases that cite this headnote

**[5] Constitutional Law**
Giving effect to every word

**Constitutional Law**
Giving effect to entire instrument

In construing a constitutional provision, if possible, significance should be given to every word, phrase, sentence, and part of the provision in pursuance of the legislative purpose.

1 Cases that cite this headnote

**[6] Constitutional Law**
Intrinsic Aids to Construction

When a word has been used in different parts of a single state constitutional enactment, courts normally infer that the word was intended to have the same meaning throughout.

4 Cases that cite this headnote

**[7] Water Law**
Water Rates, Rents, Connection Fees, and Other Charges

Proposed county initiative measure that would impose a requirement of voter preapproval for any future increase in local public water district's charges for delivering domestic water to existing customers, or new charge, was prohibited under state constitution. West's Ann.Cal. Const. Art. 13C, § 3, Art. 13D, § 6(c).

22 Cases that cite this headnote

**[8] Constitutional Law**
Giving effect to entire instrument

**Constitutional Law**
Harmonizing provisions

Related constitutional provisions should be read together and construed in a manner that gives effect to each, yet does not lead to disharmony with the others.

4 Cases that cite this headnote

**[9] Municipal Corporations**
Initiative procedure

When a significant part of a proposed initiative measure is invalid, the measure may not be submitted to the voters.

2 Cases that cite this headnote

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**Opinion**

KENNARD, J.

  

***208** ****221** In November 1996, California voters adopted Proposition 218, which added articles XIII C and XIII D to the California Constitution. In *Richmond v. Shasta Community Services Dist.* (2004) 32 Cal.4th 409, 9 Cal.Rptr.3d 121, 83 P.3d 518 (*Richmond* ), we construed article XIII D as it applies to fees that a local public water district charged for making new service connections to its domestic water delivery system. We concluded that those connection charges were not "assessments" or "property-related fees or ***209** charges" within the meaning of article XIII D. (*Richmond, supra,* at pp. 425, 428, 9 Cal.Rptr.3d 121, 83 P.3d 518.)

Here, we consider a related issue, one that involves section 3 of article XIII C, which provides that "the initiative power shall not be prohibited or otherwise limited in matters of reducing or repealing any local tax, assessment, fee or charge." Does this provision grant local voters authority to adopt an initiative ****222** measure that would reduce a local public water district's charges for delivering domestic water to existing customers and that also would require voter preapproval for any future increase in those charges or for the imposition of any new charge?

As explained below, we conclude that section 3 of article XIII C grants local voters a right to use the initiative power to reduce the rate that a public water district charges for domestic water. We also conclude, however, that this new constitutional provision does not grant local voters a right to impose a voter-approval requirement on all future adjustments of water delivery charges, and that the proposed initiative at issue here was properly withheld from the ballot because it included a provision to impose such a requirement.

**I**

In 1969, the California Legislature formed the Bighorn–Desert View Water Agency (Agency) as a special district under the Bighorn Mountains Water Agency Law.[1] (Stats.1969, ch. 1175, p. 2273 et seq.) The Agency provides domestic water service to residents in a roughly 42–square–mile area north of Yucca Valley in San Bernardino County.

E.W. Kelley is a resident of San Bernardino County and the proponent of a local initiative measure to reduce the Agency's *****76** water rate and other charges. Kelley's initiative proposed to reduce the Agency's water rate from $4.00 to $2.00 per 100–cubic–foot billing unit,[2] to reduce the "non-cap recovery charge" from $4.65 to $2.50 per month, and to reduce the "MWA ***210** pipeline charge" from $13.62 to $11.50 per month. The initiative also would have required the Agency to obtain voter approval before increasing any existing water rate, fee, or charge, or imposing any new water rate, fee, or charge.

Kelley succeeded in qualifying the initiative for the ballot. On October 24, 2002, Sharon Beringson, as the Interim Registrar of Voters for San Bernardino County, certified the initiative, and the next day by letter she informed the Agency of its duty under Elections Code section 9310 to either adopt the initiative or submit it to the voters at a special election. The Agency did neither, however. Instead, on November 20, 2002, it filed a complaint for declaratory relief in the superior court, naming Beringson as the defendant and Kelley as the real party in interest.

In the complaint, the Agency asked the court to declare the initiative impermissible under California law, and beyond the power of the Agency's electorate to enact, because it would interfere with the statutory responsibility of the Agency's board of directors to set the water rate high enough to cover its costs. (See Stats.1969, ch. 1175, § 25, pp. 2285–2286, 72 B. West's Ann. Wat.-Appen., *supra,* ch. 112, p. 203 ["The board of directors, so far as practicable, shall fix such rate or rates for water in the agency ... as will result in revenues which will pay the operating expenses of the agency, ... provide for repairs and depreciation of works, provide a reasonable surplus for improvements, extensions, and enlargements, pay the interest on any bonded debt, and provide a sinking or other fund for the payment of the principal of such debt as it may become due."].)

Kelley answered the complaint and filed a motion for judgment on the pleadings and a cross-petition for writ of mandate seeking to compel the Agency to either adopt the initiative as an ordinance or submit it to the voters at a special election. Asserting that the Agency was challenging the legality of the proposed initiative both on its face (insofar as it asserted that its board of directors had the exclusive power to set the agency's ****223** water rates and charges) and as applied (insofar as it asserted that the particular rates and charges that the initiative would set would leave the Agency with insufficient net revenues), Kelly argued that the as-applied challenge could not be raised before the election and that the facial challenge failed because the initiative was authorized and protected by section 3 of article XIII C of the California Constitution. In its opposition to Kelley's motion for judgment on the pleadings, the Agency argued, essentially,

that it was raising only a facial challenge to the proposed initiative.

***211** At the hearing on the motion for judgment on the pleadings, the parties agreed that the only issue was the validity of the initiative on its face, that the facts relevant to that issue were undisputed, and that the issue could be decided as a matter of law. The trial court, declaring that voters in the area served by the Agency lacked power to affect its water rates and fees and charges, denied Kelley's motion *****77** and cross-petition and entered a judgment of declaratory relief for the Agency.

Kelley appealed the judgment to the Court of Appeal, arguing that his initiative was authorized by article XIII C, section 3 of the California Constitution. The Court of Appeal affirmed the superior court's ruling, and Kelley petitioned this court for review. We granted review and then transferred the case back to the Court of Appeal with directions to vacate its decision and to reconsider the issues in light of *Richmond, supra,* 32 Cal.4th 409, 9 Cal.Rptr.3d 121, 83 P.3d 518.

The Court of Appeal again found in favor of the Agency, holding that article XIII C did not authorize Kelley's initiative because the initiative did not deal with special or general taxes, which the Court of Appeal held to be the only subject matter article XIII C covers. The court held that the Agency's rate, fees, and charges were not subject to Proposition 218, and thus could not be reduced by voter initiative. Kelley again petitioned this court for review, which we again granted.

**II**

Article XIII C of the California Constitution is entitled Voter Approval for Local Tax Levies. Section 1 of article XIII C defines the terms " '[g]eneral tax,' " " '[s]pecial tax,' " " '[l]ocal government,' " and " '[s]pecial district.' " Section 2 of article XIII C provides, in subdivision (b), that "[n]o local government may impose, extend, or increase any general tax unless and until that tax is submitted to the electorate and approved by a majority vote," and it provides, in subdivision (d), that "[n]o local government may impose, extend, or increase any special tax unless and until that tax is submitted to the electorate and approved by a two-thirds vote." Section 3, the provision at issue here, states: "Initiative Power for Local Taxes, Assessments, Fees and Charges. Notwithstanding any other provision of this Constitution, including, but not limited to, Sections 8 and 9 of Article II, the initiative power shall not be prohibited or otherwise limited in matters of reducing or repealing *any local tax, assessment, fee or charge.* The power of initiative to affect *local taxes, assessments, fees and charges* shall be applicable to all local governments ***212** and neither the Legislature nor any local government charter shall impose a signature requirement higher than that applicable to statewide statutory initiatives." [3] (Italics added.)

**[1]** With a single sentence, the Court of Appeal rejected Kelley's reliance on article XIII C as authority for the proposed initiative. The Court of Appeal stated: "Article XIII C governs special and general taxes, which are not at issue here." Kelley argues that this statement is erroneous because section 3 of article XIII C is not limited to special and general taxes, but applies by it terms to "any local tax, assessment, fee or charge."

**[2]** **[3]** **[4]** When interpreting a provision of our state Constitution, our aim is "to determine ****224** and effectuate the intent of those who enacted the constitutional provision at issue." (*Richmond, supra,* 32 Cal.4th at p. 418, 9 Cal.Rptr.3d 121, 83 P.3d 518.) When, as here, the voters enacted the provision, their intent governs. (*Delaney* *****78** *v. Superior Court* (1990) 50 Cal.3d 785, 798, 268 Cal.Rptr. 753, 789 P.2d 934.) To determine the voters' intent, "we begin by examining the constitutional text, giving the words their ordinary meanings." (*Richmond, supra,* at p. 418, 9 Cal.Rptr.3d 121, 83 P.3d 518.)

**[5]** Article XIII C, section 3 of the California Constitution expressly states that the initiative power cannot be limited or prohibited when an initiative proposes to reduce or repeal "any local tax, assessment, fee or charge." In construing a constitutional or statutory provision, " ' "[i]f possible, significance should be given to every word, phrase, sentence and part of an act in pursuance of the legislative purpose." ' " (*DuBois v. Workers' Comp. Appeals Bd.* (1993) 5 Cal.4th 382, 388, 20 Cal.Rptr.2d 523, 853 P.2d 978.) If possible, therefore, we must give significance to the words "assessment, fee or charge" in article XIII C, section 3, as meaning something other than "local tax." Accordingly, it would appear that article XIII C, section 3, is not limited to local special and general taxes but applies also to assessments, fees, and charges.

In the ballot pamphlet for the election at which Proposition 218 (which included both article XIII C and article XIII D) was adopted, the Legislative Analyst gave this description of how Proposition 218 would affect initiative powers: "The measure states that Californians have the power to repeal or

  

***213** reduce any local tax, assessment, or fee through the initiative process." (Ballot Pamp., Gen. Elec. (Nov. 5, 1996), analysis of Prop. 218 by Legis. Analyst, p. 74.) Thus, the Legislative Analyst appears to have also read section 3 of article XIII C as applying to fees as well as to special and general taxes and so described it to the voters who enacted it. (See *People v. Birkett* (1999) 21 Cal.4th 226, 243–244, 87 Cal.Rptr.2d 205, 980 P.2d 912 [argument and analyses in official ballot pamphlet may be consulted to determine voters' understanding and intent].)

Because the Agency offers no argument in support of the Court of Appeal's assertion that article XIII C applies only to special and general taxes, and not to fees, we will not belabor the point. We conclude that article XIII, section 3, applies to assessments, fees, and charges and not just to special and general taxes.

Are the amounts that the Agency bills its customers for the delivery of domestic water properly characterized as fees or charges within the meaning of those words in article XIII C, section 3? Although article XIII C contains definitions of the terms "general tax" and "special tax" (Cal. Const., art. XIII C, § 1, subds. (a), (d)), it does not define the terms "fee" or "charge." Article XIII D, which was enacted together with article XIII C as part of Proposition 218, does contain a definition of those terms. According to that definition, " '[f]ee' or 'charge' means any levy other than an ad valorem tax, a special tax, or an assessment, imposed by an agency upon a parcel or upon a person as an incident of property ownership, including a user fee or charge for a property related service." (Cal. Const., art. XIII D, § 2, subd. (e).) It is unclear, however, whether that definition governs the meaning of the terms "fee" and "charge" in article XIII C, section 3.

**[6]** Section 2 of article XIII D of the state Constitution, which contains definitions for various terms, including "fee" and "charge," begins with the words, "As used *in this article*." (Italics added.) Therefore, although the definitions in section 2 of article XIII D govern the meaning of the defined terms in article XIII D (see *People v. Canty* (2004) 32 Cal.4th 1266, 1277, 14 Cal.Rptr.3d 1, 90 P.3d 1168; *****79** *Richmond, supra,* 32 Cal.4th at p. 423, 9 Cal.Rptr.3d 121, 83 P.3d 518), those definitions do not *necessarily* apply outside of article XIII D and, in particular, in article XIII C. On the other hand, when a word has been used in different parts of a single enactment, courts normally infer that the word was intended to have the same meaning throughout. (*People v. Roberge* (2003) 29 Cal.4th 979, 987, 129 Cal.Rptr.2d 861, 62 P.3d 97.) Because article XIII C and article XIII D were enacted together by Proposition 218, it seems ***214** unlikely that the ****225** terms "fee" and "charge" were meant to carry *entirely* different meanings in those two articles, although some variation in meaning is possible. [4]

We considered a related question in *Richmond, supra,* 32 Cal.4th 409, 9 Cal.Rptr.3d 121, 83 P.3d 518. At issue there was whether a water service connection fee was a fee or charge within the meaning of article XIII D's definition of the terms "fee" and "charge" as "any levy other than an ad valorem tax, a special tax, or an assessment, imposed by an agency upon a parcel or upon a person as an incident of property ownership, *including a user fee or charge for a property related service.*" (Cal. Const., art. XIII D, 2, subd. (e), italics added; see *Richmond, supra,* at p. 415, 9 Cal.Rptr.3d 121, 83 P.3d 518.) Of relevance here, we stated:

"In the ballot pamphlet for the election at which article XIII D was adopted, the Legislative Analyst stated that '[f]ees for water, sewer, and refuse collection service probably meet the measure's definition of property-related fee.' (Ballot Pamp., Gen. Elec. (Nov. 5, 1996), analysis of Prop. 218 by Legis. Analyst, p. 73.) The Legislative Analyst apparently concluded that water service has a direct relationship to property ownership, and thus is a property-related service within the meaning of article XIII D because water is indispensable to most uses of real property; because water is provided through pipes that are physically connected to the property; and because a water provider may, by recording a certificate, obtain a lien on the property for the amount of any delinquent service charges (see Gov.Code, §§ 61621, 61621.3)....

"Several provisions of article XIII D tend to confirm the Legislative Analyst's conclusion that charges for utility services such as electricity and water should be understood as charges imposed 'as an incident of property ownership.' For example, subdivision (b) of section 3 provides that 'fees for the provision of electrical or gas service shall not be deemed charges or fees imposed as an incident of property ownership' under article XIII D. Under the rule of construction that the expression of some things in a statute implies the exclusion of other things not expressed (*In re Bryce C.* (1995) 12 Cal.4th 226, 231, 48 Cal.Rptr.2d 120, 906 P.2d 1275), the expression that electrical and gas service charges are not within the category of property-related fees implies that similar charges for other utility services, such as water and

sewer, are property-related fees subject to the restrictions of article XIII D.

***215** "This implication is reinforced by subdivision (c) of article XIII D, section 6, which expressly excludes 'fees or charges for sewer, water, and refuse collection services' from the voter approval requirements *****80** that article XIII D imposes on property-related fees and charges. Because article XIII D does not include similar express exemptions from the other requirements that it imposes on property-related fee[s] and charges, the implication is strong that fees for water, sewer, and refuse collection services are subject to those other requirements. (See *Howard Jarvis Taxpayers Assn. v. City of Roseville* (2002) 97 Cal.App.4th 637, 645, 119 Cal.Rptr.2d 91 [reaching the same conclusion].)

"Thus, we agree that water service fees, being fees for property-related services, may be fees or charges within the meaning of article XIII D. But we do not agree that *all* water service charges are necessarily subject to the restrictions that article XIII D imposes on fees and charges. Rather, we conclude that a water service fee is a fee or charge under article XIII D if, but only if, it is imposed 'upon a person as an incident of property ownership.' (Art. XIII D, § 2, subd. (e).)" (*Richmond, supra,* 32 Cal.4th at pp. 426–427, 9 Cal.Rptr.3d 121, 83 P.3d 518.)

For purposes of identifying fees and charges under California Constitution article XIII D, we drew a distinction between water service connection charges and charges for ****226** ongoing water delivery. We explained: "A fee for ongoing water service through an existing connection is imposed 'as an incident of property ownership' because it requires nothing other than normal ownership and use of property. But a fee for making a new connection to the system is not imposed 'as an incident of property ownership' because it results from the owner's voluntary decision to apply for the connection." (*Richmond, supra,* 32 Cal.4th at p. 427, 9 Cal.Rptr.3d 121, 83 P.3d 518.)

Comparing the provisions of article XIII C and article XIII D, it appears to us that the words "fee" and "charge," which appear in both articles, may well have been intended to have a narrower, more restrictive meaning in article XIII D. The title of article XIII D is Assessment and *Property–Related* Fee Reform (italics added) and section 6 of article XIII D, which imposes restrictions on fees, is titled *Property Related* Fees and Charges (italics added). Consistent with these references to "property-related" fees, article XIII D's definition of "fee" requires that it be imposed "upon a parcel or upon a person as an incident of property ownership." (Cal. Const., art. XIII D, § 2, subd. (e).) By comparison, the words "property related" do not appear anywhere in article XIII C, nor does anything in the text of article XIII C suggest that it is limited to levies imposed on real property or on persons as an incident of property ownership. Thus, the terms "fee" and "charge" in section 3 of article XIII C may not be subject to the "property-related" qualification that was at issue in *Richmond, supra,* 32 Cal.4th 409, 9 Cal.Rptr.3d 121, 83 P.3d 518. At the same time, any levy that ***216** qualifies as a property-related fee or charge under article XIII D must also qualify as a "fee" or "charge" under article XIII C, section 3. Nothing in the text of article XIII C, or in the ballot pamphlet for the November 1996 general election at which it was adopted, suggests an intent to *exclude* property-related fees and charges from the reach of section 3 of article XIII C, or to impose any separate or additional restriction on the meaning of "fee" or "charge" as used in article XIII C.

Thus, it is possible that California Constitution article XIII C's grant of initiative power extends to some fees that, because they are not property related, are not fees within the meaning of article XIII D. But we perceive no basis for excluding from article XIII C's authorization any of the *****81** fees subject to article XIII D. The absence of a restrictive definition of "fee" or "charge" in article XIII C suggests that those terms include all levies that are ordinarily understood to be fees or charges, including all of the property-related fees and charges subject to article XIII D.

For present purposes, it is unnecessary to arrive at an exact definition of the terms "fee" and "charge" as used in article XIII C. It is sufficient to conclude that a public water agency's charges for ongoing water delivery, which are fees and charges within the meaning of article XIII D (*Richmond, supra,* 32 Cal.4th at pp. 426–427, 9 Cal.Rptr.3d 121, 83 P.3d 518), are also fees within the meaning of section 3 of article XIII C. Therefore, section 3 of article XIII C establishes that the initiative power "shall not be prohibited or otherwise limited in matters of reducing or repealing" a public agency's water delivery charges. In other words, this constitutional provision expressly authorizes initiative measures like Kelley's insofar as they seek to reduce or repeal a public agency's water rates and other water delivery charges.

The Agency urges us to draw a distinction between water delivery charges that are "consumption based" (calculated according to the quantity of water delivered) and charges that

  

are imposed regardless of water usage. Under this proposed distinction, the Agency's water rate, which is a charge per 100 cubic feet of water, is a consumption-based charge, while its "non-cap recovery charge" and "MWA Pipeline charge" (both of which the Agency imposes in a fixed amount per month per customer) are not. The Agency argues that consumption-based water charges are not fees or charges within the meaning of article XIII D because they are not imposed "as an incident of property ownership" (Cal. Const., art. XIII D, § 2, subd. (e)), but instead as a result of the voluntary decisions of each water customer as to how much water to use. We are not persuaded.

****227** Article XIII D defines "fee" or "charge" as "*including* a user fee or charge for a property related service." (Cal. Const., art. XIII D, § 2, subd. (e), ***217** italics added.) The word "including" is " 'ordinarily a term of enlargement.' " (*Hassan v. Mercy American River Hospital* (2003) 31 Cal.4th 709, 717, 3 Cal.Rptr.3d 623, 74 P.3d 726.) As we explained in *Richmond, supra,* 32 Cal.4th 409, 9 Cal.Rptr.3d 121, 83 P.3d 518, domestic water delivery through a pipeline is a property-related service within the meaning of this definition. (*Id.* at pp. 426–427, 9 Cal.Rptr.3d 121, 83 P.3d 518.) Accordingly, once a property owner or resident has paid the connection charges and has become a customer of a public water agency, all charges for water delivery incurred thereafter are charges for a property-related service, whether the charge is calculated on the basis of consumption or is imposed as a fixed monthly fee.[5] Consumption-based water delivery charges also fall within the definition of user fees, which are "amounts charged to a person using a service where the amount of the charge is generally related to the value of the services provided." (*Utility Audit Co., Inc. v. City of Los Angeles* (2003) 112 Cal.App.4th 950, 957, 5 Cal.Rptr.3d 520.) Because it is imposed for the property-related service of water delivery, the Agency's water rate, as well as its fixed monthly charges, are fees or charges within the meaning of article XIII D, and thus, for the reasons we have explained, they are also fees or charges within the *****82** meaning of section 3 of article XIII C. Under the constitutional grant of power in section 3 of article XIII C, the initiative may be used to reduce each of those water delivery charges.

The Agency also argues that even if its water rate and other water delivery charges are fees or charges within the meaning of section 3 of article XIII C of the California Constitution, Kelley's initiative is nonetheless invalid because the Legislature has granted the Agency's governing board exclusive authority to set the Agency's rate and other charges. (See *DeVita v. County of Napa* (1995) 9 Cal.4th 763, 775–777, 38 Cal.Rptr.2d 699, 889 P.2d 1019 [discussing exclusive delegation]; *Committee of Seven Thousand v. Superior Court* (1988) 45 Cal.3d 491, 511, 247 Cal.Rptr. 362, 754 P.2d 708 [same].) The Legislature is bound by the state Constitution, however, and the evident purpose of article XIII C is to extend the local initiative power to fees and charges imposed by local public agencies. We need not determine whether the Legislature intended to preclude the use of the initiative to reduce the Agency's fees because even if it did so intend, the Legislature's authority in enacting the statutes under which the Agency operates must in this instance yield to constitutional command.

**[7]** To this point we have considered only the portions of Kelley's initiative that would reduce the Agency's water delivery charges. Kelley's initiative measure would do more than roll back the Agency's water rate and other charges, however. It would also require the Agency's board of directors to ***218** obtain voter approval before increasing any existing rate or charge or imposing any new rate or charge. Nothing in section 3 of California Constitution article XIII C authorizes initiative measures that impose voter-approval requirements for future increases in fees or charges.

Arguing to the contrary, Kelley points to the reference in section 3 of article XIII C to "[t]he power of initiative to *affect* local taxes, assessments, fees and charges." (Italics added.) He asserts that by imposing a voter-approval requirement on future increases in water delivery charges, his initiative would "affect" those charges and therefore is within the constitutional grant of initiative power. We disagree. The entire sentence reads: "The power of initiative to affect local taxes, assessments, fees and charges shall be applicable to all local governments and neither the Legislature nor any local government charter shall impose a signature requirement higher than that applicable to statewide statutory initiatives." (Cal. Const., art. XIII C, § 3.) The evident purpose of this sentence is not to define how the initiative may be used to ****228** impact fees and charges, but instead to specify that the initiative power extends to charges imposed by all local public agencies and that the signature requirement applied to statewide initiatives may not be exceeded. The scope of the initiative power is set by the previous sentence, stating that "the initiative power shall not be prohibited or otherwise limited *in matters of reducing or repealing* any local tax, assessment, fee or charge." (*Ibid.,* italics added.) Thus, analysis of the text of section 3 of article XIII C supports the conclusion that the initiative power granted by that section

extends only to "reducing or repealing" taxes, assessments, fees, and charges.

**[8]** That the voters who enacted Proposition 218 did not intend to authorize initiative measures imposing voter-approval requirements on future water delivery charge increases is confirmed by an examination of section 6 of California Constitution article XIII D. Related provisions ***83** "should be read together and construed in a manner that gives effect to each, yet does not lead to disharmony with the others." (*City of Huntington Beach v. Board of Administration* (1992) 4 Cal.4th 462, 468, 14 Cal.Rptr.2d 514, 841 P.2d 1034; see also *Cooley v. Superior Court* (2002) 29 Cal.4th 228, 248, 127 Cal.Rptr.2d 177, 57 P.3d 654; *Garcia v. McCutchen* (1997) 16 Cal.4th 469, 476, 66 Cal.Rptr.2d 319, 940 P.2d 906; *DeVita v. County of Napa, supra,* 9 Cal.4th at p. 778, 38 Cal.Rptr.2d 699, 889 P.2d 1019; *Pacific Southwest Realty Co. v. County of Los Angeles* (1991) 1 Cal.4th 155, 167, 2 Cal.Rptr.2d 536, 820 P.2d 1046.) Article XIII D, section 6, subdivision (c), says that "[*e*]*xcept for fees or charges for* sewer, *water,* and refuse collection services, no property related fee or charge shall be imposed or increased unless and until that fee or charge is submitted and approved by a majority vote of the property owners of the property subject to the fee or charge or, at the option of the agency, by a two-thirds vote of the electorate residing in the affected area." (Italics added.) Thus, article XIII D *219 expressly exempts water service charges from the voter-approval requirement that it imposes on all other fees and charges.

At least as to fees and charges that are property related, section 6 of California Constitution article XIII D would appear to embody the electorate's intent as to when voter-approval should be required, or not required, before existing fees may be increased or new fees imposed, and the electorate chose not to impose a voter-approval requirement for increases in water service charges. Although this provision does not expressly prohibit local initiatives that would impose such a requirement, neither does it authorize them. The provisions of article XIII C support a similar conclusion. Although section 2 of article XIII C imposes voter-approval requirements for general taxes and for special taxes, nothing in article XIII C imposes a voter-approval requirement for fees or charges.

Kelley has asserted no authority other than section 3 of California Constitution article XIII C for the portion of his initiative that would require voter approval before any future increase in water delivery charges, and we have concluded that article XIII C does not authorize that provision. Kelley apparently concedes that in the absence of the authority granted by section 3 of article XIII C, the exclusive delegation rule (*DeVita v. County of Napa, supra,* 9 Cal.4th at pp. 775–777, 38 Cal.Rptr.2d 699, 889 P.2d 1019; *Committee of Seven Thousand v. Superior Court, supra,* 45 Cal.3d at p. 511, 247 Cal.Rptr. 362, 754 P.2d 708) bars initiative measures that infringe on the power of the Agency's governing board to set its water delivery rate and charges. Accordingly, we agree with the Court of Appeal that Kelley's initiative is invalid insofar as it seeks to impose a voter-approval requirement on future actions by the Agency's board of directors to increase the existing water rate and other charges or to impose new charges.

To some extent, this portion of the initiative is superfluous, because under Elections Code section 9323 [6] voter approval is required **229 before a local district's governing board may amend an ordinance adopted by initiative, unless the ordinance provides ***84 otherwise. (See *DeVita v. County of Napa, supra,* 9 Cal.4th at p. 788, 38 Cal.Rptr.2d 699, 889 P.2d 1019 [discussing similar statute for county ordinance]; *Mobilepark West Homeowners Assn. v. Escondido Mobilepark West* (1995) 35 Cal.App.4th 32, 40–41, 41 Cal.Rptr.2d 393 [discussing similar statute for city ordinance].) Therefore, if the voters were to approve an initiative lowering the Agency's water rate or other charge, the Agency's governing board would need voter approval before it could change the rate or charge *220 that had been set by initiative. The Agency's governing board would not need voter approval, however, to increase a charge that was not affected by initiative or to impose an entirely new charge.

We have concluded that under section 3 of California Constitution article XIII C, local voters by initiative may reduce a public agency's water rate and other delivery charges, but also that section 3 of article XIII C does not authorize an initiative to impose a requirement of voter preapproval for future rate increases or new charges for water delivery. In other words, by exercising the initiative power voters may decrease a public water agency's fees and charges for water service, but the agency's governing board may then raise other fees or impose new fees without prior voter approval. Although this power-sharing arrangement has the potential for conflict, we must presume that both sides will act reasonably and in good faith, and that the political process will eventually lead to compromises that are mutually acceptable and both financially and legally sound. (See *DeVita v. County of Napa, supra,* 9 Cal.4th at pp. 792–793, 38 Cal.Rptr.2d 699, 889 P.2d 1019 ["We

should not presume ... that the electorate will fail to do the legally proper thing."].) We presume local voters will give appropriate consideration and deference to a governing board's judgments about the rate structure needed to ensure a public water agency's fiscal solvency, and we assume the board, whose members are elected (see Stats.1969, ch. 1175, § 5, p. 2274, 72B West's Ann. Wat.-Appen., *supra,* ch. 112, p. 190), will give appropriate consideration and deference to the voters' expressed wishes for affordable water service. The notice and hearing requirements of subdivision (a) of section 6 of California Constitution article XIII D [7] will facilitate communications between a public water agency's board and its customers, and the substantive restrictions on property-related charges in ***221** subdivision (b) of *****85** the same section [8] should allay customers' concerns ****230** that the agency's water delivery charges are excessive.

In holding that section 3 of article XIII C of the state Constitution authorizes initiative measures that reduce public agency water service charges, we are not holding that the authorized initiative power is free of all limitations. In particular, we are not determining whether the electorate's initiative power is subject to the statutory provision requiring that water service charges be set at a level that "will pay the operating expenses of the agency, ... provide for repairs and depreciation of works, provide a reasonable surplus for improvements, extensions, and enlargements, pay the interest on any bonded debt, and provide a sinking or other fund for the payment of the principal of such debt as it may become due." (Stats.1969, ch. 1175, § 25, p. 2286, 72B West's Ann. Wat.-Appen., *supra,* ch. 112, p. 203.) That issue is not currently before us.

**III**

**[9]** We have concluded that Kelley's initiative is invalid insofar as it seeks to require voter approval before the Agency's governing board may increase water service charges or impose new charges. When a significant part of a proposed initiative measure is invalid, the measure may not be submitted to the voters. (*American Federation of Labor v. Eu* (1984) 36 Cal.3d 687, 715–716, 206 Cal.Rptr. 89, 686 P.2d 609; *City and County of San Francisco v. Patterson* (1988) 202 Cal.App.3d 95, 105–106, 248 Cal.Rptr. 290.) Accordingly, the trial court correctly determined that the initiative ***222** could not be placed on the ballot, and it properly granted judgment for the Agency, and the Court of Appeal correctly affirmed the trial court's judgment, although its reasoning differed substantially from the reasoning we use here.

The judgment of the Court of Appeal is affirmed.

GEORGE, C.J., BAXTER, WERDEGAR, CHIN, MORENO, and CORRIGAN, JJ., concur.

**All Citations**

39 Cal.4th 205, 138 P.3d 220, 46 Cal.Rptr.3d 73, 06 Cal. Daily Op. Serv. 6649, 2006 Daily Journal D.A.R. 9616

Footnotes

1 The Agency was formed under the name Bighorn Mountains Water Agency and acquired its current name after consolidation in 1989 with Desert View Water District. (See Wat.Code, §§ 33300–33306; Stats.1989, ch. 570, § 3, p. 1878, 73B West's Ann. Wat.-Appen. (1995 ed.) ch. 112, p. 189.)

2 Although the Agency's water rate was $4.00 per 100–cubic–foot billing unit when the initiative was circulated for signatures, it was scheduled to be reduced to $2.30 per billing unit in June 2003. Thus, one could argue, as Kelley has, that the actual reduction proposed by the initiative was not from $4.00 to $2.00, but from $2.30 to $2.00 per billing unit. We need not resolve this dispute.

3 In section 9 of article II, the state Constitution defines "referendum" as "the power of the electors to approve or reject statutes or parts of statutes *except ... statutes providing for tax levies* ...." (Cal. Const., art. II, § 9, subd. (a), italics added.) Under this definition, tax measures are exempt from referendum. (See *Rossi v. Brown* (1995) 9 Cal.4th 688, 697, 38 Cal.Rptr.2d 363, 889 P.2d 557.) But the state Constitution imposes no similar limitation on the initiative. (See *id.* at pp. 699–705, 38 Cal.Rptr.2d 363, 889 P.2d 557.)

4 Because article XIII D provides a single definition that includes both "fee" and "charge," those terms appear to be synonymous in both article XIII D and article XIII C. This is an exception to the normal rule of construction that each word in a constitutional or statutory provision is assumed to have independent significance. (*DuBois v. Workers' Comp. Appeals Bd., supra,* 5 Cal.4th at p. 388, 20 Cal.Rptr.2d 523, 853 P.2d 978.) We use the terms interchangeably in this opinion.

  

5 *Howard Jarvis Taxpayers Assn. v. City of Los Angeles* (2000) 85 Cal.App.4th 79, 101 Cal.Rptr.2d 905, which was decided before *Richmond, supra,* 32 Cal.4th 409, 9 Cal.Rptr.3d 121, 83 P.3d 518, is disapproved insofar as it is inconsistent with this conclusion.

6 That section reads: "No ordinance proposed by initiative petition and adopted either by the district board without submission to the voters or adopted by the voters shall be repealed or amended except by a vote of the people, unless provision is otherwise made in the original ordinance. In all other respects, an ordinance proposed by initiative petition and adopted shall have the same force and effect as any ordinance adopted by the board." (Elec.Code, § 9323.)

7 "(a) Procedures for New or Increased Fees and Charges. An agency shall follow the procedures pursuant to this section in imposing or increasing any fee or charge as defined pursuant to this article, including, but not limited to, the following:

"(1) The parcels upon which a fee or charge is proposed for imposition shall be identified. The amount of the fee or charge proposed to be imposed upon each parcel shall be calculated. The agency shall provide written notice by mail of the proposed fee or charge to the record owner of each identified parcel upon which the fee or charge is proposed for imposition, the amount of the fee or charge proposed to be imposed upon each, the basis upon which the amount of the proposed fee or charge was calculated, the reason for the fee or charge, together with the date, time, and location of a public hearing on the proposed fee or charge.

"(2) The agency shall conduct a public hearing upon the proposed fee or charge not less than 45 days after mailing the notice of the proposed fee or charge to the record owners of each identified parcel upon which the fee or charge is proposed for imposition. At the public hearing, the agency shall consider all protests against the proposed fee or charge. If written protests against the proposed fee or charge are presented by a majority of owners of the identified parcels, the agency shall not impose the fee or charge." (Cal. Const., art. XIII D, § 6, subd. (a).)

8 "(b) Requirements for Existing, New or Increased Fees and Charges. A fee or charge shall not be extended, imposed, or increased by any agency unless it meets all of the following requirements:

"(1) Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.

"(2) Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.

"(3) The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.

"(4) No fee or charge may be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property in question. Fees or charges based on potential or future use of a service are not permitted. Standby charges, whether characterized as charges or assessments, shall be classified as assessments and shall not be imposed without compliance with Section 4.

"(5) No fee or charge may be imposed for general governmental services including, but not limited to, police, fire, ambulance or library services, where the service is available to the public at large in substantially the same manner as it is to property owners." (Cal. Const., art. XIII D, § 6, subd. (b).)

124 Cal.App.4th 866
Court of Appeal, Fourth District, Division 1, California.

BUILDING INDUSTRY ASSOCIATION OF SAN DIEGO COUNTY et al., Plaintiffs and Appellants,
v.
STATE WATER RESOURCES CONTROL BOARD et al., Defendants and Respondents,
San Diego Baykeeper et al.,
Interveners and Respondents.

No. D042385.
|
Dec. 7, 2004.
|
Certified for Partial Publication. [1]
|
As Modified on Denial of Rehearing Jan. 4, 2005.
|
Review Denied March 30, 2005. *

**Synopsis**
**Background:** Building industry association filed petition for writ of mandate against regional and state water control boards, challenging issuance of comprehensive municipal stormwater sewer permit, as including water quality standard provisions which allegedly were too stringent and impossible to satisfy, and so violative of federal Clean Water Act standard. Environmental groups intervened as defendants. The Superior Court, San Diego County, Wayne L. Peterson, J., denied petition. Association appealed.

**[Holding:]** The Court of Appeal, Haller, J., held that water boards were not prohibited by Clean Water Act "maximum extent practicable" standard of stormwater pollutant abatement from including provisions in permit which required that municipalities comply with state water quality standards.

Affirmed.

West Headnotes (12)

**[1] Administrative Law and Procedure**
Findings in general

In exercising its independent judgment when reviewing an administrative proceeding, a trial court must afford a strong presumption of correctness concerning the administrative findings, and the party challenging the administrative decision bears the burden of convincing the court that the administrative findings are contrary to the weight of the evidence.

3 Cases that cite this headnote

**[2] Administrative Law and Procedure**
Findings; evidence

On review of a trial court's determination of a challenge to an administrative ruling, the Court of Appeal applies a substantial evidence standard when reviewing the trial court's factual determinations on the administrative record.

1 Cases that cite this headnote

**[3] Administrative Law and Procedure**
Trial or review de novo

On review of a trial court's determination of a challenge to an administrative ruling, an appellate court conducts a de novo review of the trial court's legal determinations, and is also not bound by the legal determinations made by the agency.

1 Cases that cite this headnote

**[4] Administrative Law and Procedure**
Competence, expertise, and knowledge of agency

Court of Appeal gives appropriate consideration to an administrative agency's expertise underlying its interpretation of an applicable statute.

  

4 Cases that cite this headnote

[5] **Administrative Law and Procedure**
Waters, wetlands, and water pollution
**Environmental Law**
Water pollution

In determining the meaning of the Clean Water Act and its amendments, federal courts generally defer to the construction of a statutory provision by the Environmental Protection Agency (EPA) if the disputed portion of the statute is ambiguous. Federal Water Pollution Control Act Amendments of 1972, § 101 et seq., 33 U.S.C.A. § 1251 et seq.

3 Cases that cite this headnote

[6] **Administrative Law and Procedure**
Waters, wetlands, and water pollution
**Environmental Law**
Water pollution

Court of Appeal considers and gives due deference to statutory interpretations of Clean Water Act by regional and state water control boards. Federal Water Pollution Control Act Amendments of 1972, § 101 et seq., 33 U.S.C.A. § 1251 et seq.

10 Cases that cite this headnote

[7] **Environmental Law**
Conditions and limitations

Regional and state water control boards, in issuing comprehensive municipal stormwater sewer permit, were not prohibited by Clean Water Act "maximum extent practicable" standard of stormwater pollutant abatement from including provisions in permit which required that municipalities comply with state water quality standards; language of pertinent statute communicated basic principle that boards, which had been federally approved to issue permit, retained discretion to impose appropriate water pollution controls in addition to those that came within definition of "maximum extent practicable," this principle was consistent with legislative history and purpose of Act, and there was no showing that applicable water quality standards were unattainable. Federal Water Pollution Control Act Amendments of 1972, § 402(p)(3)(B)(iii), 33 U.S.C.A. § 1342(p)(3)(B)(iii).

*See 4 Witkin, Summary of Cal. Law (9th ed. 1987) Real Property, §§ 66-69; Cal. Jur. 3d, Pollution and Conservation Laws, § 113 et seq.*

17 Cases that cite this headnote

[8] **Statutes**
Grammar, spelling, and punctuation

While punctuation and grammar should be considered in interpreting a statute, neither is controlling unless the result is in harmony with the clearly expressed intent of the Legislature.

[9] **Administrative Law and Procedure**
Plain, literal, or clear meaning; ambiguity or silence
**Statutes**
Extrinsic Aids to Construction

If the statutory language is susceptible to more than one reasonable interpretation, a court must look to a variety of extrinsic aids to interpreting the statute, including the ostensible objects to be achieved, the evils to be remedied, the legislative history, public policy, contemporaneous administrative construction, and the statutory scheme of which the statute is a part.

1 Cases that cite this headnote

[10] **Appeal and Error**
Motions, hearings, and orders in general
**Appeal and Error**
Judgment in General

All lower court judgments and orders are presumed correct, and persons challenging them on appeal must affirmatively show reversible error.

[11] **Appeal and Error**

  

Statement of evidence

A party challenging the sufficiency of evidence to support a judgment on appeal must summarize, and cite to, all of the material evidence, not just the evidence favorable to his or her appellate positions.

1 Cases that cite this headnote

**[12] Administrative Law and Procedure**

Discretion of agency; abuse of discretion

**Administrative Law and Procedure**

Sufficiency of evidence

The party challenging the scope of an administrative permit has the burden of showing the agency abused its discretion or its findings were unsupported by the facts.

1 Cases that cite this headnote

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**Opinion**

HALLER, J.

***871** This case concerns the environmental regulation of municipal storm sewers that carry excess water runoff to lakes, lagoons, rivers, bays, and the ocean. The waters flowing through these sewer systems have accumulated numerous harmful pollutants that are then discharged into the water body without receiving any treatment. To protect against the resulting water quality impairment, federal and state laws impose regulatory controls on storm sewer discharges. In particular, municipalities and other public entities are required to obtain, and comply with, a regulatory permit limiting the quantity and quality of water runoff that can be discharged from these storm sewer systems.

In this case, the California Regional Water Control Board, San Diego Region, (Regional Water Board) conducted numerous public hearings and then issued a comprehensive municipal storm sewer permit governing 19 local public entities. Although these entities did not bring an administrative challenge to the permit, one business organization, the Building Industry Association of San Diego County (Building Industry), filed an administrative appeal with the State Water Resources Control Board (State Water Board). After making some modifications to the permit, the State Water Board denied the appeal. Building Industry then petitioned for a writ of mandate in the superior court, asserting numerous claims, including that the permit violates state and federal law because the permit provisions are too stringent and impossible to satisfy. Three environmental groups intervened as defendants in the action. After a hearing, the trial court found Building Industry failed to prove its claims and entered judgment in favor of the administrative agencies (the Water Boards) and the intervener environmental groups.

On appeal, Building Industry's main contention is that the regulatory permit violates federal law because it allows the Water Boards to impose municipal storm sewer control measures more stringent than a federal standard known as "maximum extent practicable." ( ****131** 33 U.S.C. § 1342(p)(3)(B)(iii).)[2] In the published portion of this opinion, we reject this contention, and conclude the Water Boards had the authority to include a permit provision requiring compliance with state water quality standards. In the unpublished portion of the opinion, we find Building Industry's additional contentions to be without merit. We affirm the judgment.

***872** RELEVANT BACKGROUND INFORMATIONI.

*Summary of Relevant Clean Water Act Provisions*

Before setting forth the factual background of this particular case, it is helpful to summarize the federal and state statutory schemes for regulating municipal storm sewer discharges. [3]

A. *Federal Statutory Scheme*

When the United States Congress first enacted the Federal Water Pollution Control Act in 1948, the Congress relied primarily on state and local enforcement efforts to remedy water pollution problems. (*Middlesex Cty. Sewerage Auth. v. Sea Clammers* (1981) 453 U.S. 1, 11, 101 S.Ct. 2615, 69 L.Ed.2d 435; *Tahoe–Sierra Preservation Council v. State Water Resources Control Bd.* (1989) 210 Cal.App.3d 1421, 1433, 259 Cal.Rptr. 132.) However, by the early 1970's, it became apparent that this reliance on local enforcement was ineffective and had resulted in the "accelerating environmental degradation of rivers, lakes, and streams...." (*Natural Resources Defense Council, Inc. v. Costle* (D.C.Cir.1977) 568 F.2d 1369, 1371 (*Costle* ); see *EPA v. State Water Resources Control Board* (1976) 426 U.S. 200, 203, 96 S.Ct. 2022, 48 L.Ed.2d 578.) In response, in 1972 Congress substantially amended this law by mandating compliance with various minimum technological effluent standards established by the federal government and creating a comprehensive regulatory scheme to implement these laws. (See *EPA v. State Water Resources Control Board, supra,* 426 U.S. at pp. 204–205, 96 S.Ct. 2022.) The objective of this law, now commonly known as the Clean Water Act, was to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." (§ 1251(a).)

The Clean Water Act employs the basic strategy of prohibiting pollutant emissions from "point sources" [4] unless the party discharging the pollutants obtains a permit, known as an NPDES [5] permit. (See *EPA v. State Water Resources Control Board, supra,* 426 U.S. at p. 205, 96 S.Ct. 2022.) It is "unlawful ***873** for any person to discharge a pollutant without obtaining a permit and complying with its terms." (*Ibid.;* § 1311(a); see ****132** *Costle, supra,* 568 F.2d at p. 1375.) An NPDES permit is issued by the United States Environmental Protection Agency (EPA) or by a state that has a federally approved water quality program. (§ 1342(a), (b); *EPA v. State Water Resources Control Board, supra,* 426 U.S. at p. 209, 96 S.Ct. 2022.) Before an NPDES is issued, the federal or state regulatory agency must follow an extensive administrative hearing procedure. (See 40 C.F.R. §§ 124.3, 124.6, 124.8, 124.10; see generally Wardzinski et al., *National Pollutant Discharge Elimination System Permit Application and Issuance Procedures*, in The Clean Water Act Handbook (Evans edit., 1994) pp. 72–74 (Clean Water Act Handbook).) NPDES permits are valid for five years. (§ 1342(b)(1)(B).)

Under the Clean Water Act, the proper scope of the controls in an NPDES permit depends on the applicable state water quality standards for the affected water bodies. (See *Communities for a Better Environment v. State Water Resources Control Bd.* (2003) 109 Cal.App.4th 1089, 1092, 1 Cal.Rptr.3d 76.) Each state is required to develop water quality standards that establish " 'the desired condition of a waterway.' " (*Ibid.*) A water quality standard for any given water segment has two components: (1) the designated beneficial uses of the water body; and (2) the water quality criteria sufficient to protect those uses. (*Ibid.*) As enacted in 1972, the Clean Water Act mandated that an NPDES permit require compliance with state water quality standards and that this goal be met by setting forth a specific "effluent limitation," which is a restriction on the amount of pollutants that may be discharged at the point source. (§§ 1311, 1362(11).)

Shortly after the 1972 legislation, the EPA promulgated regulations exempting most municipal storm sewers from the NPDES permit requirements. (*Costle, supra,* 568 F.2d at p. 1372; see *Defenders of Wildlife v. Browner* (9th Cir.1999) 191 F.3d 1159, 1163 (*Defenders of Wildlife* ).) When environmental groups challenged this exemption in federal court, the Ninth Circuit held a storm sewer is a point source and the EPA did not have the authority to exempt categories of point sources from the Clean Water Act's NPDES permit requirements. (*Costle, supra,* 568 F.2d at pp. 1374–1383.) The *Costle* court rejected the EPA's argument that effluent-based storm sewer regulation was administratively infeasible because of the variable nature of storm water pollution and the number of affected storm sewers throughout the country. (*Id.* at pp. 1377–1382.) Although the court acknowledged the practical problems relating to storm sewer regulation, the court found the EPA had the flexibility under the Clean Water Act to design regulations that would overcome these problems. (*Id.* at pp. 1379–1383.)

***874** During the next 15 years, the EPA made numerous attempts to reconcile the statutory requirement of point source regulation with the practical problem of regulating possibly millions of diverse point source discharges of storm water.

  

(*Defenders of Wildlife, supra,* 191 F.3d at p. 1163; see Gallagher, *Clean Water Act* in Environmental Law Handbook (Sullivan edit., 2003) p. 300 (Environmental Law Handbook); Eisen, *Toward a Sustainable Urbanism: Lessons from Federal Regulation of Urban Stormwater Runoff* (1995) 48 Wash. U.J. Urb. & Contemp. L. 1, 40–41 (*Regulation of Urban Stormwater Runoff*).)

Eventually, in 1987, Congress amended the Clean Water Act to add provisions that specifically concerned NPDES permit requirements for storm sewer discharges. (§ 1342(p); see *Defenders of Wildlife, supra,* ****133** 191 F.3d at p. 1163; *Natural Resources Defense Council v. U.S. E.P.A.* (1992) 966 F.2d 1292, 1296.) In these amendments, enacted as part of the Water Quality Act of 1987, Congress distinguished between industrial and municipal storm water discharges. With respect to *industrial* storm water discharges, Congress provided that NPDES permits "shall meet all applicable provisions of this section and section 1311 [requiring the EPA to establish effluent limitations under specific timetables] ...." (§ 1342(p)(3)(A).) With respect to *municipal* storm water discharges, Congress clarified that the EPA had the authority to fashion NPDES permit requirements to meet water quality standards without specific numerical effluent limits and instead to impose "controls to reduce the discharge of pollutants to the maximum extent practicable ...." (§ 1342(p)(3)(B)(iii); see *Defenders of Wildlife, supra,* 191 F.3d at p. 1163.) Because the statutory language pertaining to municipal storm sewers is at the center of this appeal, we quote the relevant portion of the statute in full:

> "(B) Permits for discharges from municipal storm sewers —
>
> "(i) may be issued on a system- or jurisdiction-wide basis;
>
> "(ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and
>
> "(iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." (§ 1342(p)(3)(B).)

To ensure this scheme would be administratively workable, Congress placed a moratorium on many new types of required stormwater permits until 1994 (§ 1342(p)(1)), and created a phased approach to necessary municipal ***875** stormwater permitting depending on the size of the municipality (§ 1342(p)(2)(D)). (See *Environmental Defense Center, Inc. v. U.S. E.P.A.* (9th Cir.2003) 344 F.3d 832, 841–842.)

B. *State Statutory Scheme*

Three years before the 1972 Clean Water Act, the California Legislature enacted its own water quality protection legislation, the Porter–Cologne Water Quality Control Act (Porter–Cologne Act), seeking to "attain the highest water quality which is reasonable...." (Wat.Code, § 13000.) The Porter–Cologne Act created the State Water Board to formulate statewide water quality policy and established nine regional boards to prepare water quality plans (known as basin plans) and issue permits governing the discharge of waste. (Wat.Code, §§ 13100, 13140, 13200, 13201, 13240, 13241, 13243.) The Porter–Cologne Act identified these permits as "waste discharge requirements," and provided that the waste discharge requirements must mandate compliance with the applicable regional water quality control plan. (Wat.Code, §§ 13263, subd. (a), 13377, 13374.)

Shortly after Congress enacted the Clean Water Act in 1972, the California Legislature added chapter 5.5 to the Porter–Cologne Act, for the purpose of adopting the necessary federal requirements to ensure it would obtain EPA approval to issue NPDES permits. (Wat.Code, § 13370, subd. (c).) As part of these amendments, the Legislature provided that the state and regional water boards "shall, as required or authorized by the [Clean Water Act], issue waste discharge requirements ... which apply and ensure compliance with all applicable provisions ****134** [of the Clean Water Act], together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance." (Wat.Code, § 13377.) Water Code section 13374 provides that "[t]he term 'waste discharge requirements' as referred to in this division is the equivalent of the term 'permits' as used in the [Clean Water Act]."

California subsequently obtained the required approval to issue NPDES permits. (*WaterKeepers Northern California v. State Water Resources Control Bd.* (2002) 102 Cal.App.4th 1448, 1453, 126 Cal.Rptr.2d 389.) Thus, the waste discharge requirements issued by the regional water boards ordinarily also serve as NPDES permits under federal law. (Wat.Code, § 13374.)

II. *The NPDES Permit at Issue in this Case*

Under its delegated authority and after numerous public hearings, in February 2001 the Regional Water Board issued a 52–page NPDES permit ***876** and Waste Discharge Requirements (the Permit) governing municipal storm sewers owned by San Diego County, the San Diego Unified Port District, and 18 San Diego-area cities (collectively, "Municipalities").[6] The first 10 pages of the Permit contain the Regional Water Board's detailed factual findings. These findings describe the manner in which San Diego-area water runoff absorbs numerous harmful pollutants and then is conveyed by municipal storm sewers into local waters without any treatment. The findings state that these storm sewer discharges are a leading cause of water quality impairment in the San Diego region, endangering aquatic life and human health. The findings further state that to achieve applicable state water quality objectives, it is necessary not only to require municipalities to comply with existing pollution-control technologies, but also to require compliance with applicable "receiving water limits" (state water quality standards) and to employ an "iterative process" of "development, implementation, monitoring, and assessment" to improve existing technologies.

Based on these factual findings, the Regional Water Board included in the Permit several overall prohibitions applicable to municipal storm sewer discharges. Of critical importance to this appeal, these prohibitions concern two categories of restrictions. First, the Municipalities are prohibited from discharging those pollutants "which have not been reduced to the *maximum extent practicable....* "[7] (Italics added). Second, the Municipalities are ****135** prohibited from discharging pollutants "which cause or contribute to exceedances of receiving water quality objectives ..." and/or that "cause or contribute to the violation of water quality standards...." This second category of restrictions (referred to in this opinion as the "Water Quality Standards provisions") essentially provide that a Municipality may not discharge pollutants if those pollutants would cause the receiving water body to exceed the applicable water quality standard. It is these latter restrictions that are challenged by Building Industry in this appeal.

***877** Part C of the Permit (as amended) qualifies the Water Quality Standards provisions by detailing a procedure for enforcing violations of those standards through a step-by-step process of "timely implementation of control measures ...," known as an "iterative" process. Under this procedure, when a municipality "caus[es] or contribute[s] to an exceedance of an applicable water quality standard," the municipality must prepare a report documenting the violation and describing a process for improvement and prevention of further violations. The municipality and the regional water board must then work together at improving methods and monitoring progress to achieve compliance. But the final provision of Part C states that "Nothing in this section shall prevent the [Regional Water Board] from enforcing any provision of this Order while the [municipality] prepares and implements the above report."

In addition to these broad prohibitions and enforcement provisions, the Permit requires the Municipalities to implement, or to require businesses and residents to implement, various pollution control measures referred to as "best management practices," which reflect techniques for preventing, slowing, retaining or absorbing pollutants produced by stormwater runoff. These best management practices include structural controls that minimize contact between pollutants and flows, and non-structural controls such as educational and public outreach programs. The Permit also requires the Municipalities to regulate discharges associated with new development and redevelopment and to ensure a completed project will not result in significantly increased discharges of pollution from storm water runoff.

III. *Administrative and Trial Court Challenges*

After the Regional Water Board issued the Permit, the Building Industry, an organization representing the interests of numerous construction-related businesses, filed an administrative challenge with the State Water Board. Although none of the Municipalities joined in the administrative appeal, Building Industry claimed its own independent standing based on its assertion that the Permit would impose indirect obligations on the regional building community. (See Wat.Code, § 13320 [permitting any "aggrieved person" to challenge regional water board action].) Among its numerous contentions, Building Industry argued that the Water Quality Standards provisions in the Permit require strict compliance with state water quality standards beyond what is "practicable" and therefore violate federal law.

In November 2001, the State Water Board issued a written decision rejecting Building Industry's appeal after making certain modifications to the Permit. (Cal. Wat. Resources Control Bd. Order WQ2001–15 (Nov. 15, 2001).) Of particular relevance here, the State Water Board modified the Permit to make clear that the iterative enforcement process applied to the Water Quality Standards provisions in the Permit. But ***878** the State Water Board did not delete the

Permit's provision stating ****136** that the Regional Water Board retains the authority to enforce the Water Quality Standards provisions even if a Municipality is engaged in this iterative process.

Building Industry then brought a superior court action against the Water Boards, challenging the Regional Board's issuance of the Permit and the State Water Board's denial of Building Industry's administrative challenge.[8] Building Industry asserted numerous legal claims, including that the Water Boards: (1) violated the Clean Water Act by imposing a standard greater than the "maximum extent practicable" standard; (2) violated state law by failing to consider various statutory factors before issuing the Permit; (3) violated the California Environmental Quality Act (CEQA) by failing to prepare an environmental impact report (EIR); and (4) made findings that were factually unsupported.

Three environmental organizations, San Diego BayKeeper, Natural Resources Defense Council, and California CoastKeeper (collectively, Environmental Organizations), requested permission to file a complaint in intervention, seeking to uphold the Permit and asserting a direct and substantial independent interest in the subject of the action. Over Building Industry's objections, the trial court permitted these organizations to file the complaint and enter the action as parties-interveners.

After reviewing the lengthy administrative record and the parties' briefs, and conducting an oral hearing, the superior court ruled in favor of the Water Boards and Environmental Organizations (collectively, respondents). Applying the independent judgment test, the court found Building Industry failed to meet its burden to establish the State Water Board abused its discretion in approving the Permit or that the administrative findings are contrary to the weight of the evidence. In particular, the court found Building Industry failed to establish the Permit requirements were "impracticable under federal law or unreasonable under state law," and noted that there was evidence showing the Regional Water Board considered many practical aspects of the regulatory ***879** controls before issuing the Permit. Rejecting Building Industry's legal arguments, the court also stated that under federal law the Water Boards had the discretion "to require strict compliance with water quality standards" or "to require less than strict compliance with water quality standards." The court also sustained several of respondents' evidentiary objections, including to documents relating to the legislative history of the Clean Water Act.

Building Industry appeals, challenging the superior court's determination that the Permit did not violate the federal Clean Water Act. In its appeal, Building Industry does not reassert its claim that the Permit violates state law, except for its contentions pertaining to CEQA.

DISCUSSIONI. *Standard of Review*

**[1]** A party aggrieved by a final decision of the State Water Board may obtain review of the decision by filing a timely ****137** petition for writ of mandate in the superior court. (Wat.Code, § 13330, subd. (a).) Code of Civil Procedure section 1094.5 governs the proceedings, and the superior court must exercise its independent judgment in examining the evidence and resolving factual disputes. (Wat.Code, § 13330, subd. (d).) "In exercising its independent judgment, a trial court must afford a strong presumption of correctness concerning the administrative findings, and the party challenging the administrative decision bears the burden of convincing the court that the administrative findings are contrary to the weight of the evidence." (*Fukuda v. City of Angels* (1999) 20 Cal.4th 805, 817, 85 Cal.Rptr.2d 696, 977 P.2d 693.)

**[2]** **[3]** **[4]** **[5]** **[6]** In reviewing the trial court's factual determinations on the administrative record, a Court of Appeal applies a substantial evidence standard. (*Fukuda v. City of Angels, supra,* 20 Cal.4th at p. 824, 85 Cal.Rptr.2d 696, 977 P.2d 693.) However, in reviewing the trial court's legal determinations, an appellate court conducts a de novo review. (See *Alliance for a Better Downtown Millbrae v. Wade* (2003) 108 Cal.App.4th 123, 129, 133 Cal.Rptr.2d 249.) Thus, we are not bound by the legal determinations made by the state or regional agencies or by the trial court. (See *Yamaha Corp. of America v. State Bd. of Equalization* (1998) 19 Cal.4th 1, 7–8, 78 Cal.Rptr.2d 1, 960 P.2d 1031.) But we must give appropriate consideration to an administrative agency's expertise underlying its interpretation of an applicable statute.[9] (*Ibid.*)

***880** II. *Water Boards' Authority to Enforce Water Quality Standards in NPDES Permit*

Building Industry's main appellate contention is very narrow. Building Industry argues that two provisions in the Permit (the Water Quality Standards provisions) violate federal law because they prohibit the Municipalities from discharging runoff from storm sewers if the discharge would cause a water body to exceed the applicable water quality standard

established under state law.[10] Building Industry contends that under federal law the "maximum extent practicable" standard is the "exclusive" measure that may be applied to municipal storm sewer discharges and a regulatory agency may not require a Municipality to comply with a state water quality standard if the required controls exceed a "maximum extent practicable" standard.

In the following discussion, we first reject respondents' contentions that Building Industry waived these arguments by failing to raise a substantial evidence challenge to the court's factual findings and/or ****138** to reassert its state law challenges on appeal. We then focus on the portion of the Clean Water Act (§ 1342(p)(3)(B)(iii)) that Building Industry contends is violated by the challenged Permit provisions. On our de novo review of this legal issue, we conclude the Permit's Water Quality Standards provisions are proper under federal law, and Building Industry's legal challenges are unsupported by the applicable statutory language, legislative purpose, and legislative history.

A. *Building Industry Did Not Waive the Legal Argument*

Respondents (the Water Boards and Environmental Organizations) initially argue that Building Industry waived its right to challenge the Permit's consistency with the maximum extent practicable standard because Building Industry did not challenge the trial court's *factual* findings that Building Industry failed to prove any of the Permit requirements were "impracticable" or "unreasonable."

In taking this position, respondents misconstrue the nature of Building Industry's appellate contention challenging the Water Quality Standards provisions. Building Industry's contention concerns the scope of the authority given to the Regional Water Board under the Permit terms. Specifically, ***881** Building Industry argues that the Regional Water Board does not have the authority to require the Municipalities to adhere to the applicable water quality standards because federal law provides that the "maximum extent practicable" standard is the exclusive standard that may be applied to storm sewer regulation. This argument—concerning the proper scope of a regulatory agency's authority—presents a purely legal issue, and is not dependent on the court's factual findings regarding the practicality of the specific regulatory controls identified in the Permit.

Respondents alternatively contend that Building Industry waived its right to challenge the propriety of the Water Quality Standards provisions under federal law because the trial court found the provisions were valid under state law and Building Industry failed to reassert its state law challenges on appeal. Under the particular circumstances of this case, we conclude Building Industry did not waive its rights to challenge the Permit under federal law.

Although it is well settled that the Clean Water Act authorizes states to impose water quality controls that are more stringent than are required under federal law (§ 1370; see *PUD No. 1 of Jefferson Cty. v. Washington Dept. of Ecology* (1994) 511 U.S. 700, 705, 114 S.Ct. 1900, 128 L.Ed.2d 716; *Northwest Environmental Advocates v. Portland* (9th Cir.1995) 56 F.3d 979, 989), and California law specifically allows the imposition of controls more stringent than federal law (Wat.Code, § 13377), the Water Boards made a tactical decision in the superior court to assert the Permit's validity based solely on federal law, and repeatedly made clear they were not seeking to justify the Permit requirements based on the Boards' independent authority to act under state law. On appeal, the Water Boards continue to rely primarily on federal law to uphold the Permit requirements, and their assertions that we may decide the matter based solely on state law are in the nature of asides rather than direct arguments. On this record, it would be improper to rely solely on state law to uphold the challenged Permit provisions.

B. *The Water Quality Standards Requirement Does Not Violate Federal Law*

**[7]** We now turn to Building Industry's main substantive contention on appeal— ****139** that the Permit's Water Quality Standards provisions (fn.10, *ante* ) violate federal law. Building Industry's contention rests on its interpretation of the 1987 Water Quality Act amendments containing NPDES requirements for municipal storm sewers. The portion of the relevant statute reads: "(B) Permits for discharges from municipal storm sewers ... [¶] ... [¶] (iii) shall require controls to reduce the discharge of pollutants to the *maximum extent practicable, including* management practices, control techniques and ***882** system, design and engineering methods, and such other provisions as the [EPA] Administrator or the State determines appropriate for the control of such pollutants." (§ 1342(p)(3)(B)(iii), italics added.)

1. *Statutory Language*

Focusing on the first 14 words of subdivision (iii), Building Industry contends the statute means that the maximum extent

practicable standard sets the upper limit on the type of control that can be used in an NPDES permit, and that each of the phrases following the word "*including* " identify examples of "maximum extent practicable" controls. (§ 1342(p)(3)(B)(iii), italics added.) Building Industry thus reads the final "and such other provisions" clause as providing the EPA with the authority only to include *other* types of "maximum extent practicable" controls in an NPDES storm sewer permit.

Respondents counter that the term "including" refers only to the three identified types of pollution control procedures —(1) "management practices"; (2) "control techniques"; and (3) "system, design and engineering methods"—and that the last phrase, "*and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants,*" provides the EPA (or the approved state regulatory agency) the specific authority to go beyond the maximum extent practicable standard to impose effluent limitations or water-quality based standards in an NPDES permit. In support, respondents argue that because the word "system" in section 1342(p)(3)(B)(iii) is singular, it necessarily follows from parallel-construction grammar principles that the word "system" is part of the phrase "system, design and engineering methods" rather than the phrase "control techniques and system." Under this view and given the absence of a comma after the word "techniques," respondents argue that the "and such other provisions" clause cannot be fairly read as restricted by the "maximum extent practicable" phrase, and instead the "and such other provisions" clause is a separate and distinct clause that acts as a second direct object to the verb "require" in the sentence. (§ 1342(p)(3)(B)(iii).)

Building Industry responds that respondents' proposed statutory interpretation is "not logical" because if the "and such other provisions" phrase is the direct object of the verb "require," the sentence would not make sense. Building Industry states that "permits" do not generally "require" provisions; they "include" or "contain" them.

As a matter of grammar and word choice, respondents have the stronger position. The second part of Building Industry's proposed interpretation—"control techniques and system, design, and engineering methods"—without a comma after the word "techniques" does not logically serve as a ***883** parallel construct with the "and such other provisions" clause. Moreover, we disagree that the "and such other provisions" clause cannot be a direct object to the word "require." (§ 1342(p)(3)(B)(iii).) Although it is not the clearest way of articulating the concept, the language of section 1342(p)(3)(B)(iii) does communicate the basic ****140** principle that the EPA (and/or a state approved to issue the NPDES permit) retains the discretion to impose "appropriate" water pollution controls in addition to those that come within the definition of " 'maximum extent practicable.' " (*Defenders of Wildlife, supra,* 191 F.3d at pp. 1165–1167.) We find unpersuasive Building Industry's reliance on several statutory interpretation concepts, *ejusdem generis, noscitur a sociis,* and *expressio unius est exclusion alterius,* to support its narrower statutory construction.

2. *Purpose and History of Section 1342(p)(3)(B)(iii)*

**[8]** **[9]** Further, "[w]hile punctuation and grammar should be considered in interpreting a statute, neither is controlling unless the result is in harmony with the clearly expressed intent of the Legislature." (*In re John S.* (2001) 88 Cal.App.4th 1140, 1144, fn. 1, 106 Cal.Rptr.2d 476; see *Estate of Coffee* (1941) 19 Cal.2d 248, 251, 120 P.2d 661.) If the statutory language is susceptible to more than one reasonable interpretation, a court must also "look to a variety of extrinsic aids, including the ostensible objects to be achieved, the evils to be remedied, the legislative history, public policy, contemporaneous administrative construction, and the statutory scheme of which the statute is a part." (*Nolan v. City of Anaheim* (2004) 33 Cal.4th 335, 340, 14 Cal.Rptr.3d 857, 92 P.3d 350.)

The legislative purpose underlying the Water Quality Act of 1987, and section 1342(p) in particular, supports that Congress intended to provide the EPA (or the regulatory agency of an approved state) the discretion to require compliance with water quality standards in a municipal storm sewer NPDES permit, particularly where, as here, that compliance will be achieved primarily through an iterative process.

Before section 1342(p) was enacted, the courts had long recognized that the EPA had the authority to require a party to comply with a state water quality standard even if that standard had not been translated into an effluent limitation. (See *EPA v. State Water Resources Control Board, supra,* 426 U.S. at p. 205, fn. 12, 96 S.Ct. 2022; *PUD No. 1 of Jefferson Cty. v. Washington Dept. of Ecology, supra,* 511 U.S. at p. 715, 114 S.Ct. 1900; *Northwest Environmental Advocates v. Portland* (9th Cir.1995) 56 F.3d 979, 987; *Natural Resources Defense Council v. U.S.E.P.A.* (9th Cir.1990) 915 F.2d 1314, 1316.) Specifically, section 1311(b)(1)(C) gave the regulatory agency the authority to impose "any more stringent

limitation including those necessary to meet water quality standards," and section 1342(a)(2) provided that "[t]he [EPA] Administrator shall ***884** prescribe conditions for [NPDES] permits to assure compliance" with requirements identified in section 1342(a)(1), which encompass state water quality standards. The United States Supreme Court explained that when Congress enacted the 1972 Clean Water Act, it retained "[w]ater quality standards ... as a supplementary basis for effluent limitations, ... so that numerous point sources despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels...." (*EPA v. State Water Resources Control Board, supra,* 426 U.S. at p. 205, fn. 12, 96 S.Ct. 2022; see also *Arkansas v. Oklahoma* (1992) 503 U.S. 91, 101, 112 S.Ct. 1046, 117 L.Ed.2d 239.)

There is nothing in section 1342(p)(3)(B)(iii)'s statutory language or legislative history showing that Congress intended to eliminate this discretion when it amended the Clean Water Act in 1987. ****141** To the contrary, Congress added the NPDES storm sewer requirements to strengthen the Clean Water Act by making its mandate correspond to the practical realities of municipal storm sewer regulation. As numerous commentators have pointed out, although Congress was reacting to the physical differences between municipal storm water runoff and other pollutant discharges that made the 1972 legislation's blanket effluent limitations approach impractical and administratively burdensome, the primary point of the legislation was to address these administrative problems while giving the administrative bodies the tools to meet the fundamental goals of the Clean Water Act in the context of stormwater pollution. (See *Regulation of Urban Stormwater Runoff, supra,* 48 Wash.U.J. Urb. & Contemp. L. at pp. 44–46; Environmental Law Handbook, *supra,* at p. 300; Clean Water Act Handbook, *supra,* at pp. 62–63.) In the 1987 congressional debates, the Senators and Representatives emphasized the need to prevent the widespread and escalating problems resulting from untreated storm water toxic discharges that were threatening aquatic life and creating conditions dangerous to human health. (See Remarks of Sen. Durenberger, 133 Cong. Rec. 1279 (Jan. 14, 1987); Remarks of Sen. Chaffee, 133 Cong. Rec. S738 (daily ed. Jan 14, 1987); Remarks of Rep. Hammerschmidt, 133 Cong. Rec. 986 (Jan. 8, 1987); Remarks of Rep. Roe, 133 Cong. Rec. 1006, 1007 (Jan. 8, 1987); Remarks of Sen. Stafford, 132 Cong. Rec. 32381, 32400 (Oct. 16, 1986).) This legislative history supports that in identifying a maximum extent practicable standard Congress did not intend to substantively bar the EPA/state agency from imposing a more stringent water quality standard if the agency, based on its expertise and technical factual information and after the required administrative hearing procedure, found this standard to be a necessary and workable enforcement mechanism to achieving the goals of the Clean Water Act.

To support a contrary view, Building Industry relies on comments by Minnesota Senator David Durenberger during the lengthy congressional ***885** debates on the 1987 Water Quality Act amendments.[11] (132 Cong. Rec. 32400 (Oct. 16, 1986); 133 Cong. Rec. S752 (daily ed. Jan. 14, 1987).) In the cited portions of the Congressional Record, Senator Durenberger states that NPDES permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable. Such controls include management practices, control techniques and systems, design and engineering methods, and such other provisions, as the Administrator determines appropriate for the control of pollutants in the stormwater discharge." (*Ibid.*) When viewing these statements in context, it is apparent that the Senator was merely paraphrasing the words of the proposed statute and was not intending to address the issue of whether the maximum extent practicable standard was a regulatory ceiling or whether he believed the proposed amendments limited the EPA's existing discretion.[12]

****142** Building Industry's reliance on comments made by Georgia Representative James Rowland, who participated in drafting the 1987 Water Quality Act amendments, is similarly unhelpful. During a floor debate on the proposed amendments, Representative Rowland noted that cities have "millions of" stormwater discharge points and emphasized the devastating financial burden on cities if they were required to obtain a permit for each of these points. (133 Cong. Rec. 522 (daily ed. Feb. 3, 1987).) Representative Rowland then explained that the amendments would address this problem by "allow[ing] communities to obtain far less costly single jurisdictionwide permits." (*Ibid.*) Viewed in context, these comments were directed at the need for statutory provisions permitting the EPA to issue jurisdiction-wide permits thereby preventing unnecessary administrative costs to the cities, and do not reflect a desire to protect cities from the cost of complying with strict water quality standards when deemed necessary by the regulatory agency.

*3. Interpretations by the EPA and Other Courts*

Our conclusion that Congress intended section 1342(p)(3)(B)(iii) to provide the regulatory agency with authority to impose

  

standards stricter than a "maximum extent practicable" standard is consistent with interpretations by ***886** the EPA and the Ninth Circuit. In its final rule promulgated in the Federal Register, the EPA construed section 1342(p)(3)(B)(iii) as providing the administrative agency with the authority to impose water-quality standard controls in an NPDES permit if appropriate under the circumstances. Specifically, the EPA stated this statutory provision requires "controls to reduce the discharge of pollutants to the maximum extent practicable, *and where necessary water quality-based controls* ...." (55 Fed.Reg. 47990, 47994 (Nov. 16, 1990), italics added.) We are required to give substantial deference to this administrative interpretation, which occurred after an extensive notice and comment period. (See *ibid.; Chevron, supra,* 467 U.S. at pp. 842–844, 104 S.Ct. 2778.)

The only other court that has interpreted the "such other provisions" language of section 1342(p)(3)(B)(iii) has reached a similar conclusion. (*Defenders of Wildlife, supra,* 191 F.3d at pp. 1166–1167.) In *Defenders of Wildlife,* environmental organizations brought an action against the EPA, challenging provisions in an NPDES permit requiring several Arizona localities to adhere to various best management practice controls without requiring numeric effluent limitations. (*Id.* at p. 1161.) The environmental organizations argued that section 1342(p) did not allow the EPA to issue NPDES permits without requiring strict compliance with effluent limitations. (*Defenders of Wildlife, supra*, at p. 1161.) Rejecting this argument, the Ninth Circuit found section 1342(p)(3)(B)(iii)'s statutory language "unambiguously demonstrates that Congress did not require municipal storm-sewer discharges to comply strictly" with effluent limitations. (*Defenders of Wildlife, supra,* at p. 1164.)

But in a separate part of the opinion, the *Defenders of Wildlife* court additionally rejected the reverse argument made by the affected municipalities (who were the interveners in the action) that "the EPA may not, under the [Clean Water Act], require strict compliance with state water-quality standards, through numerical limits or otherwise." (*Defenders of Wildlife, supra,* 191 F.3d at p. 1166.) The court stated: "Although Congress did not require ****143** municipal storm-sewer discharges to comply strictly with [numerical effluent limitations], § 1342(p)(3)(B)(iii) states that '[p]ermits for discharges from municipal storm sewers ... shall require ... *such other provisions as the Administrator ... determines appropriate for the control of such pollutants.*' (Emphasis added.) That provision gives the EPA discretion to determine what pollution controls are appropriate.... [¶] *Under that discretionary provision, the EPA has the authority to determine that ensuring strict compliance with state water-quality standards is necessary to control pollutants.* The EPA also has the authority to require less than strict compliance with state water-quality standards.... Under 33 U.S.C. § 1342(p)(3)(B)(iii), the EPA's choice to include either management practices or numeric limitations in the permits was within its discretion. [Citations.]" (*Defenders of Wildlife, supra,* 191 F.3d at pp. 1166–1167, second italics added.) Although dicta, this ***887** conclusion reached by a federal court interpreting federal law is persuasive and is consistent with our independent analysis of the statutory language. [13]

To support its interpretation of section 1342(p)(3)(B)(iii), Building Industry additionally relies on the statutory provisions addressing nonpoint source runoff (a diffuse runoff not channeled through a particular source), which were also part of the 1987 amendments to the Clean Water Act. (§ 1329.) In particular, Building Industry cites to section 1329(a)(1)(C), which states, "The Governor of each State shall ... prepare and submit to the [EPA] Administrator for approval, a report which ... [¶] ... [¶] describes the process ... for identifying best management practices and measures to control each [identified] category ... of nonpoint sources and ... to reduce, to the *maximum extent practicable,* the level of pollution resulting from such category...." (Italics added.) Building Industry argues that because this "nonpoint source" statutory language expressly identifies only the maximum extent practicable standard, we must necessarily conclude that Congress meant to similarly limit the storm sewer point source pollution regulations to the maximum extent practicable standard.

The logic underlying this analogy is flawed because the critical language in the two statutory provisions is different. In the nonpoint source statute, Congress chose to include only the maximum extent practicable standard (§ 1329(a)(1)(C)); whereas in the municipal storm sewer provisions, Congress elected to include the "and such other provisions" clause (§ 1342(p)(3)(B)(iii)). This difference leads to the reasonable inference that Congress had a different intent when it enacted the two statutory provisions. Moreover, because of a fundamental difference between point and nonpoint source pollution, Congress has historically treated the two types of pollution differently and has subjected each type to entirely different requirements. (See *Pronsolino v. Nastri* (9th Cir.2002) 291 F.3d 1123, 1126–1127.) Given this different treatment, it would be improper to presume Congress intended to apply the same standard in both statutes.

Building Industry's citation to comments during the 1987 congressional debates regarding nonpoint source regulation does ****144** not support Building Industry's contentions.

***888** 4. *Contention that it is "Impossible" for Municipalities to Meet Water Quality Standards*

We also reject Building Industry's arguments woven throughout its appellate briefs, and emphasized during oral arguments, that the Water Quality Standards provisions violate federal law because compliance with those standards is "impossible." The argument is not factually or legally supported.

**[10]** **[11]** First, there is no showing on the record before us that the applicable water quality standards are unattainable. The trial court specifically concluded that Building Industry failed to make a factual showing to support this contention, and Building Industry does not present a proper appellate challenge to this finding sufficient to warrant our reexamining the evidence. All judgments and orders are presumed correct, and persons challenging them must affirmatively show reversible error. (*Walling v. Kimball* (1941) 17 Cal.2d 364, 373, 110 P.2d 58.) A party challenging the sufficiency of evidence to support a judgment must summarize (and cite to) *all* of the material evidence, not just the evidence favorable to his or her appellate positions. (*In re Marriage of Fink* (1979) 25 Cal.3d 877, 887–888, 160 Cal.Rptr. 516, 603 P.2d 881; *People v. Dougherty* (1982) 138 Cal.App.3d 278, 282, 188 Cal.Rptr. 123.) Building Industry has made no attempt to comply with this well established appellate rule in its briefs.

In a supplemental brief, Building Industry attempted to overcome this deficiency by asserting that "[t]he record clearly establishes that [the Water Quality Standards provisions] are unattainable during the period the permit is in effect." This statement, however, is not supported by the proffered citation or by the evidence viewed in the light most favorable to the respondents. Further, the fact that many of the Municipalities' storm sewer discharges currently violate water quality standards does not mean that the Municipalities cannot comply with the standards during the five-year term of the Permit. Additionally, Building Industry's assertions at oral argument that the trial court never reached the "impossibility" issue and/or that respondents' counsel conceded the issue below are belied by the record, including the trial court's rejection of Building Industry's specific challenge to the proposed statement of decision on this very point. [14]

**[12]** We reject Building Industry's related argument that it was respondents' burden to affirmatively show it is feasible to satisfy each of the applicable Water Quality Standards provisions. The party challenging the scope of an administrative permit, such as an NPDES, has the burden of ***889** showing the agency abused its discretion or its findings were unsupported by the facts. (See *Fukuda v. City of Angels, supra,* 20 Cal.4th at p. 817, 85 Cal.Rptr.2d 696, 977 P.2d 693; *Huntington Park Redevelopment Agency v. Duncan* (1983) 142 Cal.App.3d 17, 25, 190 Cal.Rptr. 744.) Thus, it was not respondents' burden to affirmatively demonstrate it was possible for the Municipalities to meet the Permit's requirements.

Building Industry alternatively contends it was not required to challenge the facts underlying the trial court's determination that the Permit requirements were feasible ****145** because the court's determination was wrong as a matter of law. Specifically, Building Industry asserts that a Permit requirement that is more stringent than a "maximum extent practicable" standard is, by definition, "not practicable" and therefore "technologically impossible" to achieve under any circumstances. Building Industry relies on a dictionary definition of "practicable," which provides that the word means " 'something that can be done; feasible,' " citing the 1996 version of "Webster's Encyclopedic Unabridged Dictionary."

This argument is unpersuasive. The federal maximum extent practicable standard it is not defined in the Clean Water Act or applicable regulations, and thus the Regional Water Board properly included a detailed description of the term in the Permit's definitions section. (See *ante,* fn. 7.) As broadly defined in the Permit, the maximum extent practicable standard is a highly flexible concept that depends on balancing numerous factors, including the particular control's technical feasibility, cost, public acceptance, regulatory compliance, and effectiveness. This definition conveys that the Permit's maximum extent practicable standard is a term of art, and is not a phrase that can be interpreted solely by reference to its everyday or dictionary meaning. Further, the Permit's definitional section states that the maximum extent practicable standard "considers economics and is generally, but not necessarily, *less* stringent than BAT." (Italics added.) BAT is an acronym for "best available technology economically achievable," which is a technology-based standard for industrial storm water dischargers that focuses on reducing pollutants by treatment or by a combination of treatment and best management practices. (See *Texas Oil*

  

*& Gas Ass'n v. U.S. E.P.A.* (5th Cir.1998) 161 F.3d 923, 928.) If the maximum extent practicable standard is generally "less stringent" than another Clean Water Act standard that relies on available technologies, it would be unreasonable to conclude that anything more stringent than the maximum extent practicable standard is necessarily impossible. In other contexts, courts have similarly recognized that the word "practicable" does not necessarily mean the most that can possibly be done. (See *Nat. Wildlife Federation v. Norton* (E.D.Cal.2004) 306 F.Supp.2d 920, 928, fn. 12 ["[w]hile the meaning of the term 'practicable' in the [Endangered Species Act] is not entirely clear, the term does not simply equate to 'possible' "]; ***890** *Primavera Familienstiftung v. Askin* (S.D.N.Y.1998) 178 F.R.D. 405, 409 [noting that "impracticability does not mean impossibility, but rather difficulty or inconvenience"].)

We additionally question whether many of Building Industry's "impossibility" arguments are premature on the record before us. As we have explained, the record does not support that any required control is, or will be, impossible to implement. Further, the Permit allows the Regional Water Board to enforce water quality standards during the iterative process, but does not impose any obligation that the Board do so. Thus, we cannot determine with any degree of certainty whether this obligation would ever be imposed, particularly if it later turns out that it is not possible for a Municipality to achieve that standard.

Finally, we comment on Building Industry's repeated warnings that if we affirm the judgment, all affected Municipalities will be in immediate violation of the Permit because they are not now complying with applicable water quality standards, subjecting them to immediate and substantial civil penalties, and leading to a potential "shut down" of public operations. These doomsday arguments are unsupported. The Permit makes clear that Municipalities ****146** are required to adhere to numerous specific controls (none of which are challenged in this case) and to comply with water quality standards through "timely implementation of control measures" by engaging in a cooperative iterative process where the Regional Water Board and Municipality work together to identify violations of water quality standards in a written report and then incorporate approved modified best management practices. Although the Permit allows the regulatory agencies to enforce the water quality standards during this process, the Water Boards have made clear in this litigation that they envision the ongoing iterative process as the centerpiece to achieving water quality standards. Moreover, the regulations provide an affected party reasonable time to comply with new permit requirements under certain circumstances. (See 40 C.F.R. § 122.47.) There is nothing in this record to show the Municipalities will be subject to immediate penalties for violation of water quality standards.

We likewise find speculative Building Industry's predictions that immediately after we affirm the judgment, citizens groups will race to the courthouse to file lawsuits against the Municipalities and seek penalties for violation of the Water Quality Standards provisions. [15] As noted, the applicable laws provide time for an affected entity to comply with new standards. Moreover, although we do not reach the enforcement issue in this case, we note the ***891** Permit makes clear that the iterative process is to be used for violations of water quality standards, and gives the Regional Water Board the discretionary authority to enforce water quality standards during that process. Thus, it is not at all clear that a citizen would have standing to compel a municipality to comply with a water quality standard despite an ongoing iterative process. (See § 1365(a)(1)(2).)

III.–VII. *

DISPOSITION

Judgment affirmed. Appellants to pay respondents' costs on appeal.

WE CONCUR: BENKE, Acting P.J., and AARON, J.

**All Citations**

124 Cal.App.4th 866, 22 Cal.Rptr.3d 128, 34 Envtl. L. Rep. 20,149, 04 Cal. Daily Op. Serv. 10,694, 2004 Daily Journal D.A.R. 14,492

Footnotes

1 Pursuant to California Rules of Court, rule 976.1, this opinion is certified for publication with the exception of Discussion parts III, IV, V, VI and VII.

* Baxter, J., and Brown, J., dissented.

  

2 Further statutory references are to title 33 of the United States Code, unless otherwise specified.

3 The systems that carry untreated urban water runoff to receiving water bodies are known as "[m]unicipal separate storm sewer" systems (40 C.F.R. § 122.26(b)(8)), and are often referred to as "MS4s" (40 C.F.R. § 122.30). For readability, we will identify these systems as municipal storm sewers. To avoid confusion in this case, we will generally use descriptive names, rather than initials or acronyms, when referring to parties and concepts.

4 The Clean Water Act defines a "point source" to be "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." (§ 1362(14).)

5 NPDES stands for National Pollution Discharge Elimination System.

6 Under the Clean Water Act, entities responsible for NPDES permit conditions pertaining to their own discharges are referred to as "copermittees." (40 C.F.R. § 122.26(b)(1).) For clarity and readability, we shall refer to these entities as Municipalities.

7 The Permit does not precisely define this phrase, and instead, in its definition section, contains a lengthy discussion of the variable nature of the maximum extent practicable concept, referred to as MEP. A portion of this discussion is as follows: "[T]he definition of MEP is dynamic and will be defined by the following process over time: municipalities propose their definition of MEP by way of their [local storm sewer plan]. Their total collective and individual activities conducted pursuant to the [plan] becomes their proposal for MEP as it applies both to their overall effort, as well as to specific activities (e.g., MEP for street sweeping, or MEP for municipal separate storm sewer maintenance). In the absence of a proposal acceptable to the [Regional Water Board], the [Regional Water Board] defines MEP." The definition also identifies several factors that are "useful" in determining whether an entity has achieved the maximum extent practicable standard, including "Effectiveness," "Regulatory Compliance," "Public Acceptance," "Cost," and "Technical Feasibility."

8 Several other parties were also named as petitioners: Building Industry Legal Defense Foundation, California Business Properties Association, Construction Industry Coalition for Water Quality, San Diego County Fire Districts Association, and the City of San Marcos. However, because these entities were not parties in the administrative challenge, the superior court properly found they were precluded by the administrative exhaustion doctrine from challenging the administrative agencies' compliance with the federal and state water quality laws. Although these entities were named as appellants in the notice of appeal, they are barred by the exhaustion doctrine from asserting appellate contentions concerning compliance with federal and state water quality laws. However, as to any other claims (such as CEQA), these entities are proper appellants. For ease of reference and where appropriate, we refer to the appellants collectively as Building Industry.

9 We note that in determining the meaning of the Clean Water Act and its amendments, federal courts generally defer to the EPA's statutory construction if the disputed portion of the statute is ambiguous. (See *Chevron U.S.A. v. Natural Res. Def. Council, Inc.* (1984) 467 U.S. 837, 842–844, 104 S.Ct. 2778, 81 L.Ed.2d 694 (*Chevron* ).) However, the parties do not argue this same principle applies to a *state agency's* interpretation of the Clean Water Act. Nonetheless, under governing state law principles, we do consider and give due deference to the Water Boards' statutory interpretations in this case. (See *Yamaha Corp. of America v. State Bd. of Equalization, supra,* 19 Cal.4th at pp. 7–8, 78 Cal.Rptr.2d 1, 960 P.2d 1031.)

10 These challenged Permit provisions state "Discharges from [storm sewers] which cause or contribute to exceedances of receiving water quality objectives for surface water or groundwater are prohibited" (Permit, § A.2), and "Discharges from [storm sewers] that cause or contribute to the violation of water quality standards ... are prohibited" (Permit, § C.1).

11 We agree with Building Industry that the trial court's refusal to consider this legislative history on the basis that it was not presented to the administrative agencies was improper. However, this error was not prejudicial because we apply a de novo review standard in interpreting the relevant statutes.

12 In the cited remarks, Senator Durenberger in fact expressed his dissatisfaction with the EPA's prior attempts to regulate municipal storm sewers. He pointed out, for example, that "[r]unoff from municipal separate storm sewers and industrial sites contain significant values of both toxic and conventional pollutants," and that despite the Clean Water Act's "clear directive," the EPA "has failed to require most stormwater point sources to apply for permits which would control the pollutants in their discharge." (133 Cong. Rec. 1274, 1279–1280 (daily ed. Jan. 14, 1987).)

13 Building Industry's reliance on two other Ninth Circuit decisions to support a contrary statutory interpretation is misplaced. (See *Natural Res. Def. Council, Inc. v. U.S.E.P.A., supra,* 966 F.2d at p. 1308; *Environmental Defense Center, Inc. v. U.S. E.P.A.* (9th Cir.2003) 344 F.3d 832.) Neither of these decisions addressed the issue of the scope of a regulatory agency's authority to exceed the maximum extent practicable standard in issuing NPDES permits for municipal storm sewers.

14 Because we are not presented with a proper appellate challenge, we do not address the trial court's factual determinations in this case concerning whether it is possible or practical for a Municipality to achieve any specific Permit requirement.

15 The Clean Water Act allows a citizen to sue a discharger to enforce limits contained in NPDES permits, but requires the citizen to notify the alleged violator, the state, and the EPA of its intention to sue at least 60 days before filing suit, and limits the enforcement to nondiscretionary agency acts. (See § 1365(a)(1)(2).)

* See footnote 1, *ante*.

79 Cal.App.4th 935, 94 Cal.Rptr.2d 535, 00 Cal. Daily Op. Serv. 2760, 2000 Daily Journal D.A.R. 3719

CALIFORNIA ASSOCIATION OF PROFESSIONAL SCIENTISTS et al., Plaintiffs and Respondents,
v.
DEPARTMENT OF FISH AND GAME et al., Defendants and Respondents; ALBERT W. MILLS et al., Interveners and Appellants.
ALBERT W. MILLS, Plaintiff and Appellant,
v.
DEPARTMENT OF FISH AND GAME et al., Defendants and Appellants.

No. C023075., No. C023184.
Court of Appeal, Third District, California.
Apr. 10, 2000.

**[Opinion certified for partial publication. * ]**

## SUMMARY

An individual filed a declaratory relief action challenging the constitutionality of a flat fee imposed by the Legislature pursuant to Fish & G. Code, § 711.4, on those submitting project proposals to the Department of Fish and Game for environmental review. Plaintiff alleged the fee constituted a tax that was not passed by a two-thirds majority as required under Cal. Const., art. XIII A (Prop. 13). The trial court found that although the statute was not unconstitutional on its face, it was unconstitutional as applied to plaintiff. Before entry of judgment, however, the parties settled the matter, with the department agreeing to refund plaintiff's fees and to stop collecting the fees statewide. Employees of the department then filed a petition for a writ of mandate to compel the department to resume collection of the fees and to pursue retroactive collection. The writ proceeding and the declaratory relief action were consolidated. The trial court again ruled that the statute was unconstitutional as applied, but that, in the absence of an appellate finding that the statute was unconstitutional, the ruling could only be applied to the individual plaintiff. The trial court ordered the department to reinstate enforcement and to retroactively collect the fees, and the settlement order in the declaratory relief action was modified to conform to the judgment in the writ proceedings. (Superior Court of Sacramento County, Nos. 95CS02523 and CV529928, Jeffrey L. Gunther, Judge.) ***936**

The Court of Appeal affirmed in part and reversed in part the judgment entered in the declaratory relief action, and, since the court concluded that the statute was a valid regulatory fee, and was therefore constitutionally enacted, plaintiff's appeal from the judgment entered in the writ proceedings was dismissed as moot. The court held that the Legislature did not violate the supermajority requirement of Cal. Const., art. XIII A, by imposing the flat fee pursuant to Fish & G. Code, § 711.4, with less than a two-thirds vote, since the exaction was a regulatory fee rather than a tax. The department met its burden of showing that the amount of fees generated by Fish & G. Code, § 711.4, was far less than the cost of the environmental reviews provided. Thus, the fees were not revenue raising. Although a flat fee will seldom represent the exact cost of providing a service, the evidence was sufficient to sustain the legislative determination that a flat fee system was a reasonable means to allocate the costs of environmental review. It was reasonable to assess a flat fee and thereby reduce the cost and administrative difficulty of accounting for the services provided for each individual project. Moreover, collection of a flat fee at a uniform time eased the administrative burden of collection and provided certainty to those submitting project proposals. The court further held that there was sufficient evidence to show that there was a reasonable basis for the legislative decision to charge more for the review of a negative declaration than for the review of an environmental impact report. (Opinion by Raye, J., with Sims, Acting P. J., and Nicholson, J., concurring.)

## HEADNOTES

### Classified to California Digest of Official Reports

(1a, 1b, 1c)
Property Taxes § 7.6--Constitutional Provisions-- Proposition 13--Assessments as Fees or Taxes--Flat Fee for Environmental Review by Department of Fish and Game:Taxation § 3--Construction of Legislation.
The Legislature did not violate the super-majority requirement of Cal. Const., art. XIII A (Prop. 13) by imposing a flat fee pursuant to Fish & G. Code, § 711.4, with less than a two-thirds vote, on those who submit project proposals to the Department of Fish and Game for the environmental review necessary to protect fish and wildlife, since the exaction was

a regulatory fee rather than a tax. The department met its burden of showing that the amount of fees generated by Fish & G. Code, § 711.4, was far less than the cost of the environmental reviews provided. Thus, the fees were not revenue raising. Although a flat fee will seldom represent the exact cost of providing a service, the evidence was sufficient to sustain the legislative determination that a flat fee system was a reasonable means to ***937** allocate the costs of environmental review. It was reasonable to assess a flat fee and thereby reduce the cost and administrative difficulty of accounting for the services provided for each individual project. Moreover, collection of a flat fee at a uniform time eased the administrative burden of collection and provided certainty to those submitting project proposals.

[See 9 Witkin, Summary of Cal. Law (9th ed. 1989) Taxation, § 107 et seq.]

(2)
Property Taxes § 7.6--Constitutional Provisions--Proposition 13-- Assessments as Fees or Taxes:Taxation § 3--Construction of Legislation.
The determination under Prop. 13 (Cal. Const., art. XIII A, §§ 3, 4) whether impositions are taxes or fees is a question of law for the appellate courts to decide on independent review of the facts. Ordinarily, taxes are imposed for revenue purposes, rather than in return for a specific benefit conferred or privilege granted, and most taxes are compulsory rather than imposed in response to a voluntary decision to develop or to seek other government benefits or privileges.

(3a, 3b)
Property Taxes § 7.8--Constitutional Provisions--Proposition 13--Regulatory Fees--Special Taxes.
Fees charged for the costs of regulatory activities are not special taxes under a Cal. Const., art. XIII A, § 4 (Prop. 13) analysis if the fees do not exceed the reasonable cost of providing services necessary to the activity for which the fee is charged and they are not levied for unrelated revenue purposes. A regulatory fee may be imposed under the police power when the fee constitutes an amount necessary to carry out the purposes and provisions of the regulation. The regulatory fee, to survive as a fee, does not require a precise cost-fee ratio. Legislators need only apply sound judgment and consider probabilities according to the best honest viewpoint of informed officials in determining the amount of the fee. The government bears the burden of proof. It must establish (1) the estimated costs of the service or regulatory activity, and (2) the basis for determining the manner in which the costs are apportioned, so that charges allocated to a payor bear a fair or reasonable relationship to the payor's burdens on or benefits from the regulatory activity. The record need only demonstrate a reasonable relationship between the fees to be charged and the estimated cost of the service or program to be provided; that requirement may be satisfied by evidence showing only that the fees will generate substantially less than the anticipated costs.

(4)
Fish and Game § 3--Regulation--Fee for Environmental Review with Department of Fish and Game--Validity of Higher Fee for ***938** Review of Negative Declaration.
In proceedings to challenge the validity of a flat fee (Fish & G. Code, § 711.4) on those submitting project proposals to the Department of Fish and Game for environmental review, there was sufficient evidence to show that there was a reasonable basis for the legislative decision to charge more for the review of a negative declaration than for the review of an environmental impact report. A senior environmental specialist supervisor for the department testified at trial that the standard for a negative declaration is that a project must have no adverse impact on the environment. Thus, the department must ensure that the disclosure of the possible impacts is complete and to assure any mitigation measures are adequate. Often, the proposed mitigation measures are inadequate, and the department staff must work with the lead agency and with the project proponent to develop an acceptable negative declaration document. The supervisor testified that his staff probably spent more time on the review of a negative declaration than the review of an equivalent size project with environmental impact report documentation. Hence, due to project information collection costs and the time spent negotiating mitigation measures, the department's costs were generally higher for negative declarations.

COUNSEL
McNeill & Belton and Walter P. O'Neill for Plaintiff and Appellant and for Interveners and Appellants.
Robin L. Rivett, Sharon L. Browne and Anne M. Hawkins for Pacific Legal Foundation as Amicus Curiae on behalf of Plaintiff and Appellant.
Daniel E. Lungren and Bill Lockyer, Attorneys General, Roderick E. Walston, Chief Assistant Attorney General, Charles W. Getz IV and Marian E. Moe, Deputy Attorneys General, for Defendants and Appellants and for Defendants and Respondents.
Dennis F. Moss for Plaintiffs and Respondents.

  

**RAYE, J.**

In this appeal we consider whether the Legislature ran afoul of the supermajority requirement of article XIII A of the California Constitution when it imposed a flat fee per environmental review by the Department ***939** of Fish and Game (Fish and Game). More precisely, we must determine whether the exactions imposed by section 711.4 of the Fish and Game Code [1] constitute a regulatory fee or a tax.

Determining whether an exaction is a fee or a tax has been a recurring chore since 1978 when the voters in California enacted comprehensive and constitutional tax reform. (Cal. Const., art. XIII A (the Jarvis-Gann Property Tax Initiative or Proposition 13).) An act to increase state taxes must be passed by two-thirds of the members of the Legislature and an increase in local taxes must be passed by a two-thirds vote of the qualified electors. (Cal. Const., art. XIII A, §§ 3 & 4.) Fees, by contrast, are not subject to the supermajority limitation of article XIII A. Albert Mills, an appellant in both cases, insists the environmental review fees charged by Fish and Game pursuant to section 711.4 constitute a tax and, therefore, are unconstitutional because the statute was passed by slightly less than a two-thirds majority.

It is well established that the amount of fees collected must not surpass the cost of the regulatory services or programs they are designed to support. We must decide whether there must be a direct correlation between the amount of a fee imposed on a specific payor and the benefits received or burdens imposed by the payor's activity. More to the point, is a flat regulatory fee in legal effect a tax subject to the supermajority requirement of California Constitution, article XIII A?

We conclude that as long as the cumulative amount of the fees does not surpass the cost of the regulatory program or service and the record discloses a reasonable basis to justify distributing the cost among payors, a fee does not become a tax simply because each payor is required to pay a predetermined fixed amount. Flat fees are not in legal effect taxes. Based on the evidentiary record before us, we find that the Legislature did not violate California Constitution, article XIII A by imposing a flat regulatory fee on those who submit project proposals to Fish and Game for the environmental review necessary to protect fish and wildlife. The consequences of our ruling to the multiple parties in these consolidated cases are explained below.

**Procedural Background**

Section 711.4, enacted by the Legislature in 1990, set a fee schedule to defray a portion of the costs incurred by Fish and Game in meeting its environmental review obligations under the California Environmental Quality Act and the Z'Berg-Nejedly Forest Practice Act of 1973. (§ 711.4, ***940** subds. (a), (b), (c) & (d); Pub. Resources Code, §§ 4511, 21000 et seq.) Section 711.4 states in relevant part: "(a) The department shall impose and collect a filing fee in the amount prescribed in subdivision (d) to defray the costs of managing and protecting fish and wildlife trust resources, including, but not limited to, consulting with other public agencies, reviewing environmental documents, recommending mitigation measures, developing monitoring requirements for purposes of the California Environmental Quality Act ..., consulting pursuant to Section 21104.2 of the Public Resources Code, and other activities protecting those trust resources identified in the review pursuant to the California Environmental Quality Act. [ ] (b) The filing fees shall be proportional to the cost incurred by the department and shall be annually reviewed and adjustments recommended to the Legislature in an amount necessary to pay the full costs of department programs as specified." For projects for which a negative declaration has been prepared, the filing fee set by the Legislature is $1,250 and for projects for which an environmental impact report has been prepared, the filing fee is $850. (§ 711.4, subd. (d)(3) & (4).) "The county clerk may charge a documentary handling fee of twenty-five dollars ($25) per filing in addition to the filing fee specified in subdivision (d)." (§ 711.4, subd. (e).)

Albert W. Mills challenged the constitutionality of section 711.4 in a declaratory relief action he filed in July 1991. He sought declaratory and injunctive relief in a first cause of action and a refund of his fees in a second cause of action. A demurrer was sustained without leave to amend to the second cause of action. Fish and Game sought a writ of mandate to compel the trial court to dismiss the entire complaint because Mills had not filed a claim for a tax refund. We summarily denied the petition for the writ. The trial court denied a subsequent motion for judgment on the pleadings on the same ground asserted in the writ petition.

In 1992 the Legislature amended the statute to expand the exemptions for projects for which no fees were required. The amendment passed by a two-thirds majority vote.

The case was tried in the summer of 1994 and the following spring the trial court issued a statement of decision. The

  

court found that although the statute was not unconstitutional on its face, on the evidence received by the court, it was unconstitutionally applied. Before the statement of decision was filed and a judgment was entered, the parties settled the lawsuit. Fish and Game agreed to refund Mills's fees, to pay his attorney fees, and to cease collection of the fees statewide.

Employees of Fish and Game, however, filed a petition for a writ of mandate to compel Fish and Game to resume collection of the fees and to ***941** pursue retroactive collection. Mills intervened in the writ proceedings, which were then consolidated with the declaratory relief action.

The trial court again ruled that section 711.4 was unconstitutional as applied but that, in the absence of an appellate finding that the statute was unconstitutional, the ruling could only be applied to Mills. (Cal. Const., art. III, § 3.5.) The court ordered Fish and Game to reinstate enforcement and to retroactively collect the fees. The settlement order in the declaratory relief action was modified to conform to the judgment in the writ proceedings. The settlement order provides in pertinent part that section 711.4 is not unconstitutional on its face but is unconstitutional as applied to Mills; Fish and Game is enjoined from collecting fees from Mills but is not otherwise prohibited from collecting fees.

Mills appeals both judgments. On appeal from the judgment in the declaratory relief action, he maintains section 711.4 is unconstitutional on its face and, consequently, Fish and Game must be enjoined from collecting all fees. Fish and Game urges us to dismiss the appeal on multiple grounds: Mills lacks standing because, under the terms of the settlement, he is not aggrieved; the constitutionality of section 711.4 is moot because it was amended by a two-thirds majority; and the trial court lacked jurisdiction because Mills failed to exhaust his administrative remedies by filing a claim for a tax refund. Fish and Game also appeals. We granted the Pacific Legal Foundation's request to file an amicus curiae brief echoing Mills's constitutional attack on the statute.

For the reasons discussed herein, we affirm in part and reverse in part the judgment entered in the declaratory relief action. Because we have concluded that section 711.4 is a valid regulatory fee, and was therefore constitutionally enacted, Mills's appeal from the judgment entered in the writ proceedings is moot. That appeal is dismissed.

**DiscussionI** [*]

**. . . . . .II**

Before we apply the ever-growing body of case law involving post-Proposition 13 fees and taxes, it is essential to understand the statutory world ***942** in which Fish and Game lives and section 711.4 was born. The language of these statutes resolves some of the issues raised by Mills and provides the necessary background to analyze others.

() Mills argues that Fish and Game does not operate a regulatory program and, therefore, the fee is not regulatory in nature. We disagree. Fish and Game is only one small part of a huge regulatory system in place in this state to protect and sustain the environment, but it plays a vital regulatory role under the California Environmental Quality Act (CEQA). (Pub. Resources Code, § 21000 et seq.) CEQA guidelines specifically list Fish and Game as a trustee agency, a status which imposes certain obligations. Fish and Game must be consulted before a determination is made as to whether a negative declaration or an environmental impact report is required for a particular project. (Pub. Resources Code, § 21080.3, subd. (a).) If an environmental impact report is required, Fish and Game must comment as to the scope and contents of this document. (Pub. Resources Code, § 21080.4, subd. (a).) Later in the process, Fish and Game may be required to submit a proposed program to monitor the mitigation measures. (Pub. Resources Code, § 21081.6.) The same obligations are imposed by documents which function as environmental assessment documents such as timber harvest plans. (*Environmental Protection Information Center, Inc. v. Johnson (1985) 170 Cal.App.3d 604, 626 [216 Cal.Rptr. 5022].) Fish and Game Code section 1802 also requires Fish and Game to consult with lead and responsible agencies.*

Fish and Game also has comparable obligations under the Forest Practice Act. (Pub. Resources Code, § 4511 et seq.) Like the responsibility conferred on it under CEQA, Fish and Game must review the impact of a timber harvest plan on fish and wildlife. The Department of Forestry and Fire Protection cannot approve a timber harvest plan until it has consulted with Fish and Game. (Pub. Resources Code, § 4582.6.)

Under both CEQA and the Forest Practice Act, Fish and Game is an essential link in a comprehensive attempt to safeguard the environment. The fact that Fish and Game does not operate an independent regulatory program with a correlative accounting system does not detract from its regulatory role.

The law is not so narrowly drawn. In a similar vein, the court in *Sinclair Paint Co. v. State Bd. of Equalization* (1997) 15 Cal.4th 866 [64 Cal.Rptr.2d 447, 937 P.2d 1350] observed: "From the viewpoint of general police power authority, we see no reason why statutes or ordinances calling on polluters or producers of contaminating products to help in mitigation or cleanup efforts should be deemed less 'regulatory' in nature than the initial ***943** permit or licensing programs that allowed them to operate. Moreover, imposition of 'mitigating effects' fees in a substantial amount ... also 'regulates' future conduct by deterring further manufacture, distribution, or sale of dangerous products, and by stimulating research and development efforts to produce safer or alternative products." (*Id.* at p. 877.)

Having charged Fish and Game with the responsibility to manage and protect fish and wildlife through the environmental review process, the Legislature enacted a fee statute to fund Fish and Game's review functions. There are two parts of section 711.4 which are germane to the constitutional question before us.

The Legislature expressly addressed proportionality. Section 711.4, subdivision (b) states: "The filing fees shall be proportional to the cost incurred by the department and shall be annually reviewed and adjustments recommended to the Legislature in an amount necessary to pay the full costs of department programs as specified."

Although the Legislature mandated a flat fee financing mechanism, it also provided an exemption for those projects with a de minimis impact on fish and wildlife. Section 711.4, subdivision (d)(1) provides: "For a project which is found by the lead or certified regulatory agency to be de minimis in its effect on fish and wildlife, no filing fee shall be paid, whether or not a negative declaration or an environmental impact report is prepared pursuant to the California Environmental Quality Act." In fact, 68 percent of the projects are found to be de minimis and a fee is not required.

In sum, the Legislature has given Fish and Game a critical regulatory role in the complex regulatory structure created to safeguard precious environmental resources. At the same time, the Legislature created a flat fee system to finance Fish and Game's environmental review. That system, by statute, must be proportional to the overall cost of environmental review, but only those who propose development projects which have more than a de minimis impact upon fish and wildlife are required to bear the cost of review. We must determine whether the Legislature violated the Constitution by establishing such a fee system with less than a two-thirds vote.

**III**

In 1991 the Legislature enacted the Childhood Lead Poisoning Prevention Act to provide evaluation, screening, and follow-up services for children who were at risk of suffering lead poisoning. The program of screening and treatment under the act was to be paid entirely by fees paid by those who ***944** contributed to lead contamination. In *Sinclair Paint Co. v. State Bd. of Equalization, supra,* 15 Cal.4th 866, the Supreme Court concluded the act imposed bona fide regulatory fees, not taxes.

*Sinclair* is the first published case in the post-Proposition 13 era to consider whether a state, rather than a local, fee is in legal effect a tax. "Section 3 of article XIII A restricts the enactment of changes in state taxes, as follows: 'From and after the effective date of this article, any changes in State taxes enacted for the purpose of increasing revenues collected pursuant thereto whether by increased rates or changes in methods of computation must be imposed by an Act passed by not less than two-thirds of all members ... of the Legislature, except that no new ad valorem taxes on real property, or sales or transaction taxes on the sales of real property may be imposed.' " (*Sinclair Paint Co. v. State Bd. of Equalization, supra,* 15 Cal.4th at pp. 872-873.) By contrast, there have been an abundance of cases in which courts have struggled to characterize a local exaction as a fee or a "special tax" under California Constitution, article XIII A, section 4. In *Sinclair*, the Supreme Court announced that "[b]ecause of the close, 'interlocking' relationship between the various sections of article XIII A" the section 4 cases "may be helpful, though not conclusive" in deciding cases under section 3. (15 Cal.4th at p. 873.)

() The court also reiterated the fundamental principle that "whether impositions are 'taxes' or 'fees' is a question of law for the appellate courts to decide on independent review of the facts." (*Sinclair Paint Co. v. State Bd. of Equalization, supra*, 15 Cal.4th at p. 874.) Ordinarily, "taxes are imposed for revenue purposes, rather than in return for a specific benefit conferred or privilege granted" and "[m]ost taxes are compulsory rather than imposed in response to a voluntary decision to develop or to seek other government benefits or privileges." (*Id.* at pp. 873-874.)

  

*Sinclair* was particularly helpful in identifying three very different kinds of fees or assessments, viz. special assessments, development fees and regulatory fees. (See also *Isaac v. City of Los Angeles* (1998) 66 Cal.App.4th 586, 596 [77 Cal.Rptr.2d 752].) As the court pointed out, special assessments are based on the value of benefits conferred on property, and development fees are exacted in return for permits or other government privileges. Regulatory fees, enacted under the police power, are an entirely different animal. The parties have failed to distinguish between these types of fees and, consequently, have extracted general principles from cases involving one type of fee and applied them to cases involving a completely different type of fee. We have focused our research on those cases, like *Sinclair*, involving regulatory fees. ***945**

() General principles have emerged. Fees charged for the associated costs of regulatory activities are not special taxes under an article XIII A, section 4 analysis if the " ' "fees do not exceed the reasonable cost of providing services necessary to the activity for which the fee is charged and [they] are not levied for unrelated revenue purposes." ' " (*Sinclair Paint Co. v. State Bd. of Equalization, supra*, 15 Cal.4th at p. 876; *Townzen v. County of El Dorado* (1998) 64 Cal.App.4th 1350, 1359 [76 Cal.Rptr.2d 281].) "A regulatory fee may be imposed under the police power when the fee constitutes an amount necessary to carry out the purposes and provisions of the regulation." (*San Diego Gas & Electric Co. v. San Diego County Air Pollution Control Dist*. (1988) 203 Cal.App.3d 1132, 1146, fn. 18 [250 Cal.Rptr. 420].) "Such costs ... include all those incident to the issuance of the license or permit, investigation, inspection, administration, maintenance of a system of supervision and enforcement." (*United Business Com. v. City of San Diego* (1979) 91 Cal.App.3d 156, 165 [154 Cal.Rptr. 263].) Regulatory fees are valid despite the absence of any perceived "benefit" accruing to the fee payers. (*Pennell v. City of San Jose* (1986) 42 Cal.3d 365, 375 [228 Cal.Rptr. 726, 721 P.2d 1111], affd. on other grounds *sub nom. Pennell v. City of San Jose* (1988) 485 U.S. 1 [108 S.Ct. 849, 99 L.Ed.2d 1].) Legislators "need only apply sound judgment and consider 'probabilities according to the best honest viewpoint of informed officials' in determining the amount of the regulatory fee." (*United Business Com. v. City of San Diego, supra*, 91 Cal.App.3d at p. 166.)

The government bears the burden of proof. (*Beaumont Investors v. Beaumont-Cherry Valley Water Dist*. (1985) 165 Cal.App.3d 227, 235 [211 Cal.Rptr. 567].) It must establish (1) the estimated costs of the service or regulatory activity, and (2) the basis for determining the manner in which the costs are apportioned, so that charges allocated to a payor bear a fair or reasonable relationship to the payor's burdens on or benefits from the regulatory activity. (*Id.* at pp. 234-235.) "Courts [look] to a variety of evidence in determining whether the agency has satisfied that burden, not all of it prepared before the adoption of the ordinance." (*City of Dublin v. County of Alameda* (1993) 14 Cal.App.4th 264, 282 [17 Cal.Rptr.2d 845].)

*City of Dublin v. County of Alameda, supra,* 14 Cal.App.4th 264, provides guidance on the quantum of proof necessary to establish the requisite fee-cost ratio. By initiative, the voters in Alameda County enacted a comprehensive recycling plan. Under the law, the plan was to be funded from a recycling fund created by a $6 per ton surcharge on materials dumped in the county landfills. The issue presented was whether the evidence before the trial court established that the surcharge would not exceed the reasonably ***946** necessary costs of the programs it would fund. The Court of Appeal considered both the estimated costs of the programs and the basis for determining the apportionment of those costs.

The court wrote: "The trial court concluded that the requisite fee-cost relationship was not established because Measure D's programs are not yet developed and their costs cannot presently be calculated with certainty, but such specificity is not required. Instead, the record need only demonstrate a reasonable relationship between the fees to be charged and the *estimated* cost of the service or program to be provided; that requirement may be satisfied by evidence showing only that the fees will generate substantially less than the anticipated costs." (*City of Dublin v. County of Alameda, supra*, 14 Cal.App.4th at p. 283, original italics.)

In a similar case, the Court of Appeal addressed the quantum of proof and proportionality. "Plaintiffs fault the report for failing to include 'site-specific' data showing a 'close connection' between new development and the fees to be imposed. However, their citation to 'taking' cases shows that they are blurring legal principles. [Citation.] The fee at issue here is a general one applied to all new residential development and valid if supported by a reasonable relationship between the amount of the fee and estimated cost of services. Site-specific review is neither available nor needed." (*Garrick Development Co. v. Hayward Unified School Dist.* (1992) 3 Cal.App.4th 320, 333-334 [4 Cal.Rptr.2d 897].)

  

() Fish and Game met its burden of showing that the amount of fees generated by section 711.4 was far less than the cost of the environmental reviews provided. There was evidence that $11 million had been collected in fees, but the cost of the reviews was in excess of $20 million. Thus, the fees were not revenue raising in that they did not generate income which surpassed the cost of the services provided.

The more difficult issue is determining what latitude the Legislature has in establishing the amount of a fee imposed on an individual payor. Fish and Game argues the fees have no indicia of a tax. Since there is sufficient evidence to demonstrate that collectively the amount of the fees do not exceed the cost of the regulatory program they are collected to support, they urge us to uphold the constitutionality of section 711.4. Mills, on the other hand, insists Fish and Game failed to prove the more specific requirement that the fees are proportionate to the service provided or the burden imposed. He insists the flat fee is a tax because there is no individual correlation between the amount of the fee and the cost of the benefit or burden. Whether the Legislature retains the flexibility to mandate a flat fee by a simple majority vote is the crux of this case. ***947**

*Sinclair* is noteworthy for its expansive legitimation of regulatory fees. Under the formula approved by the Supreme Court, paint manufacturers are assessed fees based on their market share or their past and present responsibility for environmental lead contamination. (*Sinclair Paint Co. v. State Bd. of Equalization, supra*, 15 Cal.4th at p. 872.) Market share is a novel methodology for assessing fees. Nevertheless, the court permitted present fees to be determined on the basis of past conduct when not only were fees nonexistent, but the dangers of lead-based paint were unknown.

As broad as the implications of *Sinclair* are, the Supreme Court did not have to reach the troublesome issue of proportionality, because paint manufacturers were assessed fees in proportion to their share of the market. Moreover, Sinclair, in moving for summary judgment, did not seek to establish that the amount of the fees bore no reasonable relationship to the social or economic burdens its operations generated. The court noted that Sinclair would have the opportunity at trial "to try to show that no clear nexus exists between its products and childhood lead poisoning, or that the amount of the fees bore no reasonable relationship to the social or economic 'burdens' its operations generated." (*Sinclair Paint Co. v. State Bd. of Equalization, supra*, 15 Cal. 4th at p. 881.)

Close to 20 years ago, we articulated the same rule to Mills in his earlier constitutional challenge to fees charged for processing land use applications. In *Mills v. County of Trinity* (1980) 108 Cal.App.3d 656 [166 Cal.Rptr. 674], we stated: " '[T]he special tax' referred to in section 4 of article XIII A does not embrace fees charged in connection with regulatory activities which fees do not exceed the reasonable cost of providing services necessary to the activity for which the fee is charged and which are not levied for unrelated revenue purposes." (*Id.* at pp. 659-660.) In *Mills* as in *Sinclair*, however, the case was remanded "for a factual determination of whether the fees in question are reasonably compensatory for the costs occasioned by the regulated activities." (*Mills*, at p. 660.)

Flat regulatory fees were upheld in *Pennell v. City of San Jose, supra,* 42 Cal.3d 365. In *Pennell*, a rent control ordinance imposed a flat annual fee on each rental unit. It was "designed to defray the costs of providing and administering the hearing process prescribed in the ordinance, not to pay general revenue to the local government." (*Id.* at p. 375.) The court concluded: "It is well settled that a municipality under the police power may impose a regulatory fee when, as here, the fee constitutes an amount necessary to carry out the purpose and provisions of the regulation." (*Id.* at p. 375, fn. 11.) ***948**

The court in *Pennell* appeared satisfied that the cumulative amount of the fee would support the administration and implementation of the hearing process without an examination of the benefits to be derived by individual lessees. Many lessors would never avail themselves of the hearing process at all and yet under the rent control ordinance, they, like the lessees who would petition for hearing, were required to pay the fee. *Pennell* does not require the government to prove proportionality on an individual basis. Under *Pennell,* the significant inquiry is whether the amount of the fees collected under the ordinance exceed the cost of the regulatory program they are collected to support. Proportionality is measured collectively to assure that the fee is indeed regulatory and not revenue raising.

While Mills cites many cases for the general proposition that fees must be apportioned according to some formula for ascertaining the benefits received or the burdens imposed by the payor's activity, he fails to cite a single regulatory fee case in which a fee was found to be a tax because the government failed to sustain its burden of proving a reasonable apportionment. On this pivotal point, the cases

require close examination for what they require and for what they do not.

Two cases involve regulatory fees, like those before us, enacted to defray the costs of programs to mitigate damage to the environment. In *San Diego Gas & Electric Co. v. San Diego County Air Pollution Control Dist., supra,* 203 Cal.App.3d 1132 (*San Diego Gas & Electric Co.*), and *Brydon v. East Bay Mun. Utility Dist.* (1994) 24 Cal.App.4th 178 [29 Cal.Rptr.2d 128], the Courts of Appeal upheld fee structures against challenges they constituted special taxes. Both cases discuss the apportionment issue at some length.

In *San Diego Gas & Electric Co., supra*, a utility company challenged an air pollution district's method of apportioning the costs of its permit programs by apportioning them among all monitored polluters according to a formula based on the amount of emissions discharged by a stationary pollution source. The emissions-based formula allowed the district to charge additional renewal permit fees based on the average pollution generated by a facility within a specific industry. The court wrote: "SDG&E argues the district has not specifically shown how the amount of emissions generated by a pollution source increase the district's indirect costs .... There is no reason to require the district to show precisely how more emissions generate more costs to justify the emission-based apportionment formula. The purpose for the district's existence is to achieve and maintain air quality standards (§ 40001), thus from an overall perspective it is reasonable to allocate costs based on a premise that the more emissions generated by a ***949** pollution source, the greater the regulatory job of the district." (203 Cal.App.3d at pp. 1147-1148, fn. omitted.)

In rejecting *San Diego Gas & Electric Co.*'s argument that the emissions-based formula eroded the intent of the voters in enacting California Constitution, article XIII A, the court explained that "Proposition 13's goal of providing effective property tax relief is not subverted by the increase in fees or the emissions-based apportionment formula. A reasonable way to achieve Proposition 13's goal of tax relief is to shift the costs of controlling stationary sources of pollution from the tax-paying public to the pollution-causing industries themselves, an accomplishment of the 1982 amendments to [Health and Safety Code] section 42311 and the emissions-based fee schedule." (*San Diego Gas & Electric Co., supra*, 203 Cal.App.3d at pp. 1148-1149.)

In *Brydon,* water customers challenged a new rate structure as a special tax. The inclined rate structure increased price per cubic foot for increased usage. The Court of Appeal found *San Diego Gas & Electric Co.* "a sustainable analogy." "Just as the regulatory scheme set forth by the [air pollution control district] was designed to achieve a legislatively mandated ecological objective, so is the inclined block rate structure of the District a response to state-mandated water-resource conservation requirements." (*Brydon v. East Bay Mun. Utility Dist., supra*, 24 Cal.App.4th at p. 192.) The court emphasized the latitude necessary to set the amount of fees to meet the regulatory objectives. "In pursuing a constitutionally and statutorily mandated conservation program, cost allocations for services provided are to be judged by a standard of reasonableness with some flexibility permitted to account for system-wide complexity. [Citation.] [ ] ... [ ] ... In short, California Constitution, article XIII A does not apply to every regulatory fee simply because, as applied to one or another of the payor class, the fee is disproportionate to the service rendered." (*Id.* at pp. 193-194.)

Hence, both cases narrow the breadth of California Constitution, article XIII A as applied to regulatory fees. Both suggest a flexible assessment of proportionality within a broad range of reasonableness in setting fees. In *San Diego Gas & Electric Co.,* the use of a formula to distribute indirect costs was sustained, while in *Brydon* an inclined block rate schedule allowed the water district to discourage water consumption. Neither relied on the kind of exact apportionment calculation urged by Mills.

Still, *San Diego Gas & Electric Co.* and *Brydon*, unlike *Pennell*, did not involve flat fees. While the formula or rate structure may not have been exact, each bore some relationship to the benefit reaped or the burden ***950** imposed by the payor. Put another way, the payors had some control over the amount of the regulatory fee they were compelled to pay by the degree to which their respective activities impacted the environment. The more they polluted the air and consumed the water, the more they paid.

We acknowledge that in this case Mills had no comparable control over the amount of the fees he was charged to review his timber harvest plan. The amount of the fees is expressly set forth in section 711.4. () Nevertheless, we hold that a regulatory fee, to survive as a fee, does not require a precise cost-fee ratio. A regulatory fee is enacted for purposes broader than the privilege to use a service or to obtain a permit. Rather, the regulatory program is for

the protection of the health and safety of the public. The legislative body charged with enacting laws pursuant to the police power retains the discretion to apportion the costs of regulatory programs in a variety of reasonable financing schemes. An inherent component of reasonableness in this context is flexibility. We agree with the notion that shifting the costs of environmental protection to those who seek to impact our natural resources does not subvert the objectives embodied in Proposition 13. Hence, a regulatory fee does not violate California Constitution, article XIII A when the fees collected do not surpass the costs of the regulatory programs they support and the cost allocations to individual payors have a reasonable basis in the record.

**IV**

() The record before us is a vivid illustration of the need for flexibility in establishing the amount of regulatory fees. Regulatory fees, unlike other types of user fees, often are not easily correlated to a specific, ascertainable cost. This may be due to the complexity of the regulatory scheme and the multifaceted responsibilities of the department or agency charged with implementing or enforcing the applicable regulations; the multifaceted responsibilities of each of the employees who are charged with implementing or enforcing the regulations; the intermingled functions of various departments as well as intermingled funding sources; and expansive accounting systems which are not designed to track specific tasks.

Mills asserts that these problems preclude a finding of a fee. He points out that Fish and Game did not conduct the kind of study now accepted within the expert field of user fee analysis to ascertain with precision the justifiable amount of a proposed fee based on the costs involved in providing the service. He criticizes the change in accounting systems in July 1991 which obfuscates the data necessary to make credible calculations, and he bemoans ***951** the incomprehensibility of the new CALSTARS accounting system as it relates to a user fee analysis. He insists that depositing the fees into Fish and Game's preservation fund is tantamount to a tax since the preservation fund operates as a general fund for Fish and Game. And he provides many examples of how disproportionate the fees are as to certain payors. Although most projects only receive a cursory review, there is a substantial variance in the amount of time spent on more in-depth reviews, varying from a few minutes to a few weeks, with the burden falling most heavily on small timberland owners.

This evidence is undisputed. There is no question that a flat fee will seldom represent the exact cost of providing a service. Fish and Game does not pretend such a correlation exists. Since we have determined that state regulatory fees are different from other user fees, the question presented is whether the evidence in this record is sufficient to sustain the legislative determination that a flat fee system is a reasonable means to allocate the costs of environmental review. [3]

Mills fails to appreciate the difference between regulatory fees and more typical user fees. At trial, he offered an expert from the new cottage industry of analysts and advisers to local governments on how to legitimize their fees in the litigious climate spawned by Proposition 13. That expert's testimony reflects his misguided assumption that all fees are created equal and that, to survive constitutional attack, they must be supported by exhaustive studies, unassailable time keeping, and a precise cost-fee analysis.

He insisted that a cost analysis study was not only advisable, but necessary. "So that is why I am saying it is possible for Fish and Game to do a kind of cost analysis study. My question then would be, secondly, do they now have that in place? Have they kept track? Have they required their staff to fill in reports? I mean, they might be able to do it starting now. But have they done it? Nothing has been submitted to me showing a tracking process of the steps taken and breaking down the specific tasks and functions.

"I recall this being referenced to the fact the administrative or bookkeeping costs were too high to do that. Frankly, my judgment is that becomes a ***952** cop-out. It is not too difficult. You can organize and set up, especially in today's computerized world with P.C.'s on half the staff desks.

"Attorneys have to bill by the minutes. They have to keep track of their time.

"It is perfectly possible to keep track of time. And I think, frankly, my judgment might be that if it is difficult, if your staff are not now doing those things systematically, it needs a whole retraining and regearing."

He opined that absent retraining, regearing, studies, and analysis, a fee could not survive a constitutional challenge. He went on to suggest a rather unique correlation between the time spent and the benefits achieved. Having testified he could not find a direct relationship between payment of a fee and providing any service, he stated: "There is no discussion

of what happens as a result of the reviews. You know, do more spotted owls get saved? More fish saved? Or what. There is no functional relationship." Again he opined that in order to sustain the constitutionality of the fee, Fish and Game must document how a forest was saved or how many spotted owls were saved by the staff.

Fish and Game urges us to dismiss his opinion for several reasons: He had never reviewed the data supporting imposition of a state fee, he did not conduct any study to determine whether the section 711.4 flat fees were reasonable or proportional, and he had no familiarity with CEQA or the regulatory landscape in which Fish and Game must operate, not to mention that his proffered opinion constituted an inadmissible conclusion of law.

We need not address these specific deficiencies because we believe his testimony serves to highlight the fundamental distinction between a user fee and a regulatory fee. His testimony is predicated on many faulty assumptions based on user fees when there is an obvious correlation between cost and benefit. Moreover, in many cases, a statute demands that the amount of a fee be commensurate with the value of a service provided or the cost of a burden imposed. (See, e.g., Gov. Code, §§ 50076, 66001.) No comparable statutes apply to this state-imposed regulatory fee.

From the vantage point of one who earns a living studying user fees and counseling local governments on how to insulate their fees from constitutional attack, it is not surprising he would overlook the vast discrepancy between a fee imposed or a privilege accorded an individual and a fee that apportions and distributes the collective costs of a regulation. In the latter case, the many factors this expert described as deficiencies become the ***953** reasonable justification for imposing a flat fee. That is, the Legislature may have determined that the administrative cost and burden of a statewide fee, including expensive studies and accounting, was too high when a simpler, flat fee could be imposed. Moreover, often, as here, measuring the benefits is amorphous. The Legislature could reasonably eschew a graduated fee structure based on an accounting of owls that were spared and forests that survived. He failed to understand that a legislative body in determining the amount of a regulatory fee is legitimately hampered by the many factors he describes as necessary to support a user fee.

The Legislature determined that the fee must be paid when a notice of determination is entered. Mills argues the timing of the exaction is unfair and unreasonable because many payors pay for reviews they never receive and others receive a bargain price for an extensive and time-consuming study. It is not our role to assess the wisdom of legislation from either a public policy or public relations perspective. We are asked only to determine whether section 711.4 imposes a fee or a tax. The record discloses several reasonable justifications for imposing a flat fee.

Fish and Game offered testimony that the imposition of an hourly fee for any environmental review would discourage early consultation. Often developers contact Fish and Game to discuss potential adverse impacts of a proposed project before any plans are submitted. Fish and Game then has the opportunity to engage in a collaborative process to eliminate or mitigate impacts on fish and wildlife before resources have been committed to a particular development plan.

The record also discloses that the environmental review process for a CEQA project or a timber harvest plan can involve various biologists at the regional level, consultation with biologists at headquarters and review of various data bases. Moreover, the biologists often work on several projects simultaneously and perform work which benefits all the projects. Consequently, the evidence suggests it would be cumbersome and expensive to account for multiple biologists' time, from multiple regions, working multiple projects.

The evidentiary thrust to Fish and Game's argument is that the cost of performing its duties under CEQA and the Forest Practice Act far exceeds the revenue generated under section 711.4. (*City of Dublin v. County of Alameda, supra,* 14 Cal.App.4th at p. 282.) Under the accounting system dismantled in 1991, Fish and Game employees recorded their time and charged the time to various codes. Before changing to a new system, the ***954** employees' time sheets were surveyed and analyzed. A new coding system was predicated on these surveys and analyses. Mills complains that the new system camouflages and inflates the true costs of environmental review.

The trial court found Fish and Game met its burden of proving the cost of its environmental review programs. The court wrote, "While Plaintiff attacks the Department's method of converting its costs under its old accounting system to the new accounting program, the authorities do not require absolute precision. Rather, as long as the estimate of costs is a reasonable one, it will be upheld."

  

We need not perform an appellate audit of Fish and Game's accounting systems. Having reviewed the entire record, we are satisfied there is sufficient evidence to support the trial court's finding that the cost of comprehensive environmental review far surpasses the amount of fees generated under section 711.4. " '[W]e would be demanding the impossible by insisting on rigorously supported findings.' [Citation.] All that our review requires is that we are able to determine that the [Legislature] acted after finding a reasonable relationship between the fee and the need to which the development contributes." (*Shapell Industries, Inc. v. Governing Board* (1991) 1 Cal.App.4th 218, 247 [1 Cal.Rptr.2d 818].) Mills squabbles about the costs associated with the review of Fish and Game's own projects, the preparation of resource databases, and a few other relatively small items. His argument, like his expert's testimony, proves the point. Complex regulatory programs involve complex accounting methodologies which render a more conventional "user fee" assessment impractical or expensive.

There is also evidence that the administrative costs to implement an extensive and comprehensive time-reporting system would be high. The evidence shows that biologists often simultaneously perform the preliminary work establishing resource data for several projects and consult and research issues relating to many different projects. It is reasonable to assess a flat fee and thereby reduce the cost and administrative difficulty of accounting for the services provided for each individual project. Moreover, collection of a flat fee at a uniform time eases the administrative burden of collection and provides certainty to those who submit project proposals.

Fish and Game provides an apt analogy to demonstrate the reasonableness of flat fees. The Legislature has adopted a flat filing fee for filing an action in superior court whether the matter is a simple case requiring little time and attention or a complex case requiring intensive judicial resources from pretrial motions through a lengthy trial. By statute, statewide judicial fees ***955** cannot be increased or decreased by counties to provide any kind of graduated structure. (Gov. Code, § 54985, subd. (c)(1).) The fees imposed by section 711.4 are quite similar. Like a civil action, the environmental review may be time and staff intensive or it may be summarily handled. In neither case does the fee operate as a tax just because a prescribed amount is charged to all who avail themselves of the opportunity to obtain discretionary government services.

() Finally, plaintiff also challenges the Legislature's decision to charge a higher fee for the filing of a negative declaration than for other environmental documents. As explained by a Fish and Game senior environmental specialist supervisor at trial, the standard for a negative declaration is that a project have no adverse impact on the environment. Thus, Fish and Game has the responsibility to make sure the disclosure of the possible impacts is complete and to assure any mitigation measures are adequate. Often, the proposed mitigation measures are inadequate, and Fish and Game staff must work with the lead agency and with the project proponent to develop an acceptable negative declaration document. The supervisor testified that his staff probably spends more time on the review of a negative declaration than for the review of an equivalent size project with EIR (environmental impact report) documentation. Hence, because of project information collection cost and the time spent negotiating mitigation measures, Fish and Game's costs are generally higher for negative declarations. There is a sufficient reasonable basis for the legislative decision to charge more for the review of a negative declaration than for the review of an environmental impact report.

**V**

We need not address the many other issues raised by the parties in these consolidated cases rendered moot by our finding that section 711.4 does constitute a regulatory fee. Moreover, we dismiss Mills's second appeal because it too is rendered moot by our finding. In the underlying case, the California Association of Professional Scientists sought to enjoin the settlement entered into by Mills and Fish and Game in the original action. The crux of the appeal is whether the trial court properly restricted its constitutional ruling to Mills alone. Since we have upheld the constitutionality of section 711.4, we need not decide whether the trial court erred by invoking article III, section 3.5 of the California Constitution to limit the scope of its constitutional ruling.

Many of the arguments raised by Mills, and echoed by his expert at trial, are rooted in the perception that a flat fee is unfair. They object vociferously ***956** to the disparity between the amount of the fee and the services provided for different projects. This may be so. The scope of our inquiry, however, is not whether the fee is fair but whether the fee is, in legal effect, a tax. This case is not a challenge to the legislative power to enact a fee, nor is it a substantive constitutional challenge to the fee. We were asked to make the legal determination as to whether it is a fee exclusively for the purpose of determining whether it was properly enacted by a

  

majority vote. Constrained by the limited scope of appellate review, we have concluded the Legislature did not violate California Constitution, article XIII A by enacting the section 711.4 fees by a simple majority vote. Any further challenge to the equity of a flat fee structure must be presented to the Legislature for the issue is political, not constitutional.

**Disposition**

The appeal in case No. C023075 is dismissed. The judgment in case No. C023184 is affirmed in part and reversed in part as explained above. In both cases, Mills shall pay the costs on appeal.

Sims, Acting P. J., and Nicholson, J., concurred.

The petition of appellant Albert W. Mills for review by the Supreme Court was denied July 12, 2000. ***957**

Footnotes

* Pursuant to California Rules of Court, rule 976.1, this opinion is certified for publication with the exception of part I.

1 Further statutory references to sections of an undesignated code are to this code.

* See footnote, *ante*, page 935.

3 Evidence of the legislative history of section 711.4 was admitted at trial. Legislative history can be relevant to a determination whether an exaction is a fee or a tax. (*CentexReal Estate Corp. v. City of Vallejo* (1993) 19 Cal.App.4th 1358, 1362 [24 Cal.Rptr.2d 48].) Here, the trial court found the costs of environmental review exceeded the amount of the fees, but it found imposition of a flat fee arbitrary. Without the benefit of the Supreme Court's holding in *Sinclair* and the broad analysis of regulatory fees, the trial court narrowly construed section 711.4 as a user fee requiring the amount of the fees to reflect the cost of the service provided the payor. Because we have decided that a flat fee may be a reasonable allocation of the costs of a regulatory fee and the trial court found Fish and Game had met its burden of proof on this issue, the legislative history cited by the trial court is unnecessary.

KeyCite Yellow Flag - Negative Treatment
Declined to Extend by Newhall County Water Dist. v. Castaic Lake Water Agency, Cal.App. 2 Dist., January 19, 2016

51 Cal.4th 421
Supreme Court of California

CALIFORNIA FARM BUREAU FEDERATION et al., Plaintiffs and Appellants,
v.
STATE WATER RESOURCES CONTROL BOARD, Defendant and Respondent.

No. S150518.
|
Jan. 31, 2011.
|
As Modified April 20, 2011.
|
Rehearing Denied April 20, 2011.

**Synopsis**

**Background:** Farm bureau federation, water associations, and individual fee payers filed lawsuit against State Water Resources Control Board (SWRCB) for declaratory and injunctive relief, and writ of mandate, after SWRCB denied plaintiffs' requests for reconsideration and refund of new annual fees imposed by statutes on holders of water right permits and licenses. The Superior Court, Sacramento County, Nos. 03CS01776 and 04CS00473, Raymond M. Cadei, J., denied plaintiffs' petitions for writ of mandate and ruled that fees imposed under statutes and emergency regulations were valid regulatory fees. Plaintiffs appealed. The Court of Appeal reversed with directions. The Supreme Court granted review, superseding the opinion of the Court of Appeal.

**Holdings:** The Supreme Court, Corrigan, J., held that:

[1] statute requiring fees on appropriative water rights was not subject to supermajority vote requirement on its face;

[2] statute requiring fees on appropriative water rights was not subject to constitutional limitation on ad valorem real estate taxes;

[3] fees on appropriative rights held by federal entities may be allocated to federal water delivery contractors to the extent of contractors' beneficial interest;

[4] statute requiring fees on appropriative water rights did not improperly apply to federal entities themselves; and

[5] contractors' beneficial interest in federal water rights was not limited to the amount of water contracted for delivery.

Affirmed in part, reversed in part, and remanded.

Moreno, J., filed concurring opinion, in which Werdegar, J., joined.

Opinion, 53 Cal.Rptr.3d 445, superseded.

West Headnotes (30)

[1] **Water Law**
Nature and Elements in General

For purposes of the rule that the State Water Resources Control Board (SWRCB) regulates all appropriative water rights acquired since 1914, an "appropriative right" is the right to take water from a watercourse that does not run adjacent to a landowner's property. West's Ann.Cal.Water Code § 1225 et seq.

5 Cases that cite this headnote

[2] **Water Law**
Regulation and Permit Systems for Allocating Riparian Rights to Take or Use Water

**Water Law**
Powers and authority

The Water Rights Division of the State Water Resources Control Board (SWRCB) has no permitting or licensing authority over riparian or pueblo rights, or over appropriative rights acquired before 1914. West's Ann.Cal.Water Code § 1225 et seq.

6 Cases that cite this headnote

  

[3] **Water Law**
Correlative Rights of Riparian Owners
**Water Law**
Extent of right to use water in general
**Water Law**
Reasonable use

Under the common law riparian doctrine, a person owning land bordering a stream has the right to reasonable and beneficial use of water on his or her land, but a riparian owner must share the right to use water with other riparian owners.

1 Cases that cite this headnote

[4] **Taxation**
Distinguishing "tax" and "license" or "fee"

The plaintiff challenging a fee as a tax enacted in violation of the supermajority requirement for tax increases bears the burden of proof with respect to all facts essential to its claim for relief, to establish a prima facie case showing that the fee is invalid. West's Ann.Cal. Const. Art. 13A, § 3; West's Ann.Cal.Evid.Code § 500.

4 Cases that cite this headnote

[5] **Taxation**
Weight and Sufficiency of Evidence

The plaintiff challenging a fee as a tax enacted in violation of the supermajority requirement for tax increases must present evidence sufficient to establish in the mind of the trier of fact or the court a requisite degree of belief, commonly proof by a preponderance of the evidence. West's Ann.Cal. Const. Art. 13A, § 3; West's Ann.Cal.Evid.Code § 500.

[6] **Evidence**
Extent of burden in general

Unlike the "burden of producing evidence," which may shift between the parties, the burden of proof does not shift; it remains with the party who originally bears it. West's Ann.Cal.Evid.Code § 110.

2 Cases that cite this headnote

[7] **Evidence**
Party asserting or denying existence of facts
**Evidence**
Failure to sustain burden
**Trial**
Prima facie case

The burden of producing evidence as to a particular fact rests on the party with the burden of proof as to that fact, and if that party fails to produce sufficient evidence to make a prima facie case, it risks nonsuit or other unfavorable determination.

3 Cases that cite this headnote

[8] **Evidence**
Extent of burden in general

Once the party with the burden of proof as to a particular fact produces evidence sufficient to make its prima facie case, the burden of producing evidence shifts to the other party to refute the prima facie case. West's Ann.Cal.Evid.Code § 110.

3 Cases that cite this headnote

[9] **Taxation**
Distinguishing "tax" and "license" or "fee"

Once plaintiffs challenging a fee as a tax enacted in violation of the supermajority vote requirement for tax increases have made their prima facie case, the state bears the burden of production and must show (1) the estimated costs of the service or regulatory activity, and (2) the basis for determining the manner in which the costs are apportioned, so that charges allocated to a payor bear a fair or reasonable relationship to the payor's burdens on or benefits from the regulatory activity. West's Ann.Cal. Const. Art. 13A, § 3.

6 Cases that cite this headnote

[10] **Taxation**

  

Distinguishing "tax" and "license" or "fee"

**Water Law**

Powers, proceedings and review

**Water Law**

Terms and Conditions of Permit

Water Code provision enacted by simple majority of the Legislature, requiring the State Water Resources Control Board (SWRCB) to adopt a schedule of annual fees to be paid by each appropriative right permit or license holder, did not violate the supermajority vote requirement for tax increases on its face, since it did not explicitly impose a tax, even though the fees were deposited in the Water Rights Fund along with fees from other sources, where the fees were linked to activities the SWRCB's Division of Water Rights performed. West's Ann.Cal. Const. Art. 13A, § 3; West's Ann.Cal.Water Code §§ 1525, 1551, 1552.

*See Annot., Constitutionality of statutes affecting riparian rights (1928) 56 A.L.R. 277; Cal. Jur. 3d Property Taxes §§ 5, 12; 9 Witkin, Summary of Cal. Law (10th ed. 2005) Taxation, §§ 140, 130.*

**[11] Taxation**

Distinguishing "tax" and "license" or "fee"

For purposes of determining whether a provision imposes a tax subject to constitutional supermajority vote requirement, ordinarily taxes are imposed for revenue purposes and not in return for a specific benefit conferred or privilege granted. West's Ann.Cal. Const. Art. 13A, § 3.

5 Cases that cite this headnote

**[12] Taxation**

Distinguishing "tax" and "license" or "fee"

For purposes of determining whether a provision imposes a tax subject to constitutional supermajority vote requirement, most taxes are compulsory rather than imposed in response to a voluntary decision to develop or to seek other government benefits or privileges, but compulsory fees may be deemed legitimate fees rather than taxes. West's Ann.Cal. Const. Art. 13A, § 3.

**[13] Taxation**

Distinguishing "tax" and "license" or "fee"

For purposes of determining whether a provision imposes a tax subject to constitutional supermajority vote requirement, a fee may be charged by a government entity so long as it does not exceed the reasonable cost of providing services necessary to regulate the activity for which the fee is charged, but a valid fee may not be imposed for unrelated revenue purposes. West's Ann.Cal. Const. Art. 13A, § 3.

6 Cases that cite this headnote

**[14] Taxation**

Distinguishing "tax" and "license" or "fee"

For purposes of determining whether a provision imposes a tax subject to constitutional supermajority vote requirement, a regulatory fee may be imposed under the police power when the fee constitutes an amount necessary to carry out the purposes and provisions of a regulation, such as all costs incident to the issuance of the license or permit, investigation, inspection, administration, maintenance of a system of supervision, and enforcement. West's Ann.Cal. Const. Art. 13A, § 3.

1 Cases that cite this headnote

**[15] Taxation**

Distinguishing "tax" and "license" or "fee"

For purposes of determining whether a provision imposes a tax subject to constitutional supermajority vote requirement, regulatory fees are valid despite the absence of any perceived "benefit" accruing to the fee payers. West's Ann.Cal. Const. Art. 13A, § 3.

**[16] Taxation**

Distinguishing "tax" and "license" or "fee"

For a provision to impose a regulatory fee rather than a tax subject to constitutional supermajority vote requirement, legislators need only apply sound judgment and consider probabilities

according to the best honest viewpoint of informed officials in determining the amount of the regulatory fee. West's Ann.Cal. Const. Art. 13A, § 3.

1 Cases that cite this headnote

**[17] Taxation**

Distinguishing "tax" and "license" or "fee"

Simply because a fee exceeds the reasonable cost of providing the service or regulatory activity for which it is charged does not transform it into a tax subject to constitutional supermajority vote requirement. West's Ann.Cal. Const. Art. 13A, § 3.

1 Cases that cite this headnote

**[18] Taxation**

Distinguishing "tax" and "license" or "fee"

A regulatory fee does not become a tax subject to constitutional supermajority vote requirement simply because the fee may be disproportionate to the service rendered to individual payors. West's Ann.Cal. Const. Art. 13A, § 3.

2 Cases that cite this headnote

**[19] Taxation**

Distinguishing "tax" and "license" or "fee"

In determining whether a provision imposes a regulatory fee rather than a tax subject to constitutional supermajority vote requirement, the question of proportionality is not measured on an individual basis; rather, it is measured collectively, considering all rate payors. West's Ann.Cal. Const. Art. 13A, § 3.

4 Cases that cite this headnote

**[20] Taxation**

Distinguishing "tax" and "license" or "fee"

A fee cannot exceed the reasonable cost of regulation with the generated surplus used for general revenue collection, and an excessive fee that is used to generate general revenue becomes a tax subject to constitutional supermajority vote requirement. West's Ann.Cal. Const. Art. 13A, § 3.

7 Cases that cite this headnote

**[21] Water Law**

Powers, proceedings and review

**Water Law**

Terms and Conditions of Permit

The "total amount" and "total revenue" provisions of the Water Code provision requiring the State Water Resources Control Board (SWRCB) to adopt a schedule of annual fees to be paid by each appropriative right permit or license holder does not require the SWRCB to set the fees so as to collect anything more than the administrative costs incurred in carrying out the permit functions authorized by the statute. West's Ann.Cal.Water Code § 1525.

**[22] Appeal and Error**

Verdict, findings, and judgment

Remand was necessary for trial court to make sufficient factual findings for the Supreme Court to rule on the question of whether fees imposed by State Water Resources Control Board (SWRCB) on appropriative right permit or license holders, as imposed, were reasonably proportional to the costs of the regulatory program as required to be "fees" exempt from constitutional supermajority vote requirement for taxes, in denying petitions for writ of mandate and ruling that the fees were valid regulatory fees. West's Ann.Cal. Const. Art. 13A, § 3; West's Ann.Cal.Water Code § 1525.

2 Cases that cite this headnote

**[23] Taxation**

Distinguishing "tax" and "license" or "fee"

**Water Law**

Powers, proceedings and review

**Water Law**

Terms and Conditions of Permit

Water Code provision requiring the State Water Resources Control Board (SWRCB) to adopt

  

a schedule of annual fees to be paid by each appropriative right permit or license holder was not an unconstitutional "new ad valorem tax on real property" on its face, since it did not explicitly impose a tax, even though the fees were deposited in the Water Rights Fund along with fees from other sources, where the fees were linked to activities the SWRCB's Division of Water Rights performed. West's Ann.Cal. Const. Art. 13A, § 3; West's Ann.Cal.Water Code § 1525(a).

1 Cases that cite this headnote

**[24] Taxation**

United States entities, property, and securities

Under principles of sovereign immunity, the federal government is immune from state taxation absent its consent.

**[25] Indians**

Water Rights and Management

**Water Law**

Powers, proceedings and review

**Water Law**

Terms and Conditions of Permit

When a private contractor's use of United States property may be taxed, federal law permits the State Water Resources Control Board's (SWRCB) practice of allocating annual fees on appropriative rights held by federal or tribal obligees that claim sovereign immunity to persons or entities that have water delivery contracts with the obligees, but the allocation is limited to the extent the contractor has beneficial or possessory use of the property. West's Ann.Cal.Water Code §§ 1525(a), 1540, 1560.

**[26] Water Law**

Powers, proceedings and review

**Water Law**

Terms and Conditions of Permit

The Water Code provision requiring the State Water Resources Control Board (SWRCB) to adopt a schedule of annual fees to be paid by each appropriative right permit or license holder does not improperly impose the fees on water rights of the United States in violation of sovereign immunity, where the statute includes an exception for cases where SWRCB determines that the payer "will not pay the fee based on the fact that the fee payer has sovereign immunity under" the state statute providing that the fees apply to the United States "to the extent authorized under" federal law. West's Ann.Cal.Water Code §§ 1525(a), 1540, 1560.

**[27] Taxation**

Distinguishing "tax" and "license" or "fee"

When conducting a Supremacy Clause analysis, federal courts do not distinguish between fees and taxes. U.S.C.A. Const. Art. 6, cl. 2.

**[28] Constitutional Law**

Sewer, water, and drains

**Constitutional Law**

Water, sewer, and irrigation

**Indians**

Validity

**Water Law**

Statutory provisions

**Water Law**

Terms and Conditions of Permit

The statutes providing that if a federal or tribal obligee asserts sovereign immunity against annual fees to be paid by appropriative right permit or license holders, the State Water Resources Control Board (SWRCB) may allocate the fee, or a portion of the fee, to persons or entities that have water delivery contracts with the obligee, does not facially violate state and federal rights to equal protection and due process. U.S.C.A. Const.Amend. 14; West's Ann.Cal.Const. Art. 1, §§ 7(a), 15; West's Ann.Cal.Water Code §§ 1525(a), 1540, 1560.

  

**[29] Taxation**

United States entities, property, and securities

To successfully defend a Supremacy Clause challenge to a tax on persons or entities that contract with the federal government, the taxing authority must segregate and tax only the beneficial or possessory interest in the property. U.S.C.A. Const. Art. 6, cl. 2.

1 Cases that cite this headnote

**[30] Water Law**

Powers and authority

**Water Law**

Contracts between federal government and local districts or associations

A fair determination of federal water delivery contractors' taxable beneficial interest in appropriative water rights held by the federal government would include consideration of the system that supports and ensures the delivery of the amount of water contracted, less any amounts used for hydroelectric generation, but not limited to the amount of water contracted for delivery. West's Ann.Cal.Water Code §§ 1525(a), 1540, 1560.

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**Opinion**

CORRIGAN, J.

***428** **117** The California Constitution provides that any act to increase taxes must be passed by a two-thirds vote of the Legislature. [1] On the other hand, statutes that create or

raise regulatory fees need only ***43 the assent of a simple majority.[2] In 2003, the Legislature passed amendments to the Water Code[3] by a 53 percent majority. Current section 1525 was enacted as part of these amendments. The threshold issue here is whether section 1525, subdivision (a) imposes a tax or a fee. We hold that the amendments and section 1525 do not explicitly impose a tax and, therefore, are not facially unconstitutional. However, because the record is unclear as to whether the fees were reasonably apportioned in terms of the regulatory activity's costs and the fees assessed, we direct the Court of Appeal to remand the matter to the trial court to make these findings.

A second issue is whether the Water Code amendments, or their implementing regulations, violate the supremacy clause of the United States Constitution by over-assessing the beneficial interests of those who hold contractual rights to delivery of water from the federally administered Central Valley Project (hereafter, the federal contractors). We conclude that the statutes are not facially unconstitutional. We further determine that the constitutionality of the implementing regulations depends on whether they fairly assess and apportion the federal contractors' beneficial interests. However, because of conflicting factual assertions and an unclear record concerning the extent and value of those interests, we also direct remand to the trial court for findings on this issue.

## I. FACTUAL AND PROCEDURAL BACKGROUND[4]

[1] [2] [3] The State Water Resources Control Board (SWRCB or Board) is responsible for the "orderly and efficient administration of ... water resources" and exercises "adjudicatory and regulatory functions of the state." (§ 174.) The water in California belongs to the people, but the right to *use* water may be acquired as provided by law. (§§ 102, 1201.) The SWRCB's Division of *429 Water Rights (Water Rights Division or Division)[5] administers **118 the water rights program, but its authority is limited. The SWRCB regulates all appropriative water rights acquired since 1914. An appropriative right is the right to take water from a watercourse that does not run adjacent to a landowner's property. Since 1914, all appropriative rights have been acquired through a system of permits and licenses[6] ***44 that the SWRCB or its predecessor state entities have issued. Before 1914, appropriative rights were acquired under common law principles or earlier statutes. The Water Rights Division has no permitting or licensing authority over riparian[7] or pueblo[8] rights, or over appropriative rights acquired before 1914. The SWRCB does have authority to prevent illegal diversions and to prevent waste or unreasonable use of water, regardless of the basis under which the right is held. (§ 275.) Riparian, pueblo, and pre–1914 appropriative rights account for 38 percent of currently held water rights.

Rights regulated under SWRCB licenses and permits include about 40 percent of state water subject to water rights. The federal government holds the remaining 22 percent of water rights. The United States Bureau of Reclamation (Bureau of Reclamation or Bureau) holds the permits and licenses to, and operates, the Central Valley Project (CVP or Project.) The *430 Project diverts and stores water from numerous sources.[9] The Bureau contracts out the responsibility to control, distribute, and use water under the permits it holds. However, these federal contracts involve use of less than 6 percent of the water over which the Bureau holds rights. The remaining water is diverted and stored by the Bureau for hydroelectric, wildlife and other purposes.

Historically, the operation of the Water Rights Division was supported by the state's general fund (General Fund), with only 0.5 percent of costs covered by fees. In 2003, the Legislative Analyst recommended that the Division's operating costs be shifted from the General Fund and covered instead by user fees imposed on permit and license holders.[10] The SWRCB strongly opposed the recommendation. The SWRCB pointed out that its authority to impose fees did not extend to those holding water rights that were not based on its permits and licenses. While riparian, pueblo, and pre–1914 rights (collectively, RPP rights) are protected by conditions in new (post–1914) permits and through the Water Rights Division's enforcement ***45 of activity, the Division did not have authority to impose fees on those RPP rights holders. As noted, the RPP holders comprise 38 percent of water rights holders in California. The SWRCB argued that while **119 permit and license holders should pay their share, proportional fees on them could not cover the total cost of the Division's operation. Additionally, as explained in greater detail below, the federal Bureau of Reclamation and Indian tribes resist paying fees, relying on the principle of sovereign immunity.

These difficulties notwithstanding, the Legislature adopted the Legislative Analyst's recommendation and passed Senate Bill No. 1049 (2003–2004 Reg. Sess.), repealing certain sections of the Water Code and enacting sections 1525–1560.

Together, these statutes are designed to make the Water Rights Division entirely fee supported.

**A. The Fee Legislation**

We begin with a summary of the relevant statutes.

***431 Section 1525**

Section 1525 sets forth the parties and entities subject to the new fees. [11] ***46** Section 1525, subdivision (a) requires the SWRCB to adopt a schedule of *annual fees* to be paid by each permit or license holder. This group does not include riparian, pueblo, or pre–1914 rights holders. Subdivision (b) of section 1525 requires the SWRCB to establish the schedule for a *one-time* ***432** *application fee* for permits to appropriate water, for approval of leases, and for petitions relating to those applications.

Section 1525, subdivision (c) provides that the SWRCB "shall set the fee schedule authorized by this section so that the total amount of fees collected pursuant to this section equals that amount necessary to recover costs" of the Division's activities. Subdivision **120 (c) sets out "recoverable costs" in substantial detail but the costs recoverable are "not limited to" those activities identified. (§ 1525, subd. (c).) Subdivision (d)(3) similarly requires the SWRCB to "set the amount of total revenue collected each year through the fees authorized by this section at an amount equal to the revenue levels set forth in the annual Budget Act for this activity." (§ 1525, subd. (d)(3).)

In other words, the statute requires that the total budgeted cost of the Division's operations be recovered from the fees. The SWRCB is to review and revise the fees each year as necessary, to ensure they conform with the revenue levels set in the annual budget act (Budget Act). If the revenue collected during the preceding year is either greater or less than the revenue levels set forth in the Budget Act, the SWRCB may adjust the annual fees to compensate for the disparity. (§ 1525, subd. (d)(3).) The SWRCB is also authorized to adopt "emergency regulations" to implement the fee schedule. (§ 1525, subd. (d)(1).)

**Section 1537**

Section 1537 generally covers collection. While the Board sets the fees, the money is actually collected by the Board of Equalization (BOE). The BOE collects and refunds annual fees collected under the Fee Collection Procedures Law, part of the Revenue and Taxation Code, as limited by subdivision (b)(2) through (4) of section 1537. The BOE has no role in reviewing refund claims under section 1537 or the emergency regulations.

**Sections 1540 and 1560**

Section 1540 concerns the allocation of annual fees to federal contractors. Section 1560 sets out the options that may be pursued when the federal Bureau of Reclamation or an Indian tribe declines to pay a fee by relying on sovereign immunity. [12] ***47** As relevant here, the federal government and Indian tribes are the entities eligible to assert sovereign immunity.

***433 Sections 1550, 1551, and 1552**

Sections 1550 and 1551 establish the Water Rights Fund, into which the BOE must deposit fees collected on behalf of the SWRCB. The Water Rights Fund is separate from the General Fund. Money in the Water Rights Fund may be used only for purposes set out in section 1552, which includes SWRCB expenditures necessary to carry out the work of the Water Rights Division, BOE expenditures in connection with collecting the SWRCB fees, and the payment of refunds. (§ 1552.)

**B. The Emergency Regulations**

To implement section 1525's fee requirement, the SWRCB adopted **121 California Code of Regulations, title 23, sections 1066 and 1073 (regulation 1066 and regulation 1073). These regulations set formulas to calculate annual fees for permit and license holders, and for the federal contractors. Fees for issuance, supervision, and modification of permits and licenses, i.e., the revenue-producing activities now required to cover the entire cost of the Division's operations, were to be paid by the permit and license holders regulated by the SWRCB. No money would come from the General Fund. The Court of Appeal explained the difficulty the SWRCB had in setting the fees: "First, the SWRCB had to raise $4.4 million immediately to cover the cost of the water rights program in the second half of the 2003–2004 fiscal year. Second, the funding source had to be 'relatively stable.' Third, because of time constraints, SWRCB had to rely on its existing data base in ***434** calculating the amount of fees to be assessed. Fourth, although it cost SWRCB between $17,000 and $20,000 to process an application to appropriate water, SWRCB expected people would not seek SWRCB services if the one-time service fees were too high.

Fifth, because most persons and entities subject to the annual fee held permits or licenses for less than 10 acre-feet of water, [ [13] ] a minimum fee was necessary to cover the cost of sending out the fee bills. Sixth, SWRCB anticipated that 40 percent of the water right permit and license holders would refuse to pay annual fees. Seventh, the SWRCB did not have permitting authority over certain holders of water rights (specifically the holders of riparian, pueblo and pre–1914 appropriative rights) amounting to approximately 38 percent of the water diverted in the state."

*****48 C. Annual Fee Formula for Post–1914 Permit and License Holders**

Regulation 1066 applies to post–1914 permit and license holders. Regulation 1066, subdivision (a) [14] set the minimum annual fee as the greater of $100, or $.03 for each acre-foot based on the total annual amount of diversion authorized by the permit or license.

To determine the annual fees, the Board started with the $4.4 million budget amount and assumed it would be unable to collect 40 percent of billings from water right holders who claimed sovereign immunity or who refused to pay their bills. It divided the $4.4 million mandated by the Legislature by 0.6 to account for the estimated 40 percent non-collection rate. This increased its targeted revenue to approximately $7 million.

**D. Annual Fee Formula for Federal Contractors**

Regulation 1073, which implemented the provisions of Water Code sections 1540 and 1560, addressed rights held by the Bureau of Reclamation, but contracted out to federal contractors. Regulation 1073, subdivision (b)(2) applied a formula to calculate the annual fee imposed on those contractors "[i]f the [Bureau of Reclamation] decline[d] or [was] likely to decline to pay the fee or expense ... for the [Central Valley Project]." In general, regulation 1073 assessed annual fees against contractors based on a prorated portion of the total amount of annual fees associated with all Bureau permits and licenses, rather than the portion available under the terms of their contracts.

***435 E. Proceedings Below**

In January 2004, the BOE sent fee notices to the section 1525 permit and license holders and to the federal contractors. The Budget Act set a target of $4.4 million in fee revenue because the balance for the first half of 2003–2004 was paid from General Fund revenue. $7.4 million in water rights fees was collected for fiscal year 2003–2004. The imposition of water rights fees was challenged ****122** by several groups of plaintiffs representing various water rights holders. [15]

Plaintiffs sought declaratory and injunctive relief and a writ of mandate. They alleged that the statutory scheme adopted by the Legislature and the emergency regulations adopted to implement the scheme were unconstitutional both on their face and as applied. The trial court denied the writ of mandate, ruling that the money collected constituted valid regulatory fees, *****49** rather than taxes. It also rejected plaintiffs' other constitutional claims.

The Court of Appeal reversed in part, holding that section 1525 was constitutional on its face, but that "as applied" under the emergency regulations, it imposed illegal levies. It remanded the matter to the trial court with instructions that it "(1) stay further proceedings before the SWRCB and/or BOE until the SWRCB adopts new fee schedule formulas and a procedure for calculating refunds if any; (2) order the SWRCB to adopt valid fee schedule formulas within 180 days of the finality of this opinion; (3) order the SWRCB to determine the amount of annual fees improperly assessed under regulations 1066 and 1073 for the 2003–2004 fiscal year and establish a procedure for calculating refunds, if any, due within 180 days of the finality of this opinion; and (4) order the Board of Equalization, through the SWRCB, to refund any annual fees unlawfully collected to fee payers who filed timely petitions for reconsideration with the SWRCB...." [16]

***436 II. DISCUSSIONA. Standard of Review**

Whether section 1525 imposes a tax or a fee is a question of law decided upon an independent review of the record. (*Sinclair Paint Co. v. State Bd. of Equalization* (1997) 15 Cal.4th 866, 874, 64 Cal.Rptr.2d 447, 937 P.2d 1350 (*Sinclair Paint* ).)

**[4] [5] [6]** The plaintiff challenging a fee bears the burden of proof to establish a prima facie case showing that the fee is invalid. (See *Sea & Sage Audubon Society, Inc. v. Planning Com.* (1983) 34 Cal.3d 412, 421, 194 Cal.Rptr. 357, 668 P.2d 664; *Sargent Fletcher, Inc. v. Able Corp.* (2003) 110 Cal.App.4th 1658, 1668, 3 Cal.Rptr.3d 279 (*Sargent Fletcher* ).) In other words, the plaintiff bears the burden of proof [17] "with respect to all facts essential to its claim for relief." (*Homebuilders Assn. of Tulare/Kings Counties, Inc. v. City of*

*Lemoore* (2010) 185 Cal.App.4th 554, 562, 112 Cal.Rptr.3d 7; see Evid.Code, § 500.) The plaintiff "must present evidence sufficient to establish in the mind of the trier of fact or the court a requisite degree of belief (commonly proof by a preponderance of the evidence). [Citation.] The burden of proof *does not shift* ... it remains with the party who originally bears it." (*Sargent Fletcher, supra,* 110 Cal.App.4th at p. 1667, 3 Cal.Rptr.3d 279, original italics.)

**[7]** **[8]** This burden of persuasion is different from the "burden of producing evidence" (see Evid.Code, § 110), which may shift between the parties.[18] "[T]he burden of producing ****123** evidence as to a particular fact rests on the party with the burden of proof as to that fact. [Citations.] If that party fails to produce sufficient evidence to make a prima facie case, it risks nonsuit or other unfavorable determination. [Citations.] But once that party produces evidence sufficient to make its prima facie case, the burden of producing evidence *shifts* to the other party to refute the prima facie case." (*Sargent Fletcher, supra,* 110 Cal.App.4th at pp. 1667–1668, 3 Cal.Rptr.3d 279, original italics.)

*****50** **[9]** Thus, once plaintiffs have made their prima facie case, the state bears the burden of production and must show " '(1) the estimated costs of the ***437** service or regulatory activity, and (2) the basis for determining the manner in which the costs are apportioned, so that charges allocated to a payor bear a fair or reasonable relationship to the payor's burdens on or benefits from the regulatory activity.' " (*Sinclair Paint, supra,* 15 Cal.4th at p. 878, 64 Cal.Rptr.2d 447, 937 P.2d 1350; see *California Assn. of Prof. Scientists v. Department of Fish & Game* (2000) 79 Cal.App.4th 935, 945, 94 Cal.Rptr.2d 535 (*Prof. Scientists* ).)

**B. Valid Fee or Invalid Tax? Facial challenge**

**[10]** Plaintiff Farm Bureau contends that section 1525's annual fee requirement is unconstitutional on its face because it imposes a tax, not a valid regulatory fee.[19] We reject this contention.

California Constitution, article XIIIA, section 3 requires that "any changes in state taxes enacted for the purpose of increasing revenues" be approved by a two-thirds majority of the Legislature. Senate Bill No. 1049 (2003–2004 Reg. Sess.) passed the Legislature with only a 53 percent majority. Thus, if the amount charged under section 1525 is a tax, it is invalid. If it is a regulatory fee, it is not subject to the supermajority requirement.

**[11]** **[12]** We have recognized that " 'tax' has no fixed meaning, and that the distinction between taxes and fees is frequently 'blurred,' taking on different meanings in different contexts. [Citations.]" (*Sinclair Paint, supra,* 15 Cal.4th at p. 874, 64 Cal.Rptr.2d 447, 937 P.2d 1350.) Ordinarily taxes are imposed for revenue purposes and not "in return for a specific benefit conferred or privilege granted. [Citations.] Most taxes are compulsory rather than imposed in response to a voluntary decision to develop or to seek other government benefits or privileges. [Citations.] But compulsory fees may be deemed legitimate fees rather than taxes. [Citation.]" (*Ibid.*)

**[13]** In contrast, a fee may be charged by a government entity so long as it does not exceed the reasonable cost of providing services necessary to regulate the activity for which the fee is charged. A valid fee may not be imposed for unrelated revenue purposes. (*Sinclair Paint, supra,* 15 Cal.4th at p. 876, 64 Cal.Rptr.2d 447, 937 P.2d 1350; *Pennell v. City of San Jose* (1986) 42 Cal.3d 365, 375, 228 Cal.Rptr. 726, 721 P.2d 1111.)[20]

**[14]** **[15]** **[16]** **[17]** **[18]** **[19]** ***438** The scope of a regulatory fee is somewhat flexible and is related to the overall purposes of the regulatory governmental action. " 'A regulatory fee may be imposed under the police power when the fee constitutes an amount necessary to carry out the purposes and provisions of the regulation.' [Citation.] 'Such costs ... include all those incident to the issuance of the license or permit, investigation, inspection, administration, maintenance of a system of supervision and enforcement.' [Citation.] Regulatory fees are valid despite the absence of any perceived 'benefit' accruing to the fee payers. [Citation.] Legislators 'need only apply sound judgment and consider "probabilities according to the best honest viewpoint of informed officials" in determining the amount of the *****51** regulatory fee.' [Citation.]" (*Prof. Scientists, supra,* 79 Cal.App.4th at p. 945, 94 Cal.Rptr.2d 535.) "Simply because a fee exceeds ****124** the reasonable cost of providing the service or regulatory activity for which it is charged does not transform it into a tax." (*Barratt American, Inc. v. City of Rancho Cucamonga* (2005) 37 Cal.4th 685, 700, 37 Cal.Rptr.3d 149, 124 P.3d 719.) A regulatory fee does not become a tax simply because the fee may be disproportionate to the service rendered to individual payors. (*Brydon v. East Bay Mun. Utility Dist.* (1994) 24 Cal.App.4th 178, 194, 29 Cal.Rptr.2d 128.) The question of proportionality is not measured on an individual basis. Rather, it is measured collectively, considering all rate payors. (*Prof.*

*Scientists, supra,* 79 Cal.App.4th at p. 948, 94 Cal.Rptr.2d 535.)

**[20]** Thus, permissible fees must be related to the overall cost of the governmental regulation. They need not be finely calibrated to the precise benefit each individual fee payor might derive. What a fee cannot do is exceed the reasonable cost of regulation with the generated surplus used for general revenue collection. An excessive fee that is used to generate general revenue becomes a tax.

Reference to the statutory language reveals a specific intention to avoid imposition of a tax. By its terms, section 1525 permits the imposition of fees only for the costs of the functions or activities described, and not for general revenue purposes. Section 1525, subdivision (c) carefully sets out that the fees imposed shall relate to costs linked to issuing, monitoring, enforcing and administering licenses and permits, and lists the recoverable costs in some detail. Section 1551 directs that the fees collected be deposited in the Water Rights Fund, not in the General Fund. Section 1552 describes the ***439** purposes for which the money in the Water Rights Fund may be expended.[21] Although the fees set forth in section 1551 come from various sources, including some that do not involve the services described in section 1525,[22] it cannot be argued that the fees are excessive just because *****52** sections 1551 and 1552 list a variety of revenues to be deposited in the Water Rights Fund.

Section 1552 does not describe how the various revenues deposited in the Water Rights Fund should be allocated. However, no statutory language precludes the segregation and application of collected fees to fund services described in that section.[23]

**[21]** Section 1525 does not require the SWRCB to collect anything more than the administrative "costs incurred" in carrying out the functions authorized in its subdivisions (a), (b) and (c). Also, section 1525, subdivision (c) directs the SWRCB to set the fee schedules so that the "total amount of ****125** fees collected ... equals that amount necessary to recover costs incurred in connection with" the Division's administration of the provisions of subdivisions (a) and (b). Similarly, section 1525, subdivision (d)(3) requires the SWRCB to "set the amount of total revenue collected each year through the fees authorized by this section at an amount equal to the revenue levels ***440** set forth in the annual Budget Act *for this activity.*" (Italics added.) Although the "activity" subject to fees under this section could represent all of the Division's activities, the Court of Appeal correctly noted, "[T]here is nothing in the 'total amount' or 'total revenue' provisions of subdivisions (c) and (d) that requires the SWRCB to set the fees so as to collect anything more than the administrative 'costs incurred' in carrying out the permit functions authorized in subdivisions (a), (b) and (c)." Also, there is a safeguard in subdivision (d)(3) authorizing the SWRCB to "further adjust the annual fees" if it "determines that the revenue collected during the preceding year was greater than, or less than, the revenue levels set forth in the annual Budget Act...." (§ 1525, subd. (d)(3).) Thus, the fees charged under section 1525 are linked to the activities the Division performs.

**"As applied" challenge**

Plaintiffs also contend section 1525 is unconstitutional as applied through the fee schedule in regulation 1066 because the fees are so disproportionate that they are unreasonable. Central to the resolution of this issue is an understanding of the extent and costs of the Division's regulatory "activity." (§ 1525, subd. (d)(3).) The parties diverge in their approach.

As noted, on its face the statutory scheme appears simply to permit the recovery of costs the SWRCB incurs in annual supervision of water usage and the processing of applications for new or modified rights. However, plaintiffs argue the following: (1) While the Division engages in a variety of activities that benefit all water rights holders, and the general public, it is only authorized to impose fees on 40 percent of rights holders. (2) Because the statutory scheme requires that 100 percent of the Division's annual budget must be recovered through fees, the result is that 40 percent of rights holders are charged for the entire cost of operations that benefit all rights holders and the public at large. This disparity is brought to bear not on the face of the statutes, but in the regulations authorizing fee collection. Plaintiffs claim the regulations impose unreasonable fees because they are so disproportionate to the benefit derived by the fee payors or the burden they place on the regulatory system. (See *Sinclair Paint, supra,* 15 Cal.4th at p. 878, 64 Cal.Rptr.2d 447, 937 P.2d 1350.) Therefore, plaintiffs contend the fees operate as a tax and are unconstitutional because the authority for *****53** their imposition was not approved by a two-thirds vote of the Legislature.

On the other hand, the SWRCB claims that the fees are proportional and that plaintiffs' focus on the benefits of the regulatory program is misplaced. It argues that the broad benefits of the program must be distinguished from its costs.

  

The Board contends that it can allocate the majority of its regulatory costs to persons subject to the water rights permit and license system because *441 its costs flow primarily from the administration of that permit and license system. It acknowledges that the benefits that result from the regulation of permits and licenses may be characterized as benefits not only to permit and license holders, but also to the general public, and other water rights holders not subject to its fee system. But, the Board argues, that does not alter the fact that its costs are largely due to its oversight and administration of the permit and license system and not the regulation of the public or other water rights holders. The Board claims that some 95 percent of its time and expense are directed toward servicing and regulating those licensees and permittees against whom the challenged fees were assessed. As we explain below, however, the trial court made no findings on this claim.

In weighing these arguments, we look to our decision in *Sinclair Paint, supra,* 15 Cal.4th at page 866, 64 Cal.Rptr.2d 447, 937 P.2d 1350. There, the plaintiff challenged the fee in question on the basis that the fee was not regulatory in nature, but rather was **126 aimed at raising revenue. [24] We acknowledged that "the term 'special taxes' ... ' "does not embrace fees charged in connection with regulatory activities which fees do not exceed the reasonable cost of providing services necessary to the activity for which the fee is charged and which are not levied for unrelated revenue purposes." [Citations.]' " (*Sinclair Paint, supra,* 15 Cal.4th at p. 876, 64 Cal.Rptr.2d 447, 937 P.2d 1350.) We held that the fee in question was a regulatory fee and not a tax because it was "imposed ... to mitigate the actual or anticipated adverse effects of the fee payers' operations." (*Id.* at p. 870, 64 Cal.Rptr.2d 447, 937 P.2d 1350.) Thus, in *Sinclair Paint,* to determine the tax or fee issue, we directed courts to examine the costs of the regulatory activity and determine if there was a reasonable relationship between the fees assessed and the costs of the regulatory activity. (*Id.* at pp. 870, 878, 64 Cal.Rptr.2d 447, 937 P.2d 1350.) [25]

**[22]** Thus, the question revolves around the scope and the cost of the Division's regulatory activity and the relationship between those costs and the fees imposed. It is further complicated by the fact that not all those who hold water rights are required to pay the fee. Unfortunately, the record before us is insufficient to resolve the "tax or fee" question. The trial court's order lacks sufficient factual findings for us to determine whether the fees, as imposed, were reasonably proportional to the costs of the regulatory program. In fact, at the hearing on plaintiffs' motion for a peremptory writ of mandate, ***54 the trial court stated it did not believe it was required to make detailed findings.

*442 We have previously noted that "[i]t has long been the general rule and understanding that 'an appeal reviews the correctness of a judgment as of the time of its rendition, upon a record of matters which were before the trial court for its consideration.' [Citation.] This rule reflects an 'essential distinction between the trial and the appellate court ... that it is the province of the trial court to decide questions of fact and of the appellate court to decide questions of law....' [Citation.] The rule promotes the orderly settling of factual questions and disputes in the trial court, provides a meaningful record for review, and serves to avoid prolonged delays on appeal." (*In re Zeth S.* (2003) 31 Cal.4th 396, 405, 2 Cal.Rptr.3d 683, 73 P.3d 541.) Here, the trial court erred by failing to provide a sufficient record to rule on the question of law. Accordingly, this matter must be remanded. The trial court is directed to make detailed findings focusing on the Board's evidentiary showing that the associated costs of the regulatory activity were reasonably related to the fees assessed on the payors. (*Sinclair Paint, supra,* 15 Cal.4th at p. 870, 64 Cal.Rptr.2d 447, 937 P.2d 1350.) Of course, plaintiffs are free to renew their claim that the fees assessed exceeded the reasonable cost of the Division's services. (*Id.* at p. 881, 64 Cal.Rptr.2d 447, 937 P.2d 1350.) [26]

The trial court's findings should include whether the fees are reasonably related to the total budgeted cost of the Division's "activity" (see § 1525, subd. (c)), keeping in mind that a government agency should be accorded some flexibility in calculating the amount and distribution of a regulatory fee. Focusing on the activity and its associated costs will allow the trial court to determine whether the assessed fees were reasonably proportional and thus not a tax. (*Sinclair Paint, supra,* 15 Cal.4th at p. 870, 64 Cal.Rptr.2d 447, 937 P.2d 1350.) The court must determine whether the statutory scheme and its implementing regulations provide a fair, **127 reasonable, and substantially proportionate assessment of all costs related to the regulation of affected payors.

### C. Ad Valorem Real Property Tax

Plaintiffs Northern California Water Association and Central Valley Water Project Association contend that section 1525 imposes an unconstitutional "new ad valorem tax[ ] on real property." As these parties observe, Proposition 13 prohibits

this particular category of new taxes, regardless of legislative approval. (Cal. Const., art. XIII A, § 3.)

**[23]** The gravamen of the contention is that the water rights obtained through the Division's permits and licenses are interests in real property, and that the license and permit charges imposed under section 1525 are thus taxes ***443** improperly based on the ownership of real property interests. However, we have determined above that section 1525 does not, on its face, impose a tax, as opposed to a regulatory fee unaffected by Proposition 13. A fortiori, the face of the statute assesses no new "ad valorem tax[ ] on real property."

*****55** Any further consideration of the ad valorem real property tax issue is premature. We have deemed it necessary to remand for further evidence and findings whether the specific system of charges developed by the SWRCB under the authority of section 1525, subdivision (a) imposes taxes, rather than fees. If the remand leads to the conclusion that the charges are valid fees, not taxes, it will follow that they do not constitute ad valorem taxes on real property.

On the other hand, if the remand results in a conclusion that the current charges are taxes, not fees, those taxes will be unconstitutional under Proposition 13, whether or not they are "ad valorem taxes on real property" (Cal. Const., art. XIII A, § 3), because they were authorized by less than a two-thirds legislative vote (*ibid.*). Accordingly, we express no further views on this subject.

**D. Federal Contractors Facial challenge**

**[24]** These same plaintiffs also contend that sections 1540 and 1560 are unconstitutional on their face because they violate the supremacy clause of the United States Constitution. (See *McCulloch v. Maryland* (1819) 17 U.S. (4 Wheat.) 316, 425–437, 4 L.Ed. 579.) Under established principles of sovereign immunity, the federal government is immune from state taxation absent its consent. (See *Davis v. Michigan Dept. of Treasury* (1989) 489 U.S. 803, 812–813, 109 S.Ct. 1500, 103 L.Ed.2d 891.)

Section 1540 provides in relevant part: "If the board determines that the person or entity on whom a fee or expense is imposed will not pay the fee ... based on the fact that the fee payer has sovereign immunity under Section 1560, the board may allocate the fee or expense, or an appropriate portion of the fee or expense, to persons or entities who have contracts for the delivery of water from the person or entity on whom the fee or expense was initially imposed. The allocation of the fee or expense to these contractors does not affect ownership of any permit, license, or other water right, and does not vest any equitable title in the contractors."

Section 1560 states that the fees imposed under section 1525 apply to the United States and Indian tribes "to the extent authorized under federal ***444** or tribal law." (§ 1560, subd. (a).) Also, section 1560, subdivision (b)(2) provides that the SWRCB should allocate the fees as provided in section 1540 should the United States or an Indian tribe refuse to pay them.

**[25]** **[26]** **[27]** Thus, the plain language of section 1540 provides that if a federal or tribal obligee asserts sovereign immunity under section 1560, the SWRCB may allocate the fee, or a portion of the fee, to persons or entities that have water delivery contracts with the obligee. This practice is permitted under federal law when a private contractor's use of United States property may be taxed.[27] But the allocation is limited to the extent the contractor has beneficial or possessory use of the property. (See *United States v. County of Fresno* (1977) 429 U.S. 452, 462, 97 S.Ct. 699, 50 L.Ed.2d 683 (*County of Fresno* ); *United States v. Nye County Nevada* (9th Cir.1991) 938 F.2d 1040, 1042–1043 ****128** (*Nye County* ); *United States v. Hawkins County, Tennessee* (6th Cir.1988) 859 F.2d 20, 23 (*Hawkins County* ).)[28] We reject *****56** the contention that the statutory scheme imposes the fees on water rights of the United States and not the private contractors. Clearly, any attempt to impose fees on the federal government would be resisted on sovereign immunity grounds.

**[28]** Accordingly, neither section 1540 nor section 1560 authorizes imposition of a fee that facially violates the supremacy clause or state and federal rights to equal protection and due process.

**"As applied" challenge**

We next address the implementing regulation. Under regulation 1073, the SWRCB assessed annual costs against the federal contractors, prorating among them the amount of annual fees associated with *all* the Bureau of Reclamation's permits and licenses—over 116 million acre-feet. However, while the Bureau holds all the permits and licenses, the contractors have contractual rights for water delivery over only 6.6 million acre-feet or about 5 percent of all rights held by the Bureau. The Court of Appeal held that regulation 1073 violated the supremacy clause because it required "the federal

contractors to pay for the entire amount of annual fees that would otherwise be imposed on the Bureau."

**[29]** ***445** To successfully defend a supremacy clause challenge to a tax on persons or entities that contract with the federal government, the taxing authority must segregate and tax only the beneficial or possessory interest in the property. (See *County of Fresno, supra,* 429 U.S. at p. 462, 97 S.Ct. 699; *Nye County, supra,* 938 F.2d at pp. 1042–1043; *Hawkins County, supra,* 859 F.2d at p. 23.) Thus, although the SWRCB has the authority to impose regulatory costs on the federal contractors, it can do so only to the extent of the contractors' interest.

Regulation 1073's formula required the federal contractors to pay for the entire amount of annual costs that would be imposed on the Bureau of Reclamation despite the fact that their contractual rights represented a small proportion of the whole. Plaintiffs claim that the result is a disproportionate assessment of fees, thereby making regulation 1073 unconstitutional under the supremacy clause.[29] (*County of Fresno, supra,* 429 U.S. at p. 462, 97 S.Ct. 699.) They contend that the fees should be based on the amount of water they contracted to deliver.

The SWRCB counters that the imposition of the fee should not be limited to the amount of water actually deliverable under the federal contracts. The SWRCB argues that it correctly calculated the fees using the face value of the permitted and licensed water rights. The face value is the total annual amount of water diversion authorized by the federally held permit or license. The SWRCB argues that the amount of diversions authorized by the federally held permits and licenses generally exceeds the amount of the water delivery contracts. The difference between the amount available for diversion and the amount actually delivered is due to factors that include hydrological variation, the need to hold water in storage for future dry years, conveyance and evaporation losses, and water releases to mitigate for project impacts on fish and wildlife.

In addition, the SWRCB argues the following. The Bureau of Reclamation controls the CVP water under permits and licenses issued and regulated by the Water ***57** Rights Division. The water is held for two primary purposes: hydroelectric power generation and water supply. The SWRCB sought to ***446** apportion a **129** fair share of the regulatory costs associated with these permits and licenses to those water users who benefit through their water delivery contracts with the Bureau. As a result, the SWRCB initially discounted the value of the permits and licenses by approximately 50 percent to account for hydroelectric power generation use, then allocated to the federal contractors a pro rata share of the regulatory costs to the remaining value of the Bureau's permits and licenses that related to water supply. Accordingly, the Board argues, these charges were reasonably calculated because they apportioned the Division's costs of administering the Bureau's permits and licenses, exclusive of those costs related to hydroelectric generation, to the federal contractors who benefited from the receipt of the water.

**[30]** The SWRCB asserts that this is a fair apportionment of costs that withstands a supremacy clause challenge. It argues the federal contractors' beneficial interest is not properly valued by a simple calculation of the proportion of total CVP water the contractors are entitled to receive under their contracts. It claims that a fair determination of the federal contractors' beneficial interest must include consideration of the system that supports and ensures the delivery of the amount contracted, not just the amount of water contracted for delivery. Thus, the SWRCB proposes that the federal contractors have a taxable interest in the "face value" of the Bureau's water rights held under permits and licenses, less any amounts used for hydroelectric generation.

We agree with the SWRCB. However, again due to conflicting factual assertions and an inadequate record, we cannot determine how much of the total water in question is used to support the water delivered and can thus be allocated to the federal contractors' beneficial interest. Accordingly, we remand for the trial court to determine the contractors' beneficial interest and the value of that interest. The trial court shall make findings as to whether the Board has fairly evaluated the federal contractors' beneficial interest, such that water not actually under contract for delivery is fairly attributable to the value of the delivery contracts themselves.[30]

**DISPOSITION**

We affirm the Court of Appeal's judgment holding that the fee statutes at issue are facially constitutional. However, the Court of Appeal's judgment is ***447** reversed as to its determination that the statutes and their implementing regulations are unconstitutional as applied. We remand this matter for the Court of Appeal to remand to the trial court for proceedings consistent with this opinion.

  

WE CONCUR: KENNARD, Acting C.J., BAXTER, WERDEGAR, CHIN, and MORENO, JJ., and GEORGE, J. *

Concurring Opinion by MORENO, J.

I concur in the majority opinion. I write separately to offer these additional reflections on the "as applied" challenge to the fee as a tax.

*****58** A charge that is labeled a regulatory fee may indeed be a tax in disguise if "the amount of fees assessed and paid exceeded the reasonable cost of providing the [regulatory] services for which the fees were charged, or [if] the fees were levied for unrelated revenue purposes." (*Sinclair Paint Co. v. State Bd. of Equalization* (1997) 15 Cal.4th 866, 881, 64 Cal.Rptr.2d 447, 937 P.2d 1350.) Here, there is no allegation that the fees in question are being used for unrelated revenue purposes. Rather, it is contended that only 40 percent of water rights holders are being charged a fee that by right should be charged to all water rights holders, and therefore the fee is not sufficiently linked to the regulatory costs generated by those on whom the fee is imposed and constitutes a tax.

****130** Every government entity that imposes a regulatory fee must decide who should be subject to the fee and who should not. A number of factors may go into that decision, including assessments of the regulatory burdens imposed by the various actors and the administrative convenience of imposing the fee. As the majority states: " 'Legislators "need only apply sound judgment and consider 'probabilities according to the best honest viewpoint of informed officials' in determining the amount of the regulatory fee." [Citation.]' " (Maj. opn., *ante,* 121 Cal.Rptr.3d at pp. 50–51, 247 P.3d at p. 123.) So, too, legislators and regulators need only make reasonable decisions about who should be subject to a regulatory fee.

In the present case, the State Water Resources Control Board claims that "some 95 percent of its time and expense are directed toward servicing and regulating those licensees and permittees against whom the challenged fees were assessed." (Maj. opn., *ante,* 121 Cal.Rptr.3d at p. 53, 247 P.3d at p. 125.) The support for this contention ***448** stems primarily from a document produced by the board on April 15, 2004, shortly after the present litigation commenced. Because of the uncertain reliability of this document, as well as the trial court's lack of findings, remand is appropriate to determine whether the board's decisions regarding who would be subject to the fee were reasonable.

I CONCUR: WERDEGAR, J.

**All Citations**

51 Cal.4th 421, 247 P.3d 112, 121 Cal.Rptr.3d 37, 11 Cal. Daily Op. Serv. 1429, 2011 Daily Journal D.A.R. 1698

Footnotes

1 California Constitution, article XIIIA, section 3, originally approved by initiative as Proposition 13, sometimes referred to as the "People's Initiative to Limit Property Taxation," on June 6, 1978.

2 On November 2, 2010, the voters approved Proposition 26, which requires a two-thirds supermajority vote of the Legislature to pass certain fees. None of the parties have asserted that the law enacted by Proposition 26 applies to this case.

3 Hereafter, undesignated statutory references are to the Water Code.

4 The factual and procedural background is largely adopted from the Court of Appeal opinion.

5 The Division consists of three sections: permitting, licensing, and hearings and special projects. As noted by the Court of Appeal, "[t]he permitting section 'processes water right applications, petitions to change terms in water right permits and water right licenses. Groundwater recordations, [and] statements of water diversion and use, which are a recordation function [*sic.*]....' The licensing section enforces existing permits and licenses and handles work associated with licensing a permit. The hearings and special projects section assists the SWRCB with various types of administrative hearings, reviews environmental documents filed in support of water rights applications and petitions, assists with the implementation of the Bay–Delta Water Quality Control Plan, and certifies water quality...." Although the SWRCB has other divisions in its organization, we are concerned only with the Water Rights Division.

6 Anyone seeking to obtain an appropriative water right files an application with the SWRCB (§ 1225 et seq.), which issues a water right permit. (§ 1380 et seq.) Beneficial use of water perfected under this post–1914 statutory scheme is confirmed by a license issued by the SWRCB. (§§ 1605, 1610.) The license is, in effect, a title or deed to the water right and is recorded in the county in which the diversion takes place. (§ 1650.)

  

7 Under the common law riparian doctrine, a person owning land bordering a stream has the right to reasonable and beneficial use of water on his or her land. (*People v. Shirokow* (1980) 26 Cal.3d 301, 307, 162 Cal.Rptr. 30, 605 P.2d 859 (*Shirokow*).) A riparian owner must share the right to use water with other riparian owners. (See *Harris v. Harrison* (1892) 93 Cal. 676, 681, 29 P. 325.)

8 "The pueblo water right—a distinctive feature of California water law—is the paramount right of an American city as successor of a Spanish or Mexican pueblo (municipality) to the use of water naturally occurring within the old pueblo limits for the use of the inhabitants of the city." (Hutchins, The Cal. Law of Water Rights (1956) p. 256.)

9 "In 1933, primarily to control flooding in the Central Valley, the California Legislature approved the Central Valley Project (CVP), which is the nation's largest water reclamation project and California's largest water supplier. [Citation.] Originally a state project, the CVP was turned over to the federal Bureau of Reclamation, which operates the CVP under rights granted by the SWRCB." (*In re Bay–Delta etc.* (2008) 43 Cal.4th 1143, 1154, 77 Cal.Rptr.3d 578, 184 P.3d 709, fn. omitted.) To achieve its purposes, "[t]he CVP operates 21 reservoirs, 11 power plants, and 500 miles of major canals and aqueducts." (*Id.* at p. 1154, fn. 1, 77 Cal.Rptr.3d 578, 184 P.3d 709.)

10 The proposal called for General Fund support for the first half of the 2003–2004 fiscal year with fee increases covering the second half of the year. Thereafter, total Water Rights Division operations would be fee supported.

11 In relevant part, section 1525 provides:

"(a) Each person or entity who holds a permit or license to appropriate water, and each lessor of water leased under Chapter 1.5 (commencing with Section 1020) of Part 1, shall pay an annual fee according to a fee schedule established by the board.

"(b) Each person or entity who files any of the following shall pay a fee according to a fee schedule established by the board:

"(1) An application for a permit to appropriate water.

"(2) A registration of appropriation for a small domestic use or livestock stockpond.

"(3) A petition for an extension of time within which to begin construction, to complete construction, or to apply the water to full beneficial use under a permit.

"(4) A petition to change the point of diversion, place of use, or purpose of use, under a permit or license.

"(5) A petition to change the conditions of a permit or license, requested by the permittee or licensee, that is not otherwise subject to paragraph (3) or (4).

"(6) A petition to change the point of discharge, place of use, or purpose of use, of treated wastewater, requested pursuant to Section 1211.

"(7) An application for approval of a water lease agreement.

"(8) A request for release from priority pursuant to Section 10504.

"(9) An application for an assignment of a state-filed application pursuant to Section 10504.

"(c) The board shall set the fee schedule authorized by this section so that the total amount of fees collected pursuant to this section equals that amount necessary to recover costs incurred in connection with the issuance, administration, review, monitoring, and enforcement of permits, licenses, certificates, and registrations to appropriate water, water leases, and orders approving changes in point of discharge, place of use, or purpose of use of treated wastewater. The board may include, as recoverable costs, but is not limited to including, the costs incurred in reviewing applications, registrations, petitions and requests, prescribing terms of permits, licenses, registrations, and change orders, enforcing and evaluating compliance with permits, licenses, certificates, registrations, change orders, and water leases, inspection, monitoring, planning, modeling, reviewing documents prepared for the purpose of regulating the diversion and use of water, applying and enforcing the prohibition set forth in Section 1052 against the unauthorized diversion or use of water subject to this division, and the administrative costs incurred in connection with carrying out these actions.

"(d)(1) The board shall adopt the schedule of fees authorized under this section as emergency regulations in accordance with Section 1530." [¶] ... [¶]

"(3) The board shall set the amount of total revenue collected each year through the fees authorized by this section at an amount equal to the revenue levels set forth in the annual Budget Act for this activity. The board shall review and revise the fees each fiscal year as necessary to conform with the revenue levels set forth in the annual Budget Act. If the board determines that the revenue collected during the preceding year was greater than, or less than, the revenue levels set forth in the annual Budget Act, the board may further adjust the annual fees to compensate for the over or under collection of revenue.

"(e) Annual fees imposed pursuant to this section for the 2003–04 fiscal year shall be assessed for the entire 2003–04 fiscal year."

  

12 Section 1540 provides:

> "If the board determines that the person or entity on whom a fee or expense is imposed will not pay the fee or expense based on the fact that the fee payer has sovereign immunity under Section 1560, the board may allocate the fee or expense, or an appropriate portion of the fee or expense, to persons or entities who have contracts for the delivery of water from the person or entity on whom the fee or expense was initially imposed. The allocation of the fee or expense to these contractors does not affect ownership of any permit, license, or other water right, and does not vest any equitable title in the contractors."

Section 1560 provides:

"(a) The fees and expenses established under this chapter and Part 3 (commencing with Section 2000) apply to the United States and to Indian tribes, to the extent authorized under federal or tribal law.

"(b) If the United States or an Indian tribe declines to pay a fee or expense, or the board determines that the United States or the Indian tribe is likely to decline to pay a fee or expense, the board may do any of the following:

"(1) Initiate appropriate action to collect the fee or expense, including any appropriate enforcement action for failure to pay the fee or expense, if the board determines that federal or tribal law authorizes collection of the fee or expense.

"(2) Allocate the fee or expense, or an appropriate portion of the fee or expense, in accordance with Section 1540. The board may make this allocation as part of the emergency regulations adopted pursuant to Section 1530.

"(3) Enter into a contractual arrangement that requires the United States or the Indian tribe to reimburse the board, in whole or in part, for the services furnished by the board, either directly or indirectly, in connection with the activity for which the fee or expense is imposed.

"(4) Refuse to process any application, registration, petition, request, or proof of claim for which the fee or expense is not paid, if the board determines that refusal would not be inconsistent with federal law or the public interest."

13 An acre-foot is "[t]he volume of water, 43,560 cubic feet, that will cover an area of one acre to a depth of one foot." (American Heritage Dict. (2d college ed.1982) p. 75.)

14 Regulation 1066, subdivision (a) provided: "A person who holds a water right permit or license shall pay an annual fee that is the greater of $100 or $0.03 per acre-foot based on the total annual amount of diversion authorized by the permit or license." (Cal.Code Regs., tit. 23, § 1066, subd. (a), Register 2003, No. 52 (Dec. 23, 2003).)

15 Plaintiff California Farm Bureau Federation (Farm Bureau) asserts it is authorized to take judicial action to protect the rights of farm families that hold water rights subject to the fees imposed by Senate Bill No. 1049 (2003–2004 Reg. Sess.) and the emergency regulations. The individuals named in its complaint hold water rights and have been assessed the section 1525 fees. Plaintiff Northern California Water Association represents over 70 agricultural water districts within the Sacramento River Basin, some of which hold water rights. Other members receive water under contracts with the Bureau of Reclamation, and others operate hydroelectric plants licensed or regulated by the Federal Energy Regulatory Commission.

Plaintiff Central Valley Water Project Association represents the interests of some 300 agricultural and municipal districts, agencies and communities within the Central and Santa Clara Valleys that have contracts for water from the Central Valley Project.

16 The terms "payor" and "payer" are synonymous and are used variably in case law.

17 The terms "burden of proof" and "burden of persuasion" are synonymous. (1 Witkin, Cal. Evidence (4th ed. 2000) Burden of Proof and Presumptions, § 3, p. 157.)

18 The "burden of producing evidence" has also been referred to as the "burden of production" and the "burden of going forward." (*Sargent Fletcher, supra,* 110 Cal.App.4th at p. 1667, 3 Cal.Rptr.3d 279.)

19 Plaintiffs do not challenge the one-time fees set forth in section 1525, subdivision (b).

20 This case does not involve a special assessment or a development fee, two types of fees that are routinely challenged under Proposition 13. (*Prof. Scientists, supra,* 79 Cal.App.4th at p. 944, 94 Cal.Rptr.2d 535.)

21 Section 1552 provides:

"The money in the Water Rights Fund is available for expenditure, upon appropriation by the Legislature, for the following purposes:

  

"(a) For expenditure by the State Board of Equalization in the administration of this chapter and the Fee Collection Procedures Law (Part 30 (commencing with Section 55001) of Division 2 of the Revenue and Taxation Code) in connection with any fee or expense subject to this chapter.
"(b) For the payment of refunds, pursuant to Part 30 (commencing with Section 55001) of Division 2 of the Revenue and Taxation Code, of fees or expenses collected pursuant to this chapter.
"(c) For expenditure by the board for the purposes of carrying out this division, Division 1 (commencing with Section 100), Part 2 (commencing with Section 10500) of Division 6, and Article 7 (commencing with Section 13550) of Chapter 7 of Division 7.
"(d) For expenditures by the board for the purposes of carrying out Sections 13160 and 13160.1 in connection with activities involving hydroelectric power projects subject to licensing by the Federal Energy Regulatory Commission.
"(e) For expenditures by the board for the purposes of carrying out Sections 13140 and 13170 in connection with plans and policies that address the diversion or use of water."

22 Section 1551 provides:
"All of the following shall be deposited in the Water Rights Fund:
"(a) All fees, expenses, and penalties collected by the board or the State Board of Equalization under this chapter and Part 3 (commencing with Section 2000).
"(b) All funds collected under Section 1052, 1845, or 5107.
"(c) All fees collected under Section 13160.1 in connection with certificates for activities involving hydroelectric power projects subject to licensing by the Federal Energy Regulatory Commission."

23 The Court of Appeal referred to the situation as "an accounting issue that concerns how the monies are treated within the Water Rights Fund."

24 The plaintiff also did not contend that the fees exceeded the reasonable cost of the services provided or that they were charged for unrelated revenue purposes. (*Sinclair Paint, supra,* 15 Cal.4th at p. 876, 64 Cal.Rptr.2d 447, 937 P.2d 1350.)

25 On remand, we also allowed plaintiffs "to prove ... that the amount of fees assessed and paid exceeded the reasonable cost of providing the ... services for which the fees were charged, or that the fees were levied for unrelated revenue purposes." (*Sinclair Paint, supra,* 15 Cal.4th at p. 881, 64 Cal.Rptr.2d 447, 937 P.2d 1350.)

26 Because we remand, we need not address the SWRCB's contention that the "polluter pays" rationale justifies the annual cost allocation because the money collected supports regulatory activities that serve an important public purpose and are a valid exercise of the police power.

27 When conducting a supremacy clause analysis, federal courts do not distinguish between fees and taxes. (See *Novato Fire Protection Dist. v. United States* (9th Cir.1999) 181 F.3d 1135, 1138–1139; *United States v. Anderson Cottonwood Irrigation Dist.* (N.D.Cal.1937) 19 F.Supp. 740, 741.)

28 Also, section 1560, subdivision (a) provides that the fees are only to be collected "to the extent authorized under federal or tribal law."

29 We reject plaintiff Northern California Water Association's contention that because the federal government is immune from the fee under federal law there should be no fee imposed on the federal contractors. (*County of Fresno, supra,* 429 U.S. at p. 453, 97 S.Ct. 699.)
Plaintiffs also argue that the annual fee is unconstitutional because the SWRCB failed to provide any evidence showing that this amount is reasonably related to the cost of the regulatory burden. This argument fails. The SWRCB presented evidence to the trial court in support of the amount charged for the annual fee.

30 Because we reverse the Court of Appeal's judgment and remand this matter to the trial court so it can make findings and a determination as to whether the fees were improperly imposed, we need not address plaintiffs' claim that the Court of Appeal erred by limiting refunds.

* Retired Chief Justice of California, assigned by the Chief Justice pursuant to article VI, section 6 of the California Constitution.

KeyCite Yellow Flag - Negative Treatment
Distinguished by Living Rivers Council v. State Water Resources Control Board, Cal.App. 1 Dist., May 7, 2014

135 Cal.App.4th 1392
Court of Appeal, Fourth District, Division 1, California.

CITY OF ARCADIA et al., Plaintiffs and Appellants,
v.
STATE WATER RESOURCES CONTROL BOARD et al., Defendants and Appellants.

No. D043877.
|
Jan. 26, 2006.
|
Rehearing Denied Feb. 17, 2006.
|
Review Denied April 19, 2006.

**Synopsis**

**Background:** Cities filed petition for writ of mandate and complaint for declaratory and injunctive relief against state and regional water boards to challenge water boards' adoption and approval of a zero trash total maximum daily loads (TMDL) discharge from municipal storm drains into river. The Superior Court, San Diego County, No. GIC803631, Wayne L. Peterson and Linda B. Quinn, JJ., partially granted cities' petition and granted declaratory relief, but did not invalidate trash TMDL on specified grounds. Water boards and cities appealed.

**Holdings:** The Court of Appeal, McConnell, P.J., held that:

[1] water boards' decision not to conduct an assimilative capacity study before adopting zero trash TMDL was within their expertise rather than trial court's;

[2] water boards sufficiently complied with statute requiring consideration of economic factors before adopting and approving zero trash TMDL;

[3] regional water board's environmental checklist with regard to approving zero trash TMDL was deficient for purposes of California Environmental Quality Act (CEQA);

[4] water boards' adoption and approval of zero trash TMDL did not violate federal standards; and

[5] adoption and approval of zero trash TMDL did not fail to comply with requisite scientific standards.

Judgment affirmed in part, reversed in part; order affirmed.

West Headnotes (26)

[1] **Mandamus**
Legislative powers

Review of judgment partially granting cities' petition for writ of mandate to challenge adoption by state and regional water boards of planning document setting a target of zero trash discharge from municipal storm drains into river was limited to traditional mandamus, inasmuch as water boards' actions were quasi-legislative. West's Ann.Cal.C.C.P. § 1085.

[2] **Mandamus**
Legislative powers

Acts of an administrative agency that are quasi-legislative in nature are not reviewable by administrative mandamus; rather, review of a quasi-legislative action is limited to traditional mandamus.

[3] **Mandamus**
Presumptions and burden of proof

**Mandamus**
Scope of inquiry and powers of court

Under statute authorizing writs of mandate, review is limited to an inquiry into whether the action was arbitrary, capricious, or entirely lacking in evidentiary support, and the petitioner has the burden of proof to show that the decision is unreasonable or invalid as a matter of law. West's Ann.Cal.C.C.P. § 1085.

3 Cases that cite this headnote

[4] **Mandamus**
Scope and extent in general

In mandamus proceedings, the appellate court reviews the record de novo except where the trial court made foundational factual findings, which are binding on appeal if supported by substantial evidence.

1 Cases that cite this headnote

[5] **Environmental Law**
Assessments and impact statements

Abuse of discretion applies to review of California Environmental Quality Act issues. West's Ann.Cal.Pub.Res.Code § 21000 et seq.

[6] **Environmental Law**
Assessments and impact statements

On review of California Environmental Quality Act (CEQA) issues, the reviewing court's task on appeal is the same as the trial court's; the reviewing court therefore conduct its review independent of the trial court's findings. West's Ann.Cal.Pub.Res.Code § 21000 et seq.

[7] **Environmental Law**
Daily maximum load and limited segments

State and regional water boards' decision not to conduct an assimilative capacity study before adopting a target of zero trash discharge from municipal storm drains into river was within their expertise rather than the trial court's; Clean Water Act did not require regional boards to conduct an assimilative capacity study before adopting the zero trash total maximum daily loads (TMDL), and the evidence adequately supported boards' decision. Clean Water Act, § 303, 33 U.S.C.A. § 1313.

[8] **Environmental Law**
Daily maximum load and limited segments

State and regional water boards were not required to conduct a cost/benefit analysis before adopting and approving a zero trash total maximum daily loads (TMDL) discharge from municipal storm drains into river; by its plain terms, statute authorizing such analysis did not apply at the TMDL stage. West's Ann.Cal.Water Code § 13267.

[9] **Statutes**
Language and intent, will, purpose, or policy

**Statutes**
Plain Language; Plain, Ordinary, or Common Meaning

The court's primary aim in construing any law is to determine the legislative intent, and in doing so, the court looks first to the words of the statute, giving them their usual and ordinary meaning.

[10] **Environmental Law**
Daily maximum load and limited segments

Adoption of a trash total maximum daily loads (TMDL) under Clean Water Act does not, by itself, prohibit any conduct or require any actions; instead, each TMDL represents a goal that may be implemented by adjusting pollutant discharge requirements in individual National Pollution Discharge Elimination System (NPDES) permits or establishing nonpoint source controls. Clean Water Act, § 303, 33 U.S.C.A. § 1313.

3 Cases that cite this headnote

[11] **Environmental Law**
Daily maximum load and limited segments

State and regional water boards sufficiently complied with statute requiring consideration of economic factors before adopting and approving a zero trash total maximum daily loads (TMDL) discharge from municipal storm drains into river; boards' trash TMDL included the estimated costs of several types of compliance methods and a cost comparison of capital costs and costs of operation and maintenance, and consideration of economic factors under statute did not require analysis of every conceivable compliance method or combinations thereof, or the fiscal impacts on permittees. West's Ann.Cal.Water Code § 13241.

  

2 Cases that cite this headnote

**[12] Environmental Law**

Daily maximum load and limited segments

State and regional water boards could include estuary of river along with river when adopting and approving a zero trash total maximum daily loads (TMDL) discharge from municipal storm drains into river; plain language of Clean Water Act did not preclude boards from exercising their discretion to simultaneously submit to the Environmental Protection Agency (EPA) the identification of an impaired water body and a TMDL for it. Clean Water Act, § 303(d)(2), 33 U.S.C.A. § 1313(d)(2).

1 Cases that cite this headnote

**[13] Environmental Law**

Notice and comment

State and regional water boards sufficiently identified estuary of river along with river, so as to put all parties on notice when adopting and approving a zero trash total maximum daily loads (TMDL) discharge from municipal storm drains into river, pursuant to Clean Water Act; although trash TMDL list did not include estuary, trash TMDL listed and discussed the beneficial uses of the estuary, and administrative record contained several pictures of trash deposited in estuary during high flows. Clean Water Act, § 303, 33 U.S.C.A. § 1313.

**[14] Environmental Law**

Waters and water courses; dams and flood control

Regional water board failed to comply with California Environmental Quality Act (CEQA) requirements when it prepared an environmental checklist with regard to approving a zero trash total maximum daily loads (TMDL) discharge from municipal storm drains into river, in lieu of an environmental impact report (EIR) or its functional equivalent; basin planning process of state and regional water boards was a certified regulatory program, neither checklist nor trash TMDL included an analysis of the reasonably foreseeable impacts of construction and maintenance of pollution control devices or mitigation measures. West's Ann.Cal.Pub.Res.Code § 21159.

*See 12 Witkin, Summary of Cal. Law (10th ed. 2005) Real Property, § 831 et seq.; Cal. Jur. 3d, Pollution and Conservation Laws, § 118 et seq.*

7 Cases that cite this headnote

**[15] Environmental Law**

Necessity for Preparation of Statement, Consideration of Factors, or Other Compliance with Requirements

California Environmental Quality Act (CEQA) requires a governmental agency to prepare an environmental impact report (EIR) whenever it considers approval of a proposed project that may have a significant effect on the environment. West's Ann.Cal.Pub.Res.Code § 21000 et seq.

3 Cases that cite this headnote

**[16] Environmental Law**

Significance in general

**Environmental Law**

Mitigation measures

**Environmental Law**

Negative declaration; statement of reasons

Under the California Environmental Quality Act (CEQA), if there is no substantial evidence a project may have a significant effect on the environment, or the initial study identifies potential significant effects, but provides for mitigation revisions which make such effects insignificant, a public agency must adopt a negative declaration to such effect and, as a result, no environmental impact report (EIR) is required. West's Ann.Cal.Pub.Res.Code § 21000 et seq.

5 Cases that cite this headnote

**[17] Environmental Law**

Significance in general

**Environmental Law**

  

Weight and sufficiency

The California Environmental Quality Act (CEQA) requires the preparation of an environmental impact report (EIR) whenever it can be fairly argued on the basis of substantial evidence that the project may have significant environmental impact; thus, if substantial evidence in the record supports a fair argument that significant impacts or effects may occur, an EIR is required and a negative declaration cannot be certified. West's Ann.Cal.Pub.Res.Code § 21000 et seq.

5 Cases that cite this headnote

**[18] Environmental Law**

Categorical exclusion; exemptions in general

State regulatory programs that meet certain environmental standards and are certified by the Secretary of the California Resources Agency are exempt from the requirements of California Environmental Quality Act (CEQA) for preparation of environmental impact reports (EIRs), negative declarations, and initial studies; environmental review documents prepared by such programs may be used instead of environmental documents that CEQA would otherwise require. West's Ann.Cal.Pub.Res.Code § 21080.5.

2 Cases that cite this headnote

**[19] Environmental Law**

Categorical exclusion; exemptions in general

The guidelines for implementation of the California Environmental Quality Act (CEQA) do not directly apply to a certified regulatory program's environmental document; however, when conducting its environmental review and preparing its documentation, a certified regulatory program is subject to the broad policy goals and substantive standards of CEQA. 14 CCR § 15000 et seq.

5 Cases that cite this headnote

**[20] Declaratory Judgment**

Officers and official acts in general

**Declaratory Judgment**

State officers and boards

In cities' challenge to state and regional water boards' adoption and approval of a zero trash total maximum daily loads (TMDL) discharge from municipal storm drains into river, judgment should not have included declaratory relief as to non-navigable waters, where water boards conceded that trash TMDL only applied to navigable waters, leaving no present controversy with regard to non-navigable waters.

**[21] Declaratory Judgment**

Necessity

The fundamental basis of declaratory relief is the existence of an actual, present controversy.

**[22] Environmental Law**

Daily maximum load and limited segments

State and regional water boards' adoption and approval of a zero trash total maximum daily loads (TMDL) discharge from municipal storm drains into river did not violate federal "maximum extent practicable" and "best management practices" standards under Clean Water Act; record failed to show that zero limit was unattainable, burden was on cities challenging the TMDL to establish impossibility, and, in any event, federal statute applicable to establishing a TMDL did not suggest that practicality was a consideration. Clean Water Act, § 303(d)(1)(C), 33 U.S.C.A. § 1313(d)(1)(C).

2 Cases that cite this headnote

**[23] Appeal and Error**

Form and requisites in general

**Appeal and Error**

Points and arguments

**Appeal and Error**

Briefs and argument in general

  

**Appeal and Error**

Citation to facts and legal authority in general

Parties are required to include argument and citation to authority in their briefs, and the absence of these necessary elements allows the appellate court to treat the appellant's issue as waived.

3 Cases that cite this headnote

[24] **Environmental Law**

Daily maximum load and limited segments

State and regional water boards' adoption and approval of a zero trash total maximum daily loads (TMDL) discharge from municipal storm drains into river did not require water boards to identify load allocations and implementation measures for nonpoint sources of trash discharge; Clean Water Act did not require that states adopt a regulatory system for nonpoint sources. Clean Water Act, § 303, 33 U.S.C.A. § 1313.

2 Cases that cite this headnote

[25] **Environmental Law**

Daily maximum load and limited segments

State and regional water boards' adoption and approval of a zero trash total maximum daily loads (TMDL) discharge from municipal storm drains into river was not improper under Clean Water Act, notwithstanding stated beneficial uses of river that included allegedly illegal use of river for recreation and bathing by homeless people seeing shelter there; swimming and bathing by homeless were only two among numerous other beneficial uses that were not challenged. Clean Water Act, § 303(d)(1)(A), 33 U.S.C.A. § 1313(d)(1)(A).

[26] **Environmental Law**

Daily maximum load and limited segments

State and regional water boards' adoption and approval of a zero trash total maximum daily loads (TMDL) discharge from municipal storm drains into river did not fail to comply with requisite scientific analysis under Clean Water Act; project evaluated trash loading at two drainage basins, and trash TMDL relied on several studies to conclude that urban runoff was the dominant source of trash. Clean Water Act, § 303, 33 U.S.C.A. § 1313.

1 Cases that cite this headnote

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**Opinion**

McCONNELL, P.J.

***1401** This case concerns the serious environmental problem of litter discharged from municipal storm drains into the Los Angeles River, and efforts of the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) and the State Water Resources Control Board (State Board) [1] to ameliorate the problem through the adoption and

approval of a planning document setting a target of zero trash discharge within a multi-year implementation period.

The Water Boards appeal a judgment partially granting a petition for writ of mandate brought by the City of Arcadia and 21 other cities (Cities),[2] who ***1402** agree trash pollution must be remedied but oppose the target of zero trash as unattainable and inordinately expensive. The Water Boards challenge the court's findings that an assimilative capacity study is a required element of its action; a cost-benefit analysis and consideration of economic factors are required under state law and are not met; the zero trash target is inapplicable to the Los Angeles River Estuary (Estuary) because it does not appear on the state's list of impaired waters; and, the Water Boards failed to comply with the California Environmental Quality Act (CEQA) by not preparing an Environmental Impact report (EIR) or its functional equivalent.

The Water Boards also contend the court erred by granting the Cities declaratory relief on their claim the Trash total maximum daily load (TMDL) does not apply to "nonwaters," meaning areas that do not drain into navigable waters such as the Los Angeles River or tributaries, as the parties agreed during this proceeding that the trash TMDL applies only to navigable waters.

The Cities also appeal, contending the trial court erred by not invalidating the Trash TMDL on the additional grounds the Water Boards failed to provide for deemed compliance with the target of zero trash through certain methods; failed to implement load allocations for nonpoint sources of trash pollution; failed to adhere to the data collection and analysis required by federal and state law; relied on nonexistent, illegal and irrational uses to be made of the Los Angeles River; and, violated the Administrative Procedures Act (APA).

We conclude the Cities' appeal lacks merit. As to the Water Boards' appeal, we conclude the court properly invalidated the planning document on the ground of noncompliance with CEQA, and we affirm the judgment insofar as it is based on that ground. We reverse the judgment to the extent it is based on other grounds. Further, we hold the court erred by granting declaratory relief on the nonwaters issue as there was no controversy when the court ruled.

****379** BACKGROUND INFORMATIONI*Statutory and Regulatory Scheme*

The "quality of our nation's waters is governed by a 'complex statutory and regulatory scheme ... that implicates both federal and state administrative responsibilities.' " ***1403** (*City of Burbank v. State Water Resources Control Bd.* 2005) 35 Cal.4th 613, 619, 26 Cal.Rptr.3d 304, 108 P.3d 862 (*City of Burbank* ).) An overview of applicable law is required to place the facts here in context.

A*Federal Law*

In 1972 Congress enacted amendments to the Federal Water Pollution Control Act (Pub.L. No. 92–500 (Oct. 18, 1972) 86 Stat. 816; 33 U.S.C. § 1251 et seq.), which, as amended in 1977, is commonly known as the Clean Water Act. (*City of Burbank, supra,* 35 Cal.4th at pp. 619–620, 26 Cal.Rptr.3d 304, 108 P.3d 862.) Its stated goal is "to restore and maintain the chemical, physical and biological integrity of the Nation's waters" by eliminating the discharge of pollutants into navigable waters. (33 U.S.C. § 1251(a).)

The Clean Water Act places "primary reliance for developing water quality standards on the states." (*Scott v. Hammond* (7th Cir.1984) 741 F.2d 992, 994.) It requires each state to develop such standards and review them at least once every three years for required modifications. (33 U.S.C. § 1313(a), (c)(1).) The standards must include designated uses such as recreation, navigation or the propagation of fish, shellfish and wildlife; water quality criteria sufficient to protect the designated uses; and an antidegradation policy. (40 C.F.R. §§ 131.6, 131.10–131.12 (2003).) The water quality criteria "can be expressed in narrative form or in a numeric form, e.g., specific pollutant concentrations." (*Florida Public Interest Research Group Citizen Lobby, Inc. v. EPA* (11th Cir.2004) 386 F.3d 1070, 1073.) "Narrative criteria are broad statements of desirable water quality goals in a water quality plan. For example, 'no toxic pollutants in toxic amounts' would be a narrative description." (*City of Burbank, supra,* 35 Cal.4th at p. 622, fn. 4, 26 Cal.Rptr.3d 304, 108 P.3d 862.)

The Clean Water Act focuses on two possible sources of pollution: point sources and nonpoint sources. "Point source" means "any discernable, confined and discrete conveyance" such as a pipe, ditch, channel, tunnel, or conduit. (33 U.S.C. § 1362(14).) The Clean Water Act does not define nonpoint source pollution, but it has been described as " ' "nothing more [than] a [water] pollution problem not involving a discharge from a point source." ' " (*Defenders of Wildlife v. EPA* (10th Cir.2005) 415 F.3d 1121, 1123–1124.)[3]

***1404** "Congress dealt with the problem of point source pollution using the National Pollution Discharge Elimination System [NPDES] permit process. Under this approach, compliance rests on technology- ****380** based controls that limit the discharge of pollution from any point source into certain waters unless that discharge complies with the [Clean Water] Act's specific requirements." (*San Francisco BayKeeper v. Whitman* (2002) 297 F.3d 877, 880; 33 U.S.C. § 1311(b)(1)(A).) " 'Nonpoint sources, because of their very nature, are not regulated under the NPDES [program]. Instead, Congress addressed nonpoint sources of pollution in a separate portion of the [Clean Water] Act which encourages states to develop areawide waste treatment management plans.' " (*Pronsolino v. Marcus* (N.D.Cal.2000) 91 F.Supp.2d 1337, 1348, citing 33 U.S.C. § 1288; see also 33 U.S.C. § 1329.)

"When the NPDES system fails to adequately clean up certain rivers, streams or smaller water segments, the [Clean Water] Act requires use of a water-quality based approach. States are required to identify such waters ... [and] rank [them] in order of priority, and based on that ranking, calculate levels of permissible pollution called 'total maximum daily loads' or 'TMDLs.' " (*San Francisco BayKeeper v. Whitman, supra,* 297 F.3d at p. 880; 33 U.S.C. § 1313(d)(1)(A); 40 C.F.R. § 130.7(b) (2003).) "This list of substandard waters is known as the '303(d) list' (section 303 of the Clean Water Act having been codified as [title 33 United States Code] section 1313)." (*City of Arcadia v. EPA* (9th Cir.2005) 411 F.3d 1103, 1105 (*City of Arcadia II* ).)

"A TMDL defines the specified maximum amount of a pollutant which can be discharged or 'loaded' into the waters at issue from all combined sources." (*Dioxin/Organochlorine Center v. Clarke* (9th Cir.1995) 57 F.3d 1517, 1520.) "A TMDL must be 'established at a level necessary to implement the applicable water quality standards....' [Citation.] A TMDL assigns a *waste load allocation* ... to each point source, which is that portion of the TMDL's total pollutant load, which is allocated to a point source for which an NPDES permit is required. [Citation.] Once a TMDL is developed, effluent limitations in NPDES permits must be consistent with the [waste load allocations] in the TMDL." (*Communities for a Better Environment v. State Water Resources Control Bd.* (2003) 109 Cal.App.4th 1089, 1095–1096, 1 Cal.Rptr.3d 76; *Dioxin/Organochlorine Center v. Clarke,* at p. 1520.)[4] A TMDL requires a ***1405** "margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality." (33 U.S.C. § 1313(d)(1)(C).)

The EPA may allow states to adopt and administer NPDES permit programs (*Pronsolino v. Marcus, supra,* 91 F.Supp.2d at p. 1347, fn. 10), and it has authorized California to administer such a program. (54 Fed.Reg. 40664 (Oct. 3, 1989).)

B*State Law*

California implements the Clean Water Act through the Porter–Cologne Act (Wat.Code, § 13000 et seq.), which was promulgated in 1969. Under the Porter–Cologne Act, nine regional boards regulate the quality of waters within their regions under the purview of the State Board. (Wat.Code, §§ 13000, 13100, 13200, 13241, 13242.)

****381** Regional boards must formulate and adopt water quality control plans, commonly called basin plans, which designate the beneficial uses to be protected, water quality objectives and a program to meet the objectives. (Wat.Code, §§ 13050, subd. (j), 13240.) " 'Water quality objectives' means the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area." (*Id.,* § 13050, subd. (h).)

The EPA must approve or disapprove a state's TMDL within 30 days of its submission. (33 U.S.C. § 1313(d)(2).) If the EPA disapproves a state's submission, it must establish its own TMDL within 30 days of the disapproval. (*Ibid.*)

II*Trash TMDL*

The Los Angeles River is a 51–mile flood control channel, largely concrete-lined, which runs through the City of Los Angeles and surrounding municipalities in Los Angeles County and terminates at the Pacific Ocean. In 1990 the Regional Board issued an NPDES storm water permit to the Los Angeles County Department of Public Works as the principal permittee and 84 cities as copermittees, to address various chemical pollutants discharged into the region's water bodies (Municipal NPDES Permit).

***1406** In 1994 the Regional Board adopted a revised water quality control plan, or basin plan (1994 Basin Plan), which includes narrative water quality objectives. It provides that "[w]aters shall not contain floating materials, including solids, liquids, foams, and scum, in concentrations that

cause nuisance or adversely affect beneficial uses," and "[w]aters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses." (Italics omitted.) Beneficial uses of the Los Angeles River and surrounds include wildlife and marine habitat, including habitat for endangered species, and recreational activities such as fishing, walking, hiking, jogging, bicycling, horseback riding, bird watching and photography.

In 1996 and 1998 the Regional Board identified certain reaches of the Los Angeles River on the state's "303(d) list" as being impaired by trash, primarily through storm water runoff in thousands of municipal storm drains. [5] On September 19, 2001, the Regional Board adopted a resolution to amend its 1994 Basin Plan to incorporate a TMDL for trash in the Los Angeles River (Trash TMDL). Despite many objections from affected municipalities, the Trash TMDL sets a numeric target of zero trash as "even a single piece of trash can be detrimental, and no level of trash is acceptable in waters of the state." [6] "The numeric target is staff's interpretation of the narrative water quality objective [in **382 the 1994 Basin Plan], including an implicit margin of safety."

The reduction of trash is to be phased over a 14–year period, including an optional two-year baseline monitoring period. In lieu of baseline monitoring, cities may accept a default baseline allocation of "640 gallons of uncompressed trash per square mile per year," a value based on data the City of Calabasas provided. The Trash TMDL provides for a "review of the current target [of zero trash] ... once a reduction of 50% has been achieved and sustained," "based on the findings of future studies regarding the threshold levels needed for protecting beneficial uses."

Under the Trash TMDL, cities may use a variety of compliance methods, including "[e]nd-of-pipe full capture structural controls," "partial capture *1407 control systems" and "[i]nstitutional controls." Cities using a full-capture system meeting certain criteria will be deemed in compliance with the zero target if the systems are properly maintained and maintenance records are available for the Regional Board's inspection.

On December 21, 2001, the Regional Board issued an order under Water Code section 13267 to the County of Los Angeles and copermittees under the Municipal NPDES Permit to submit baseline monitoring plans by February 1, 2002, and to monitor trash in the Los Angeles River between January 2002 and December 2003, with a final report due February 2004. [7] The Regional Board intends to use resulting data to "refine" the default baseline waste load allocations in the Trash TMDL.

In February and July 2002, the State Board and the Office of Administrative Law, respectively, approved the Trash TMDL. In August 2002 the EPA approved it and announced it supersedes an interim TMDL for trash the EPA adopted in March 2002 as a result of a consent decree in litigation between environmental groups and the EPA. (*City of Arcadia I, supra,* 265 F.Supp.2d 1142, 1147.) [8]

III*Procedural History*

The Cities are within the Regional Board's jurisdiction and are permittees under the 2001 Municipal NPDES Permit. In July 2002 the Cities filed a petition for writ of mandate and complaint for declaratory and injunctive relief against the Water Boards. They filed the action in the Los Angeles County Superior Court, but the parties stipulated to its transfer to the San Diego County Superior Court.

The second amended petition alleges numerous grounds on which the Trash TMDL violates the Clean Water Act or the Porter–Cologne Act, and the court adjudicated some issues in favor of each party. It found the *1408 Water Boards improperly (1) failed to conduct an analysis of the Los Angeles River's assimilative capacity; (2) failed to conduct a cost-benefit analysis or **383 consider economic factors under Water Code sections 13267 and 13241; (3) purported to apply the Trash TMDL to the Estuary even though it is not listed on the state's 1998 303(d) list as impaired; and (4) failed to prepare a required EIR or its functional equivalent under CEQA. The court issued a writ of mandate commanding the Water Boards to set aside the amendment to the 1994 Basin Plan and the Trash TMDL to the extent it was based on the above findings and to not take any further steps to implement it. The court denied the Water Boards' motion to vacate the judgment or grant a new trial, and judgment was entered on December 24, 2003.

The Cities later moved for an order that the prohibitory terms of the writ of mandate and judgment not be stayed on appeal. (Code Civ. Proc., § 1110b.) The court granted the motion, and further ordered that "to preserve the status quo and prevent injustice to [the Cities], the ... implementation schedule and compliance dates, and all milestones contained in the [Trash TMDL] shall be tolled effective December 24, 2003, through

and until a final determination has been rendered on the pending appeal." The Water Boards appealed that order, and in accordance with the parties' stipulation we consolidated it with the other appeals.

DISCUSSION*WATER BOARDS' APPEAL*I*Standard of Review*

**[1]** **[2]** The Water Boards contend a deferential standard of review applies to our review of their action under Code of Civil Procedure section 1085, and the Cities claim an independent standard applies under Code of Civil Procedure section 1094.5. Code of Civil Procedure section 1094.5, the administrative mandamus statute, applies when "the writ is issued for the purpose of inquiring into the validity of any final administrative order or decision made as the result of a proceeding in which by law a hearing is required to be given, evidence is required to be taken, and discretion in the determination of facts is vested in the inferior tribunal." (Code Civ. Proc., § 1094.5, subd. (a).) "Acts of an administrative agency that are quasi-legislative in nature, e.g., establishment of regulations to carry out a statutory policy or direction, are not reviewable by administrative mandamus." (8 Witkin, Cal. Procedure (4th ed. 1997) Extraordinary Writs, § 268, pp. 1067–1068.) Rather, review of a quasi-legislative action is limited to traditional mandamus. (*Id.* at p. 1068.)

**[3]** **[4]** ***1409** The trial court correctly found this proceeding is for traditional mandamus because the Regional Board's adoption and the State Water Board's approval of the Trash TMDL was quasi-legislative. Under Code of Civil Procedure section 1085, " ' "review is limited to an inquiry into whether the action was arbitrary, capricious or entirely lacking in evidentiary support," ' ... [and][t]he petitioner has the burden of proof to show that the decision is unreasonable or invalid as a matter of law. [Citation.] We review the record de novo except where the trial court made foundational factual findings, which are binding on appeal if supported by substantial evidence." (*Citizens for Improved Sorrento Access, Inc. v. City of San Diego* (2004) 118 Cal.App.4th 808, 814, 13 Cal.Rptr.3d 259.)

The Cities' reliance on Water Code section 13330 is misplaced. It provides that "[a]ny party aggrieved by a final decision or order of a regional board *for which the state board denies review* may obtain review of the decision or order of the regional ****384** board in the superior court (*id.*, § 13330, subd. (b), italics added), and "[e]xcept as otherwise provided herein, Section 1094.5 of the Code of Civil Procedure shall govern proceedings for which petitions are filed pursuant to this section" (*id.*, § 13330, subd. (d)). Given the language italicized above, Water Code section 13330 necessarily applies to an administrative appeal of a quasi-judicial action under Code of Civil Procedure section 1094.5. Here, an appeal to the State Board was unnecessary because the Trash TMDL was ineffective without its approval. (Wat.Code, § 13245.) Indeed, the State Board notified the Cities in March 2001 that it "lacks statutory authority to accept petitions for review of water quality control plan (basin plan) amendments adopted" by regional boards.

**[5]** **[6]** As to CEQA issues, the parties agree an abuse of discretion standard applies. (*Federation of Hillside & Canyon Assns. v. City of Los Angeles* (2004) 126 Cal.App.4th 1180, 1199, 24 Cal.Rptr.3d 543.) Abuse of discretion "is established if the agency has not proceeded in a manner required by law or if the determination or decision is not supported by substantial evidence." (Pub. Resources Code, § 21168.5.) "Our task on appeal is 'the same as the trial court's.' [Citation.] Thus, we conduct our review independent of the trial court's findings." (*Quail Botanical Gardens Foundation, Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1602, fn. 3, 35 Cal.Rptr.2d 470.)

II*Assimilative Capacity Study*

The trial court invalidated the Trash TMDL based in part on the Cities' argument an "assimilative capacity study" is a required element of a TMDL and none was performed here. In its statement of decision, the court ***1410** explained "[i]t is unreasonable to conclude that the beneficial uses of the [Los Angeles] River could not be maintained with some 'target' other than zero. Of course, it is possible the River would not support a greater target, however, without a study it is yet undetermined."

**[7]** The Water Boards contend the trial court erred by substituting its own judgment for that of the Water Boards on the issue of whether the adoption of the Trash TMDL should have been preceded by a scientific study of the assimilative capacity of the Los Angeles River. They assert the matter was best suited for their determination rather than the court's and the evidence adequately supports their decision. We agree with the Water Boards.

During the notice and comment period, the Regional Board received numerous complaints that a zero Trash TMDL is infeasible, or at least unwarranted without a scientific assimilative capacity study, or load capacity study, showing a zero limit is the only means of protecting beneficial uses. For

instance, the City of Los Angeles worried that "[i]f there's one gum wrapper in the [Los Angeles] River, you can get sued."

The Regional Board responded to one complaint as follows: "For more typical pollutants, the loading parameters are flow and pollutant concentration. For this pollutant [trash], flow does not serve to dilute the pollutant, but merely serves as a transport mechanism. Therefore, the typical loading calculation does not apply to trash." The Regional Board took the position that since littering is unlawful, a target of zero trash in the Los Angeles River is the only defensible position. It also explained that its staff "found no study to document that there is an acceptable level of trash that will cause no harm to aquatic life," and absent such a study it was compelled to adopt a zero target.

****385** At a Regional Board hearing, Dr. Mark Gold, executive director of Heal the Bay, testified he was unaware of any assimilative capacity study having been performed anywhere on trash. He explained, "Basically it's a physical object. It's trash. It's not something that breaks down and becomes part of the environment in many, many cases. And so honestly, it probably won't reach any sort of threshold of being a scientific study of any value."

At a State Board hearing Dave Smith, an EPA team leader working with the Regional Board on the trash issue, testified "it would be difficult to design [an assimilative capacity] study and come up with firm answers." He also explained that both the Regional Board and the State Board "have conducted pretty diligent efforts to find research studies, reports, that look at the affects of trash on the aquatic environment," and neither they nor the EPA could find any literature to support a target of more than zero trash.

***1411** Alex Helperin, of the Natural Resources Defense Council, testified at a Regional Board hearing that "[e]ven small quantities [of trash] can maim and kill wildlife, [which] becomes entangled in it or ingest[s] it. [Trash] [c]an obstruct and repel boaters and contract recreators and compromise the aesthetic quality that's essential to the recognized aspect of non-contact recreation beneficial use for the Los Angeles River."

The administrative record includes numerous photographs of copious amounts of trash deposited in the Los Angeles River watershed through storm water drains. Dennis Dickerson, the Executive Officer of the Regional Board, testified he took photographs of trash in the Long Beach area shortly after storms, and among them are photographs of "water birds foraging among the trash." One photograph is of a bird with a cigarette butt in its mouth and another is of a fish trapped in a plastic six-ring can holder.

In arguing an assimilative capacity study is required *before* adopting a TMDL, the Cities rely principally on an EPA document issued January 7, 2000, entitled "Guidance for Developing TMDLs in California" (2000 EPA Guidance). It states: "The TMDL document must describe the relationship between numeric target(s) and identified pollutant sources, and estimate total assimilative capacity (loading capacity) of the water[ ]body for the pollutant of concern.... [¶] The loading capacity is the critical quantitative link between the applicable water quality standards (as interpreted through numeric targets) and the TMDL. Thus, a maximum allowable pollutant load must be estimated to address the site-specific nature of the impairment.... [¶] The loading capacity section must discuss the methods and data used to estimate loading capacity. A range of methods can be used...." (Emphasis omitted.)

The 2000 EPA Guidance, however, contains the following disclaimer: "[I]t does not impose legally-binding requirements on the EPA, the State of California, or the regulated community, and may not apply to a particular situation based upon the circumstances. EPA and State decision makers retain the discretion to adopt approaches on a case-by-case basis that differ from this guidance where appropriate and consistent with the requirements of section 303(d) [of the Clean Water Act] and EPA's regulations."

Smith, of the EPA, testified at a Regional Board hearing that he wrote the 2000 EPA Guidance and the Trash TMDL "fully complies with the Clean Water Act, its regulations and [the 2000 EPA Guidance]." Smith explained the "TMDL process specifically contemplates making decisions under uncertainty," and "[i]t does so by providing that a margin of safety has to be ****386** incorporated in every TMDL to account for the uncertainty in the analysis." Smith said states are required "to move forward to make TMDL decisions ***1412** based on available information and data, not to wait again and again and again for better information to come forward." Generally, " 'considerable weight should be accorded to an executive department's construction of a statutory scheme it is entrusted to administer.' " (*United States v. Mead Corp.* (2001) 533 U.S. 218, 227–228, 121 S.Ct. 2164, 150 L.Ed.2d 292.)

  

In *Natural Resources Defense Council v. Muszynski* (2d Cir.2001) 268 F.3d 91 (*Muszynski*), the plaintiff asked the court to invalidate a TMDL that the EPA had approved to control phosphorus pollution in drinking water, on the ground a margin of safety of only 10 percent was insufficient to account for uncertainty regarding the effects of phosphorus on water quality. The plaintiff argued "that no scientific or mathematical basis prescribed this percentage as opposed to any other." (*Id.* at p. 102.) The EPA countered that "because 'there is no "standard" or guideline for choosing a specific margin of safety, best professional judgment and the available information are used in setting [it].' " (*Ibid.*) The *Muszynski* court agreed with the EPA, explaining: "While the [margin of safety] may ... be set with an uncomfortable degree of discretion, requiring that EPA [or authorized regional board] show a rigorous scientific methodology *dictates one course of action as opposed to another and would effectively prevent the agency from acting in situations where action is required in the face of a clear public health or environmental danger but the magnitude of that danger cannot be effectively quantified.* '[A]s long as Congress delegates power to an agency to regulate on the borders of the unknown, courts cannot interfere with reasonable interpretations of equivocal evidence.' [Citation.] ... [S]imply to reject EPA's efforts to implement the [Clean Water Act] because it must respond to real water quality problems without the guidance of a rigorously precise methodology would essentially nullify the exercise of agency discretion in the form of 'best professional judgment.' " (*Muszynski, supra,* 268 F.3d at pp. 102–103, italics added.)

Further, in *Muszynski, supra,* 268 F.3d 91, 103, the court noted "that approval of the Phase I [margin of safety] was based, in part, on the limited information available. The EPA approval contemplates revision of the [margin of safety] as more information becomes available: 'As additional reservoir data and loading data become available, Phase I model assumptions are being reexamined under Phase II.' "

We conclude federal law does not require the Regional Board to conduct an assimilative capacity study before adopting the Trash TMDL. Moreover, the evidence amply shows that because of the nature of trash, including Styrofoam containers and other materials that are undiluted by water, in contrast to chemical pollutants, and the dangers to wildlife of even small amounts of trash, an assimilative capacity study would be difficult to conduct and of little value at the outset. For instance, given the ill effects of trash in a ***1413** water body it is unlikely such a study would determine the Los Angeles River may be loaded with a certain percentage of trash without affecting beneficial uses, particularly since a TMDL must include a margin of safety that "takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality." (33 U.S.C. § 1313(d)(1)(C).) In any event, the Trash TMDL requires the Regional Board to reconsider the zero trash target after a 50 percent reduction of trash is achieved, and no party suggests a trash reduction of at least 50 percent is unwarranted or unattainable. Because of ****387** this escape hatch, compliance with a zero trash target may never actually be mandated. The Water Boards' decision not to conduct or require an assimilative capacity study is within their expertise, not the court's, and we defer to them on the issue.

III*Cost-Benefit Analysis and Economic Considerations*

**[8]** The Water Boards next contend the court erred by finding the Trash TMDL is invalid because they violated state law by not conducting a cost-benefit analysis (Wat.Code, § 13267) or considering economic factors (*id.* at § 13241) before adopting and approving it.

A*Water Code Section 13267*

A regional board is authorized to investigate the quality of waters in its region (Wat.Code, § 13267, subd. (a)), and when it requires a polluter to furnish "technical or monitoring program reports," the "burden, including costs, of these reports shall bear a reasonable relationship to the need for the report[s] and the benefits to be obtained from the reports." (Wat.Code, § 13267, subd. (b)(1).) The court found the Regional Board adopted the Trash TMDL under the authority of Water Code section 13267, as the document mentions the statute several times and "expressly requires monitoring plans and submission of data to establish baselines for trash discharges."

The Water Boards persuasively contend Water Code section 13267 is inapplicable, and references to that statute in the Trash TMDL are to contemplated future orders. For instance, the Trash TMDL states "[b]aseline monitoring will be required via [Water Code] Section 13267," and the submission of baseline monitoring plans will be due "30 days after receipt of the Executive Officer's request as authorized by [Water Code] Section 13267." ***1414** It also states that "future storm water permits will be modified to incorporate the Waste Load Allocations and to address monitoring and implementation of this [Trash] TMDL."

  

Further, the Trash TMDL states "the permittee [under the Municipal NPDES permit] will submit a monitoring plan with the proposed monitoring sites and at least two alternative monitoring locations for each site. The plan must include maps of the drainage and storm drain data for each proposed and alternate monitoring location. The monitoring plan(s) will be submitted to the Regional Board within 30 days after receipt of the Executive Officer's letter requesting such a plan. Such a request is authorized pursuant to [Water Code] [s]ection 13267.... The Regional Board's Executive Officer will have full authority to review the monitoring plan(s), to modify the plan, to select among the alternate monitoring sites, and to approve or disapprove the plan(s)."

Additionally, the Water Boards submit that the December 21, 2001, order the Regional Board issued under Water Code section 13267 to the County of Los Angeles and copermittees under the Municipal NPDES permit regarding baseline monitoring and reporting would have been "useless and unnecessary" had the Trash TMDL itself required monitoring and reporting, and since there was no appeal of the December 21 order to the State Board within 30 days (Wat.Code, § 13320, subd. (a)) the cost-benefit analysis issue is not subject to appellate review. We note that the December 21 order, but not the Trash TMDL, warns that under Water Code section 13268 the "failure to conduct the required monitoring and/or to provide the required information in a timely manner ****388** may result in civil liability imposed by the Regional Board in an amount not to exceed ... $1000."

**[9]** **[10]** "Our primary aim in construing any law is to determine the legislative intent. [Citation.] In doing so we look first to the words of the statute, giving them their usual and ordinary meaning." (*Committee of Seven Thousand v. Superior Court* (1988) 45 Cal.3d 491, 501, 247 Cal.Rptr. 362, 754 P.2d 708.) We agree that by its plain terms Water Code section 13267 is inapplicable at the TMDL stage, and thus the court erred by invalidating the Trash TMDL on this ground. The monitoring and reports are required by the December 21, 2001 order, not the Trash TMDL, and the reduction of trash will be implemented by other NPDES permits. "TMDLs are primarily informational tools that allow the states to proceed from the identification of waters requiring additional planning to the required plans." (*Pronsolino v. Nastri* (9th Cir.2002) 291 F.3d 1123, 1129.) "A TMDL does not, by itself, prohibit any conduct or require any actions. Instead, each TMDL represents a goal that may be implemented by adjusting pollutant discharge requirements in individual NPDES permits or establishing nonpoint source ***1415** controls." (*City of Arcadia I, supra,* 265 F.Supp.2d at p. 1144.) A "TMDL forms the basis for further administrative actions that may require or prohibit conduct with respect to particularized pollutant discharges and water[ ]bodies." (*Id.* at p. 1145.)

B*Water Code Section 13241*

**[11]** Water Code section 13241 provides that "[e]ach regional board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance." In establishing water quality objectives a regional board is required to consider several factors, including "[e]conomic considerations." (Wat.Code, § 13241, subd. (d).)

The Water Boards contend Water Code section 13241 is inapplicable because the Trash TMDL does not establish water quality objectives, but merely implements, under Water Code section 13242, the existing narrative water quality objectives in the 1994 Basin Plan. It provides that waters shall not contain floating materials, including solids, or suspended or settleable materials in concentrations that adversely affect beneficial uses. The Cities counter that the Trash TMDL effectively establishes new water quality objectives, because when the 1994 Basin Plan was adopted a TMDL for trash was not contemplated and thus economic considerations of such a TMDL were not considered. Further, the Trash TMDL imposes for the first time a numeric limit for trash and significantly increases the costs of compliance.

We need not, however, decide whether the Trash TMDL adopts new or revised water quality objectives within the meaning of Water Code section 13241, because even if the statute is applicable, the Water Boards sufficiently complied with it.[9] Water Code section 13241, subdivision (d) does not define "economic considerations" or specify a particular manner of compliance, and thus, as the Water Boards assert, the matter is within a regional ****389** board's discretion. It appears there is no reported opinion analyzing the "economic considerations" phrase of this statute. In *City of Burbank, supra,* 35 Cal.4th at page 625, 26 Cal.Rptr.3d 304, 108 P.3d 862, the court, without discussion, concluded that in adopting Water Code section 13241 the Legislature intended "that a regional board consider the *cost of compliance* [with numeric pollutant restrictions] when setting effluent limitations in a wastewater discharge permit." (Italics added.)

  

***1416** The Trash TMDL discusses the costs of gathering and disposing of trash at the mouth of the Los Angeles River watershed during the rainy seasons between 1995 and 1999. It also states: "Cleaning up the river, its tributaries and the beaches is a costly endeavor. The Los Angeles County Department of Public Works contracts out the cleaning of over 75,000 catchments (catch basins) for a total cost of slightly over $1 million per year, billed to 42 municipalities.... [¶] Over 4,000 tons of trash are collected from Los Angeles County beaches annually, at a cost of $3.6 million to Santa Monica Bay communities in fiscal years 1988–1989 alone. In 1994 the annual cost to clean the 31 miles of beaches (19 beaches) along Los Angeles County was $4,157,388."

The Trash TMDL also discusses the costs of various types of compliance measures, and explains the "cost of implementing this TMDL will range widely, depending on the method that the Permittees select to meet the Waste Load Allocations. Arguably, enforcement of existing litter ordinances could be used to achieve the final Waste Load Allocations at minimal or no additional cost. The most costly approach in the short-term is the installation of full-capture structural treatment devices on all discharges into the river. However, in the long term this approach would result in lower labor costs and may be less expensive than some other approaches."

The Trash TMDL defines catch basin inserts as "the least expensive structural treatment device in the short term," at a cost of approximately $800 each. It cautions, however, that because catch basin inserts "are not a full capture method, they must be monitored frequently and must be used in conjunction with frequent street sweeping." The Trash TMDL estimates that if the approximately 150,000 catch basins throughout the watershed were retrofitted with inserts, capital costs would be $120 million over 10 years, maintenance and operation costs would be $330 million over 10 years, and maintenance and operation costs after full implementation would be $60 million per year.

Further, the Trash TMDL discusses the full capture vortex separation system (VSS), which "diverts the incoming flow of storm[ ]water and pollutants into a pollutant separation and containment chamber. Solids within the separation chamber are kept in continuous motion, and are prevented from blocking the screen so that water can pass through the screen and flow downstream. This is a permanent device that can be retrofitted for oil separation as well. Studies have shown that VSS [units] remove virtually all of the trash contained in treated water. The cost of installing a VSS is assumed to be high, so limited funds will place a cap on the number of units which can be installed during any single fiscal year."

***1417** The Trash TMDL estimates the retrofitting of the entire Los Angeles River watershed with low capacity VSS units would be $945 million in capital costs and $813 million in operation and maintenance costs over 10 years, and $148 million in annual operation and maintenance costs after full implementation. The installation of large capacity VSS units would run ****390** approximately $332 million in capital costs and $41 million in operation and maintenance costs over 10 years, and $7.4 million per year in operation and maintenance costs after full implementation. The yearly cost of servicing one VSS unit is estimated to be $2,000. The Trash TMDL explains that "outfitting a large drainage with a number of large VSS [units] may be less costly than using a larger number of small VSS [units]. Maintenance costs decrease dramatically as the size of the system increases." The Trash TMDL also contains a cost comparison of catch basin inserts and low capacity and large capacity VSS units.

Additionally, the Trash TMDL estimates the costs for end-of-pipe nets at between $10,000 and $80,000, depending on the length of the pipe network. It explains that " '[r]elease nets' are a relatively economical way to monitor trash loads from municipal drainage systems. However, in general they can only be used to monitor or intercept trash at the end of a pipe and are considered to be partial capture systems, as nets are usually sized at a 1/2″ to 1″ mesh."

The Cities assert that "a 'consideration' of economics should have included a discussion of the economic *impacts* associated with the vortex separation systems. Alternatively, the Water Boards could have analyzed other methods of compliance, such as a series of [best management practices], including increased street sweeping, catch basin inserts, release nets, or some other combination of [best management practices] that should have been evaluated for purposes of allowing the municipalities to be in deemed compliance with the zero [Trash] TMDL." (Italics added.) As stated, though, the Trash TMDL does include the estimated costs of several types of compliance methods and a cost comparison of capital costs and costs of operation and maintenance. The Cities cite no authority for the proposition that a consideration of economic factors under Water Code section 13241 must include an analysis of every conceivable compliance method or combinations thereof or the fiscal impacts on permittees.

  

Given the lack of any definition for "economic considerations" as used in Water Code section 13241, and our deference to the Water Boards' expertise, we conclude the Trash TMDL's discussion of compliance costs is adequate ***1418** and does not fulfill the arbitrary or capricious standard. Accordingly, the Trash TMDL is not invalid on this ground. [10]

IV*Los Angeles River Estuary*

**[12]** Additionally, the Water Boards challenge the court's finding they abused their discretion by attempting to include the Estuary in the Trash TMDL, as the Estuary is not on the state's 1998 303(d) list of impaired waters. The Water Boards contend a water body's formal listing on the state's 303(d) list is not a prerequisite to formulating a TMDL for it. Rather, an agency may simultaneously submit to the EPA the *identification* of a ****391** water body as impaired and a corresponding TMDL.

The Clean Water Act provides: "Each state shall identify those waters within its boundaries for which the effluent limitations ... are not stringent enough to implement any water quality standards applicable to such waters. The State shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters." (33 U.S.C. § 1313(d)(1)(A).) Further, it provides that "[e]ach state shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, the total maximum daily load...." (*Id.* at § 1313(d)(1)(C).) These provisions do not prohibit a regional board from identifying a water body and establishing a TMDL for it at essentially the same time, or indicate that formal designation on a state's 303(d) list is a prerequisite to a TMDL.

Further, 33 United States Code section 1313(d)(2) provides: "Each State shall submit to the [EPA] Administrator from time to time, ... for his [or her] approval the waters identified *and* the loads established under paragraphs (1)(A) [and] ... (1)(C) ... of this subsection. The [EPA] Administrator shall either approve or disapprove such identification *and* load not later than thirty days after the date of submission." (Italics added.) This clarifies that a regional board may simultaneously identify an impaired water body and establish a TMDL for it.

***1419** In *San Francisco BayKeeper v. Whitman, supra,* 297 F.3d 877, 884–885, the court held an agency has no *duty* to submit a TMDL at the same time it identifies an impaired water body, noting the development of a TMDL "to correct the pollution is obviously a more intensive and time-consuming project than simply identifying the polluted waters, as the EPA has indicated." (*Id.* at p. 885.) The Water Boards assert the case does not deprive an agency from exercising its *discretion* to simultaneously submit to the EPA the identification of an impaired water body and a TMDL for it. Given the plain language of 33 United States Code section 1313(d)(2), we agree. Moreover, "[s]tates remain at the front line in combating pollution" (*City of Arcadia II, supra,* 411 F.3d at p. 1106), and "[s]o long as the [s]tate does not attempt to adopt more *lenient* pollution control measures than those already in place under the [Clean Water] Act, [it] does not prohibit state action." (*Id.* at p. 1107.)

**[13]** Alternatively, the Cities complain the Regional Board did not sufficiently identify the Estuary as being impaired and included in the Trash TMDL until after its adoption and approval by the State Board and Office of Administrative Law and the completion of all public hearings. On July 29, 2002, the Regional Board sent the EPA a memorandum "to provide clarification on specific aspects" of the Trash TMDL. It stated that a "TMDL was established for the reaches of the Los Angeles River, tributaries and lakes listed on the [state's] 1998 303(d) list," and "[i]n addition, a TMDL was established for the Los Angeles River [E]stuary in the City of Long Beach. As described on page 12, paragraph 2 of the [staff] report, staff found that the impairment in the [E]stuary due to trash is 'even more acute in Long Beach where debris flushed down by the upper reaches collects.' [¶] The impairment in the [E]stuary was well documented during TMDL development," and it "would have been included in the 1998 303(d) list if the attached photographic evidence had been available at the time of the listing."

The Trash TMDL lists the reaches of the Los Angeles River "that are impaired by trash, and listed on the [state's] 303(d) ****392** list." The list does not include the Estuary. The Water Boards assert that even so, it was always obvious the Estuary is impaired and included in the Trash TMDL. The Trash TMDL states it is "for the Los Angeles River Watershed," and "watershed" is defined as "a region or area bounded peripherally by a divide and draining ultimately to a particular watercourse or body of water." (Merriam–Webster's Collegiate Dict. (10th ed.1996) p. 1336.) "Estuary" is defined as "a water passage where the tide meets a river current," especially "an arm of the sea at the lower end of a river." (*Id.* at p. 397.)

  

The Trash TMDL describes the watershed as beginning at the "western end of the San Fernando Valley to the Queensway Bay and Pacific Ocean at Long Beach," and it also states the watershed continues from "Willow Street all ***1420** the way through the [E]stuary." An amici curiae brief by Santa Monica BayKeeper, Inc., Heal the Bay, Inc., and Natural Resources Defense Council, Inc. (collectively BayKeeper), asserts Queensway Bay is the site of the Estuary, and no party has challenged the assertion. Further, the Trash TMDL lists and discusses the beneficial uses of the Estuary, including habitat for many species of birds, some endangered, and fish. It also states beneficial uses "are impaired by large accumulations of suspended and settled debris throughout the river system," and in particular "estuarine habitat" is impaired. Further, the administrative record contains several pictures of trash deposited in the Estuary during high flows, depicting "the variety of ways through which trash ... becomes an integral part of wildlife, affecting all plant and animal communities in the process."

The Trash TMDL's identification of the Estuary as impaired could have been clearer, but we conclude it was sufficient to put all affected parties on notice, and does not meet the arbitrary-and-capricious standard. Further, although the identification of impaired water bodies requires a priority ranking (33 U.S.C. § 1313(d)(2)), and the Trash TMDL does not prioritize the Estuary's need for a TMDL, we agree with amici BayKeeper that any error in the Water Boards' procedure was not prejudicial because the Trash TMDL shows amelioration of the trash problem in the entire Los Angeles River watershed is highly important, and it is unlikely the Water Boards would single out the Estuary for lower priority or that inclusion of the Estuary would disturb their existing priorities.

V*CEQA*

**[14]** The Water Boards challenge the sufficiency of the evidence to support the trial court's finding that the amendment adding the Trash TMDL to the 1994 Basin Plan does not comport with CEQA. The court found the Regional Board's environmental checklist was deficient and there is sufficient evidence of a fair argument that the project may have a significant effect on the environment, thus necessitating an EIR or its functional equivalent. We conclude the court was correct.

A*General Legal Principles*

"CEQA compels government first to identify the environmental effects of projects, and then to mitigate those adverse effects through the ***1421** imposition of feasible mitigation measures or through the selection of feasible alternatives." (*Sierra Club v. State Bd. of Forestry* (1994) 7 Cal.4th 1215, 1233, 32 Cal.Rptr.2d 19, 876 P.2d 505.) CEQA mandates that public agencies refrain from approving projects with significant environmental effects if ****393** there are feasible alternatives or mitigation measures that can substantially lessen or avoid those effects. (*Mountain Lion Foundation v. Fish & Game Com.* (1997) 16 Cal.4th 105, 134, 65 Cal.Rptr.2d 580, 939 P.2d 1280.)

**[15]** **[16]** **[17]** CEQA is implemented through initial studies, negative declarations and EIR's. (*Sierra Club v. State Bd. of Forestry, supra,* 7 Cal.4th at p. 1229, 32 Cal.Rptr.2d 19, 876 P.2d 505.) "CEQA requires a governmental agency [to] prepare an [EIR] whenever it considers approval of a proposed project that *'may* have a *significant* effect on the environment.' " (*Quail Botanical Gardens Foundation, Inc. v. City of Encinitas, supra,* 29 Cal.App.4th at p. 1601, 35 Cal.Rptr.2d 470.) "If there is no substantial evidence a project 'may have a significant effect on the environment' or the initial study identifies potential significant effects, but provides for mitigation revisions which make such effects insignificant, a public agency must adopt a negative declaration to such effect and, as a result, no EIR is required. [Citations.] However, the Supreme Court has recognized that CEQA requires the preparation of an EIR 'whenever it can be fairly argued on the basis of substantial evidence that the project may have significant environmental impact.' [Citations.] Thus, if substantial evidence in the record supports a 'fair argument' significant impacts or effects may occur, an EIR is required and a negative declaration cannot be certified." (*Id.* at pp. 1601–1602, 35 Cal.Rptr.2d 470.)

" 'Significant effect on the environment' means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant." (Cal.Code Regs., tit. 14, § 15382.)

B*Certified Regulatory Program*

  

**[18]** "State regulatory programs that meet certain environmental standards and are certified by the Secretary of the California Resources Agency are exempt from CEQA's requirements for preparation of EIRs, negative declarations, and initial studies. [Citations.] Environmental review documents prepared by certified programs may be used instead of environmental documents that CEQA would otherwise require. [Citations.] Certified regulatory ***1422** programs remain subject, however, to other CEQA requirements." (2 Kostka & Zischke, Practice Under the Cal. Environmental Quality Act (Cont.Ed.Bar 2005) § 21.2, p. 1076; Pub. Resources Code, § 21080.5.) Documents prepared by certified programs are considered the "functional equivalent" of documents CEQA would otherwise require. (*Mountain Lion Foundation v. Fish & Game Com., supra,* 16 Cal.4th at p. 113, 65 Cal.Rptr.2d 580, 939 P.2d 1280; 2 Kostka & Zischke, Practice Under the Cal. Environmental Quality Act, *supra,* § 21.10, p. 1086 ["the documentation required of a certified program essentially duplicates" that required for an EIR or negative declaration].)

An "agency seeking certification must adopt regulations requiring that final action on the proposed activity include written responses to significant environmental points raised during the decisionmaking process. [Citation.] The agency must also implement guidelines for evaluating the proposed activity consistently with the ****394** environmental protection purposes of the regulatory program. [Citation.] The document generated pursuant to the agency's regulatory program must include alternatives to the proposed project and mitigation measures to minimize significant adverse environmental effects [citation], and be made available for review by other public agencies and the public [citation]." (*Mountain Lion Foundation v. Fish & Game Com., supra,* 16 Cal.4th at p. 127, 65 Cal.Rptr.2d 580, 939 P.2d 1280.)

**[19]** The guidelines for implementation of CEQA (Cal.Code Regs., tit. 14, § 15000 et seq.) do not directly apply to a certified regulatory program's environmental document. (2 Kostka & Zischke, Practice Under the Cal. Environmental Quality Act, *supra,* § 21.10, p. 1086.) However, "[w]hen conducting its environmental review and preparing its documentation, a certified regulatory program is subject to the broad policy goals and substantive standards of CEQA." (*Ibid.*)

In a certified program, an environmental document used as a substitute for an EIR must include "[a]lternatives to the activity and mitigation measures to avoid or reduce any significant or potentially significant effects that the project might have on the environment," and a document used as a substitute negative declaration must include a "statement that the agency's review of the project would not have any significant or potentially significant effects on the environment and therefore no alternatives or mitigation measures are proposed to avoid or reduce any significant effects on the environment. This statement shall be supported by a checklist or other documentation to show the possible effects that the agency examined in reaching this conclusion." (Cal.Code Regs., tit. 14, § 15252, subd. (a).)

The basin planning process of the State Board and regional boards is a certified regulatory program (Cal.Code Regs., tit. 14, § 15251, subd. (g)), and ***1423** the regulations implementing the program appear in the California Code of Regulations, title 23, sections 3775 to 3782. A regional board's submission of a plan for State Board approval must be accompanied by a brief description of the proposed activity, a completed environmental checklist prescribed by the State Board, and a written report addressing reasonable alternatives to the proposed activity and mitigation measures to minimize any significant adverse environmental impacts. (*Id.,* § 3777, subd. (a).)

C*Environmental Documentation*

The Regional Board's environmental documentation in lieu of documents CEQA ordinarily requires consists of a checklist and the Trash TMDL. The checklist asked a series of questions regarding whether implementation of the Trash TMDL would cause environmental impacts, to which the Regional Board responded "yes," "maybe" or "no." "Yes" or "maybe" answers required an explanation. The checklist described beneficial impacts pertaining to plant and animal life, water quality and recreation. The checklist denied the project would have any environmental impact on land, including soil displacement, air, noise, natural resources or traffic, and thus it included no discussion of those factors. The checklist concluded "the proposed Basin Plan amendment [adding the Trash TMDL] could not have a significant effect on the environment."

The Regional Board obviously intended its documentation to be the functional equivalent of a negative declaration. Nonetheless, on appeal the Water Boards claim for the first time that the Regional ****395** Board's environmental review process is tiered, and its documentation meets the requirements of a first tier EIR under Public Resources Code section 21159. They assert the court's criticism of the

  

checklist is baseless "because it ignores the concept of tiered environmental review and specific provisions for pollution control performance standards."

" 'Tiering' refers 'to the coverage of general matters in broader EIRs (such as on general plans or policy statements) with subsequent narrower EIRs or ultimately *site-specific* EIRs incorporating by reference the general discussions and concentrating solely on the issues specific to the EIR subsequently prepared. Tiering is appropriate when the sequence of EIRs is: [¶] ... [f]rom a general plan, policy, or program EIR to a ... site-specific EIR.' " (*Natural Resources Defense Council, Inc. v. City of Los Angeles* (2002) 103 Cal.App.4th 268, 285, 126 Cal.Rptr.2d 615.) "[C]ourts have allowed first tier EIR's to defer detailed analysis to subsequent project EIR's." (*Friends of* ***1424** *Mammoth v. Town of Mammoth Lakes Redevelopment Agency* (2000) 82 Cal.App.4th 511, 532, 98 Cal.Rptr.2d 334.)

Public Resources Code section 21159, which allows expedited environmental review for mandated projects, provides that an agency "shall perform, at the time of the adoption of a rule or regulation requiring the installation of pollution control equipment, or a performance standard or treatment requirement, an environmental analysis of the reasonably foreseeable methods of compliance.... The environmental analysis shall, at a minimum, include, all of the following: [¶] (1) An analysis of the reasonably foreseeable environmental impacts of the methods of compliance. [¶] (2) An analysis of reasonably foreseeable mitigation measures. [¶] (3) An analysis of reasonably foreseeable alternative means of compliance with the rule or regulation." (Pub. Resources Code, § 21159, subd. (a).) The Water Boards submit they complied with the statute, and the "tier two environmental review is the responsibility of the local agencies who will determine how they intend to comply with the performance standards" of the Trash TMDL.

Issues not presented to the trial court are ordinarily waived on appeal. (*Royster v. Montanez* (1982) 134 Cal.App.3d 362, 367, 184 Cal.Rptr. 560.) In any event, we conclude the checklist and Trash TMDL are insufficient as either the functional equivalent of a negative declaration [11] or a tiered EIR. Moreover, an EIR is required since the Trash TMDL itself presents substantial evidence of a fair argument that significant environmental impacts may occur. "Because a negative declaration ends environmental review, the fair argument test provides a low threshold for requiring an EIR." (*Ocean View Estates Homeowners Assn., Inc. v. Montecito Water Dist.* (2004) 116 Cal.App.4th 396, 399, 10 Cal.Rptr.3d 451.)

****396** The Trash TMDL discusses various compliance methods or combinations thereof that permittees may employ, including the installation of catch basin inserts and VSS units. The Trash TMDL estimates that if the catch basin method is used exclusively, approximately 150,000 catch basins throughout the watershed would require retrofitting at a cost of approximately $120 million. It explains, however, that the "ideal way to capture trash deposited into a storm[ ]drain system would be to install a VSS unit. This device diverts ***1425** the incoming flow of storm[ ]water and pollutants into a pollution separation and containment chamber." Only VSS units or similar full-capture devices will be deemed fully compliant with the zero trash target. The Trash TMDL estimates the cost of installing low capacity VSS units would be $945 million and the cost of installing large capacity VSS units would be $332 million.

The checklist and the Trash TMDL, however, ignore the temporary impacts of the construction of these pollution controls, which logically may result in soils disruptions and displacements, an increase in noise levels and changes in traffic circulation. Further, the Trash TMDL explains that since catch basin inserts "are not a full capture method, they must be monitored frequently and must be used in conjunction with frequent street sweeping." The checklist and the Trash TMDL also ignore the effects of increased street sweeping on air quality, and possible impacts caused by maintenance of catch basin inserts, VSS units and other compliance methods.

Indeed, the County of Los Angeles wrote to the Regional Board that "cleanout of structural controls, such as [catch basin inserts] and VSSs, naturally will increase existing noise levels due to vehicle and vacuuming noises." The City of Los Angeles advised that the Trash TMDL would result in increased maintenance vehicle traffic and "substantial air emissions or deterioration of ambient air quality," increased noise, increased use of natural resources and adverse impacts on existing transportation systems.

The Water Boards contend those comments are merely "unsubstantiated opinion and speculation by biased project opponents." Substantial evidence is not "[a]rgument, speculation, unsubstantiated opinion or narrative [or] evidence which is clearly inaccurate or erroneous." (Pub. Resources Code, § 21082.2, subd. (c).) However, letters and testimony from government officials with personal

  

knowledge of the anticipated effects of a project on their communities "certainly supports a fair argument that the project may have a significant environmental impact." (*City of Livermore v. Local Agency Formation Com.* (1986) 184 Cal.App.3d 531, 542, 230 Cal.Rptr. 867.) Again, however, the Trash TMDL itself satisfies the fair argument criterion.

Even if the Water Boards had relied on Public Resources Code section 21159 at the trial court, the environmental documents do not meet its minimum requirements. Neither the checklist nor the Trash TMDL includes an analysis of the reasonably foreseeable impacts of construction and maintenance of pollution control devices or mitigation measures, and in fact the Water Boards develop no argument as to how they ostensibly complied with the statute. While we agree a tiered environmental analysis is appropriate here, the Regional Board did not prepare a first-level EIR or its functional equivalent. We reject the Water Boards' argument the Regional Board did all it ***1426** could because there "is no way to examine project level impacts that are entirely dependent upon the speculative possibilities of how subsequent ****397** decision[ ]makers may choose to comply" with the Trash TMDL. Tier two project-specific EIR's would be more detailed under Public Resources Code section 21159.2, but the Trash TMDL sets forth various compliance methods, the general impacts of which are reasonably foreseeable but not discussed.

As a matter of policy, in CEQA cases a public agency must explain the reasons for its actions to afford the public and other agencies a meaningful opportunity to participate in the environmental review process, and to hold it accountable for its actions. (*Federation of Hillside & Canyon Assns. v. City of Los Angeles, supra,* 126 Cal.App.4th 1180, 1198, 24 Cal.Rptr.3d 543.) The Water Boards' CEQA documentation is inadequate, and remand is necessary for the preparation of an EIR or tiered EIR, or functional equivalent, as substantial evidence raises a fair argument the Trash TMDL may have significant impacts on the environment. The court correctly invalidated the Trash TMDL on CEQA grounds. [12]

VI*Declaratory Relief*

**[20]** In its statement of decision, the trial court explained the Cities "contend [the Water Boards] improperly attempted to control the watershed including the 'entire 584 square miles' of incorporated and unincorporated areas of the County [of Los Angeles], and nowhere in the [Trash] TMDL or the [1994] Basin Plan Amendment did [they] assert that the numeric Waste Load Allocations ... are to apply to the entire 584 square miles of watershed." The court, however, explained the Water Boards "concede the [Trash] TMDL only applies to navigable waters by asserting [they] didn't intend to control non-navigable waters," and it found "the parties are in agreement that the trash load allocations apply to the portion of the subject watershed as defined on pages 3575 and 3584 of the Administrative Record [pages of the Trash TMDL] and the Waste Load Allocations do not apply to non-waters."

The statement of decision nonetheless states the court granted the Cities' "relief as requested" as to "regulation of non-waters." In their third cause of action, the Cities sought a judicial declaration that the amendment to the 1994 Basin Plan and the Trash TMDL are invalid because they violate federal and state law. The judgment declared unenforceable a July 29, 2002, letter from ***1427** the Regional Board to the EPA that stated the "Waste Load Allocations apply to the entire urbanized portion of the watershed.... The urbanized portion of the watershed was calculated to encompass 584 square miles of the total watershed."

**[21]** "The fundamental basis of declaratory relief is the existence of an *actual, present controversy.*" (5 Witkin, Cal. Procedure, *supra,* Pleadings, § 817, p. 273.) Because the parties agreed during this proceeding there was no *present* controversy, the judgment should not have included declaratory relief on the nonwaters issue.

*CITIES' APPEALIConcepts of "Maximum Extent Practicable" and "Best Management Practices"*

**[22]** The Cities contend a zero target for trash in the Los Angeles River is unattainable, ****398** and thus the Trash TMDL violates the law by not deeming compliance through the federal "maximum extent practicable" and "best management practices" standards, which are less stringent than the numeric target of zero. The Cities rely on 33 United States Code section 1342(p)(3)(B)(iii), under which an NPDES permit for a municipal discharge into a storm drain "shall require controls to reduce the discharge of pollutants to the *maximum extent practicable,* including management practices, control techniques and system, design and engineering methods, and such other provisions as the [EPA] Administrator or the State determines appropriate for the control of such pollutants." (Italics added.) [13] "Best management practices" are generally pollution control measures set forth in NPDES permits. (*BIA, supra,* 124 Cal.App.4th at p. 877, 22 Cal.Rptr.3d 128.)

  

The Cities assert that "as the [r]ecord reflects, compliance with the 'zero' [Trash] TMDL ... is impossible," and the Water Boards "themselves recognize that 'zero' is an impossible standard to meet." Contrary to the Cities' suggestion, the Water Boards made no implied finding or concession of impossibility. Rather, the record shows that members of the Water Boards questioned whether a zero trash target is actually attainable. A zero limit on ***1428** trash within the meaning of the Trash TMDL *is* attainable because there are methods of deemed compliance with the limit. The record does not show the limit is unattainable, and the burden was on the Cities as opponents of the Trash TMDL to establish impossibility. Further, the impossibility issue is not germane at this juncture, as the matter is at the planning stage with an interim goal of a 50 percent reduction in trash, a goal everyone agrees is necessary and achievable.

In any event, the trial court found 33 United States Code section 1342(p)(3)(B)(iii) inapplicable to the adoption of a TMDL. The court also found state and federal laws authorize regional boards to "use water quality, and not be limited to practicability as the guiding principle for developing limits [in a TMDL] on pollution." Further, the court noted the Cities presented no authority for their proposition the Regional Board is required to adopt a storm water TMDL that is achievable.

We agree with the court's assessment. The statute applicable to establishing a TMDL, 33 United States Code section 1313(d)(1)(C), does not suggest that practicality is a consideration. To the contrary, a regional board is required to establish a TMDL "at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety." (33 U.S.C. § 1313(d)(1)(C).) The NPDES permit provision, 33 United States Code 1342(p)(3)(B), is inapplicable because, again, we are only considering the propriety of the Trash TMDL, a precursor to NPDES permits implementing it. Under the Trash TMDL, the numeric target will be reconsidered after several years when a reduction in trash of 50 percent is achieved, and thus it is presently unknown whether compliance with a trash limit of zero will ever actually be mandated.

**[23]** To bolster their position the Cities rely on ****399** 33 United States Code section 1329(a)(1)(C)). It provides, however, that in a state's assessment report for a *nonpoint* source management program, the state must "describe[ ] the process, including intergovernmental coordination and public participation, for identifying best management practices and measures to control each category and subcategory of nonpoint sources and, where appropriate, particular nonpoint sources identified under subparagraph (B) and to reduce, to the maximum extent practicable, the level of pollution resulting from such category, subcategory, or source." (*Ibid.*) In *BIA, supra,* 124 Cal.App.4th at page 887, 22 Cal.Rptr.3d 128, we rejected the argument the statute shows Congress intended to apply a maximum extent practicable standard to point source discharges as well as nonpoint discharges. The Cities say they disagree with *BIA*, but they develop no argument revealing any flaw in the opinion. "[P]arties are required ***1429** to include argument and citation to authority in their briefs, and the absence of these necessary elements allows this court to treat appellant's ... issue as waived." (*Interinsurance Exchange v. Collins* (1994) 30 Cal.App.4th 1445, 1448, 37 Cal.Rptr.2d 126.)

The Cities' reliance on *Defenders of Wildlife v. Browner* (9th Cir.1999) 191 F.3d 1159, for the proposition that municipalities, unlike private companies, may not be required to strictly comply with numeric discharge limits is likewise misplaced. *Defenders of Wildlife v. Browner* involves a challenge to an NPDES permit, not the adoption of a TMDL. Further, the court there rejected the argument that "the EPA [or authorized regional or state board] may not, under the [Clean Water Act], require strict compliance with state water-quality standards, through numerical limits or otherwise." (*Id.* at p. 1166.) The court explained: "Although Congress did not require municipal storm-sewer discharges to comply strictly with [numerical effluent limitations], [section] 1342(p)(3)(B)(iii) [of United States Code, title 33] states that '[p]ermits for discharges from municipal storm sewers ... shall require ... *such other provisions as the* [*EPA* ] *Administrator ... determines appropriate for the control of such pollutants.*' (Emphasis added.) That provision gives the EPA discretion to determine what pollution controls are appropriate.... [¶] Under that discretionary provision, the EPA has the authority to determine that ensuring strict compliance with state water-quality standards is necessary to control pollutants. The EPA also has the authority to require less than strict compliance with state water-quality standards.... Under 33 United States Code section 1342(p)(3)(B)(iii), the EPA's choice to include either management practices or numeric limitations in the permits was within its discretion." (*Id.* at pp. 1166–1167.)

In *BIA*, this court similarly held that 33 United States Code section 1342(p)(3)(B)(iii) does not divest a regional board's

  

discretion to impose an NPDES permit condition requiring compliance with state water quality standards more stringent than the maximum-extent-practicable standard. (*BIA, supra,* 124 Cal.App.4th at pp. 871, 882–885, 22 Cal.Rptr.3d 128; see also Wat.Code, § 13377 [waste discharge requirements shall meet federal standards and may also include "more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance"].) Thus, even if the analysis in *Defenders of Wildlife v. Browner* or *BIA* arguably has any application to a TMDL, the opinions do not help the Cities.

Additionally, the Cities' reliance on a November 2002 EPA memorandum on establishing TMDLs and issuing NPDES ****400** permits is misplaced, as it postdates the Regional Board's adoption of the Trash TMDL and its approval by the State Board and the EPA. Further, the memorandum states it ***1430** is not binding, and "indeed, there may be other approaches that would be appropriate in particular situations. When EPA makes a TMDL or permitting decision, it will make each decision on a case-by-case basis and will be guided by applicable requirements of the [Clean Water Act] and implementing regulations, taking into account comments and information presented at that time by interested persons regarding the appropriateness of applying these recommendations to the particular situation."

II*Nonpoint Sources of Pollution*

**[24]** The Cities contend the court should have invalidated the Trash TMDL on additional grounds, including the Water Boards' failure to identify load allocations and implementation measures for nonpoint sources of trash discharge. The Cities assert the Water Boards are required to adopt implementation measures "for the homeless and aerial sources of trash, [and] also for the other nonpoint sources of trash consisting of State and federal facilities, and other facilities not yet subject to NPDES Permits." The Cities submit that the Clean Water Act does not allow the Water Boards "to effectively impose the burden of the load allocation from all nonpoint sources solely on municipalities."

The Cities further claim the Water Boards acted arbitrarily and capriciously by imposing a trash target of zero on municipalities, but imposing a " 'de minimus' requirement on non-point source discharges." The Cities cite the July 29, 2002, letter from the Regional Board to the EPA, clarifying that it identified nonpoint sources of trash pollution "as wind blown trash and direct deposit of trash into the water," but "as the non-point sources were determined to be de-minimus, we did not believe it necessary to outline a reduction schedule for non-point sources." Contrary to the Cities' position, the Regional Board did not adopt a "de minimus" load allocation for nonpoint sources. Rather, as the trial court found, the Regional Board found the trash pollution from nonpoint sources is de minimus compared to trash pollution from point sources. The TMDL states the "major source of trash in the [Los Angeles River] results from litter, which is intentionally or accidentally discarded in the watershed drainage areas."

In arguing the Trash TMDL is required to include a specific load allocation for nonpoint sources of pollution, the Cities rely on the 2000 EPA Guidance, which provides: "Load allocations for nonpoint sources *may* be expressed as specific allocations for specific discharges or as 'gross allotments' to nonpoint source discharger categories. Separate nonpoint source allocations *should* be established for background loadings. Allocations may be based on a variety ***1431** of technical, economic, and political factors. The methodology used to set allocations *should* be discussed in detail." (Italics added.)

The 2000 EPA Guidance, however, states it does not impose legally binding requirements. Further, the load allocation for nonpoint sources is implicitly zero for trash. Federal regulations define a TMDL as the sum of waste load allocations for point sources, load allocations for nonpoint sources and natural backgrounds. (40 C.F.R. § 130.2(i) (2003).) Since "a TMDL defines the specified maximum amount of a pollutant which can be discharged into a body of water from all sources combined" ****401** (*American Wildlands v. Browner* (10th Cir.2001) 260 F.3d 1192, 1194), and the Trash TMDL specifies a zero numeric target for trash in Los Angeles River, load allocations are necessarily zero as well as waste load allocations.

Additionally, the Cities cite no authority for the proposition the Water Boards are required to identify an implementation program for nonpoint pollution sources. Again, "[w]here a point is merely asserted by counsel without any argument of or authority for its proposition, it is deemed to be without foundation and requires no discussion." (*People v. Ham* (1970) 7 Cal.App.3d 768, 783, 86 Cal.Rptr. 906, disapproved on another ground in *People v. Compton* (1971) 6 Cal.3d 55, 60, fn. 3, 98 Cal.Rptr. 217, 490 P.2d 537; *People v. Sierra* (1995) 37 Cal.App.4th 1690, 1693, fn. 2, 44 Cal.Rptr.2d 575.)

  

In any event, although the Clean Water Act focuses on both point and nonpoint sources of pollution, it is settled that the measure "does not require states to take regulatory action to limit the amount of non-point water pollution introduced into its waterways. While the [Clean Water Act] requires states to designate water standards and identify bodies of water that fail to meet these standards, ' "nothing in the [Clean Water Act] demands that a state adopt a regulatory system for nonpoint sources." ' " (*Defenders of Wildlife v. EPA, supra,* 415 F.3d at pp. 1124–1125, citing *American Wildlands v. Browner, supra,* 260 F.3d 1192, 1197 ["In the [Clean Water] Act, Congress has chosen not to give the EPA the authority to regulate nonpoint source pollution"]; *Appalachian Power Co. v. Train* (4th Cir.1976) 545 F.2d 1351, 1373 ["Congress consciously distinguished between point source and nonpoint source discharges, giving EPA authority under the [Clean Water] Act to regulate only the former"]; *City of Arcadia I, supra,* 265 F.Supp.2d at p. 1145 ["For nonpoint sources, limitations on loadings are not subject to a federal nonpoint source permitting program, and therefore any nonpoint source reductions can be enforced ... only to the extent that a state institutes such reductions as regulatory requirements pursuant to state ***1432** authority"].) "Nonpoint sources, because of their very nature, are not regulated under the NPDES [program]. Instead, Congress addressed nonpoint sources of pollution in a separate portion of the [Clean Water] Act which encourages states to develop areawide waste treatment management plans." (*Pronsolino v. Marcus, supra,* 91 F.Supp.2d at p. 1348, citing 33 U.S.C. § 1288; see also 33 U.S.C. § 1329.)

We conclude the court correctly ruled on this issue.

III*Uses To Be Made of Watershed*

**[25]** The Cities next contend the Trash TMDL is invalid because the Water Boards "improperly relied on nonexistent, illegal and irrational 'uses to be made' of the [Los Angeles] River." (Emphasis omitted.) The Cities complain that the Trash TMDL states a purported beneficial use of one of numerous reaches of the river on the state's 303(d) list is "recreation and bathing, in particular by homeless people who seek shelter there," and the State Board chairman questioned the legality of such uses. The Cities also assert there is no evidence to support the Trash TMDL's finding that swimming is an actual use of the river in any location.

The Cities rely on section 303(d)(1)(A) of the Clean Water Act (33 U.S.C. § 1313(d)(1)(A)), which provides that in identifying impaired waters for its 303(d) list, states "shall establish a priority ranking for such waters, taking into account the severity of the pollution and the *uses to be made* of such waters." (Italics added.) ****402** The Cities assert "an 'illegal' use cannot be a 'use to be made' for the water body."

Additionally, the Cities cite Water Code section 13241, which requires regional boards to establish water quality objectives in water quality control plans by considering a variety of factors, including "[p]ast, present, and probable future beneficial uses of water." (Wat.Code, § 13241, subd. (a).) They assert the "Water Boards acted contrary to law by basing the [Trash] TMDL on any uses of the [Los Angeles] River other than the actual 'uses to be made' of the River." (Emphasis omitted.)

The Cities, however, make no showing of prejudice. Swimming and bathing by the homeless are only two among numerous other beneficial uses that the Cities do not challenge, and there is no suggestion the numeric target of zero trash in the Los Angeles River would have been less stringent without consideration of the factors the Cities raise.

***1433** IV*Scientific Methodology*

**[26]** Further, the Cities contend the Trash TMDL is invalid on the additional ground that before adopting and approving it the Water Boards failed to comply with the requisite data collection and analysis. The Cities rely on a federal regulation providing that "[s]tates must establish appropriate monitoring methods and procedures (including biological monitoring) necessary to compile and analyze data on the quality of waters of the United States and, to the extent practicable, ground-waters." (40 C.F.R. § 130.4(a) (2003).) "The State's water monitoring program shall include collection and analysis of physical, chemical and biological data and quality assurance and control programs to assure scientifically valid data" in developing, among other things, TMDLs. (*Id.,* § 130.4(b).)

The trial court rejected the Cities' position, finding they failed to establish the Water Boards' scientific data is inadequate or scientifically invalid. The court explained the Water Boards "have not failed to conduct ongoing studies, as they say, how else would [they] know the River is impaired by trash[?] And the Record reveals studies relied upon by the Boards."

This argument is a variation on the assimilative capacity study issue, and we similarly reject it. As the Water Boards point out, "trash is different than other pollutants.... The complex modeling and analytical effort that may be necessary for typical pollutants that may be present in extremely

low concentrations have no relevance to calculating a trash TMDL." Further, the Trash TMDL does discuss sources of trash in the Los Angeles River. It states the "City of Los Angeles conducted an Enhanced Catch Basin Cleaning Project in compliance with a consent decree between the [EPA], the State of California, and the City of Los Angeles. The project goals were to determine debris loading rates, characterize the debris, and find an optimal cleaning schedule through enhancing basin cleaning. The project evaluated trash loading at two drainage basins[.]" It goes on to discuss the amounts and types of trash collected in the drainage basins between March 1992 and December 1994. The Cities cite no authority for the notion the Water Boards may not rely on data collected by another entity.

The Trash TMDL also states "[s]everal studies conclude that urban runoff is the dominant source of trash. The large amounts of trash conveyed by the urban storm water to the Los Angeles River is evidenced by the amount of ... trash that accumulates at the base of storm drains."

****403** ***1434** Alternatively, the Cities contend a TMDL is not suitable for trash calculation. They rely on 33 United States Code section 1313(d)(1)(C), which provides: "Each State shall establish for [impaired] waters ... the total maximum daily load, for those pollutants which the [EPA] Administrator identifies ... as *suitable for such calculation.* Such load shall be established at a level *necessary* to implement the applicable water quality standards with seasonal variations and a margin of safety." (Italics added.)

The Cities also cite a 1978 EPA regulation that states a TMDL is "suitable for ... calculation" only under "proper technical conditions." (43 Fed.Reg. 60662, 60665 (Dec. 28, 1978) (italics omitted).) "Proper technical conditions" require "the availability of the analytical methods, modeling techniques and data base necessary to develop a technically defensible TMDL." (*Id.* at p. 60662.) The Cities assert the proper technical conditions do not exist, referring to the Trash TMDL's comment that "[e]xtensive research has not been done on trash generation or the precise relationship between rainfall and its deposition in waterways."

The Cities ignore the EPA's determination that a TMDL *may* be calculated for trash as a pollutant. It approved the Regional Board's Trash TMDL, and had previously approved a trash TMDL for the East Fork of the San Gabriel River. (See Cal.Code Regs., tit. 23, § 3933.) Thus, the Cities' view that the 1978 EPA regulation prohibits a TMDL for trash is unfounded. TMDL's for trash are relatively new, and there is no evidence that in 1978 the EPA contemplated their establishment.

We find irrelevant the Cities' discussion of the EPA's proposed July 2000 TMDL "rule," as their federal register citation is not a regulation and merely concerns the 2003 withdrawal of a rule that never took effect. (68 Fed.Reg. 13608, 13609 (Mar. 19, 2003) ["The July 2000 rule was controversial from the outset"].) In August 2001 the EPA delayed implementation of the July 2000 rule for further consideration, noting that some local government officials argued "some pollutants are not suitable for TMDL calculation." (66 Fed.Reg. 41817, 41819 (Aug. 9, 2001).) Nothing is said, however, about whether a trash TMDL is unsuitable for calculation, and again, the EPA has approved such TMDLs. The withdrawal of the proposed July 2000 rule left the existing rule regarding the establishment of a TMDL in place. (33 U.S.C. § 1313(d)(1)(C).)

V*APA Requirements*

Lastly, the Cities contend the trial court erred by finding the Water Boards did not violate the APA. They assert the July 29, 2002, "clarification ***1435** memorandum" from the Regional Board to the EPA makes substantive changes to the Trash TMDL regulation—the inclusion of the Estuary in the Trash TMDL and designating an allocation of zero for nonpoint pollution sources—violates the notice and hearing provisions of the APA. The Cities also contend the Trash TMDL and the clarification memorandum "establish[ ] a regulation in violation of the APA's elements of 'clarity,' 'consistency,' and 'necessity,' as defined in [Government] Code section 11349."

The APA (Gov.Code, §§ 11340 et seq., 11370) "establishes the procedures by which state agencies may adopt regulations. The agency must give the public notice of its proposed regulatory action [citations]; issue a complete text of the proposed regulation with a statement of the reasons for it [citation]; give interested parties an opportunity to comment on ****404** the proposed regulation [citation]; respond in writing to public comments [citations]; and forward a file of all materials on which the agency relied in the regulatory process to the Office of Administrative Law [citation], which reviews the regulation for consistency with the law, clarity, and necessity [citations]." (*Tidewater Marine Western, Inc. v. Bradshaw* (1996) 14 Cal.4th 557, 568, 59 Cal.Rptr.2d 186, 927 P.2d 296.) "One purpose of the APA is to ensure that those persons or entities whom a regulation will affect have

a voice in its creation [citation], as well as notice of the law's requirements so that they can conform their conduct accordingly [citation].” (*Id.* at pp. 568–569, 59 Cal.Rptr.2d 186, 927 P.2d 296.)

The APA does not apply to “the adoption or revision of state policy for water quality control” unless the agency adopts a “policy, plan, or guideline, or any revision thereof.” (Gov.Code, § 11353, subds.(a), (b)(1).) The Water Boards contend that while the Trash TMDL and amendment adding it to the 1994 Basin Plan are policies or plans covered by the APA, the clarification memorandum is not because it does not revise the terms of the Trash TMDL.

We are not required to reach the issue, because assuming the APA is applicable the Cities' position lacks merit. As to the Estuary, we have determined the Trash TMDL sufficiently notified affected parties of its inclusion in the document as an impaired water body. Further, we have determined the load allocation for nonpoint sources of trash pollution is also necessarily zero, and the Trash TMDL is not required to include implementation measures for nonpoint sources. Accordingly, the clarification memorandum is not germane. [14]

***1436** DISPOSITION

The judgment is affirmed insofar as it is based on the Trash TMDL's violation of CEQA, and on a rejection of each of the issues the Cities raised in their appeal. The judgment is reversed insofar as it is based on the Trash TMDL's lack of an assimilative capacity study, inclusion of the Estuary as an impaired water body, and a cost-benefit analysis under Water Code section 13267 or the consideration of economic factors under Water Code section 13241, and also insofar as it grants declaratory relief regarding the purported inclusion of non-navigable waters in the Trash TMDL.

The court's postjudgment order staying the Trash TMDL's implementation schedule is affirmed. The parties are to bear their own costs on appeal.

WE CONCUR: McINTYRE and IRION, JJ.

**All Citations**

135 Cal.App.4th 1392, 38 Cal.Rptr.3d 373, 36 Envtl. L. Rep. 20,025, 06 Cal. Daily Op. Serv. 797, 2006 Daily Journal D.A.R. 1145

Footnotes

1 We refer to these entities together as the Water Boards.

2 In addition to Arcadia the Cities include Baldwin Park, Bellflower, Cerritos, Commerce, Diamond Bar, Downey, Irwindale, Lawndale, Monrovia, Montebello, Monterey Park, Pico Rivera, Rosemead, San Gabriel, Santa Fe Springs, Sierra Madre, Signal Hill, South Pasadena, Vernon, West Covina and Whittier.

3 According to the Environmental Protection Act (EPA), nonpoint source pollution is caused by rainfall or snowmelt moving over and through the ground, and includes excess fertilizers, herbicides, and insecticides from agricultural lands and residential areas; oil, grease and toxic chemicals from urban runoff and energy production; sediment from improperly managed construction sites, crop and forest land, and eroding stream banks; salt from irrigation practices and acid drainage from abandoned mines; and bacteria and nutrients from livestock, pet wastes and faulty septic systems. (http://www.epa.gov/owow/nps/qa.html.)

4 The Clean Water Act “does not define total maximum daily load. EPA's regulations break it into a ‘waste[ ]load allocation’ for point sources and a ‘load allocation’ for nonpoint sources.” (*Pronsolino v. Marcus, supra,* 91 F.Supp.2d at p. 1344, fn. 8; 40 C.F.R. § 130.2(g)-(i) (2005).)

5 The Regional Board defines “trash” as “man-made litter” within the meaning of Government Code section 68055.1, subdivision (g), which provides: “ ‘Litter’ means all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other produce packages or containers constructed of steel, aluminum, glass, paper, plastic, and other natural and synthetic materials, thrown or deposited on the lands and waters of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing.”

6 The Regional Board adopted a Trash TMDL in January 2001, which also had a target of zero trash. It reconsidered the matter on September 19, 2001, “to provide clarifying language and greater flexibility in implementing the [Trash] TMDL.”

7 In *City of Arcadia v. EPA* (N.D.Cal.2003) 265 F.Supp.2d 1142, 1156 (*City of Arcadia I* ), the court noted the Los Angeles County Department of Public Works has assumed responsibility for the baseline monitoring burden for all municipalities to

  

which the Trash TMDL applies. The Trash TMDL states that "[e]ach of the permittees and co-permittees are responsible for monitoring land uses within their jurisdiction," but "monitoring responsibilities may be delegated to a third-party monitoring entity such as the [Department of Public Works]."

8 In *City of Arcadia I, supra,* 265 F.Supp.2d at page 1153, the City of Arcadia and other cities unsuccessfully challenged the EPA's approval of the Trash TMDL on the ground it was unauthorized to do so after adopting its own TMDL. In *City of Arcadia II, supra,* 411 F.3d at pages 1106–1107, the court affirmed the lower court's dismissal of the case.

9 For the same reason, we are not required to reach the Water Boards' assertion that to any extent the California Supreme Court's recent opinion in *City of Burbank, supra,* 35 Cal.4th 613, 26 Cal.Rptr.3d 304, 108 P.3d 862, applies to a TMDL, it precludes them from considering economic factors in establishing the Trash TMDL.

10 The Cities also assert that under federal law an economic analysis is a prerequisite to the adoption of a TMDL. They rely on 40 Code of Federal Regulations, part 130.6(c)(4), but it pertains to nonpoint sources of pollution that need not be addressed in a TMDL, as discussed further below. The portion of the regulation covering TMDLs does not mention economics (*id.,* § 130.6(c)(1)). Parts 130.6(5) and (6) of 40 Code of Federal Regulations discuss economics, but in the context of the area wide planning process under section 208(b)(2) of the Clean Water Act (33 U.S.C. § 1288(b)(2)), which is inapplicable here. According to the Water Boards, the Southern California Association of Governments is the designated area-wide planning agency.

11 A negative declaration may not be based on a " 'bare bones' " approach in a checklist. (*Snarled Traffic Obstructs Progress v. City and County of San Francisco* (1999) 74 Cal.App.4th 793, 797, fn. 2, 88 Cal.Rptr.2d 455, and cases cited therein.) A "certified program's statement of no significant impact must be supported by documentation *showing* the potential environmental impacts that the agency examined in reaching its conclusions," and "[t]his documentation would be similar to an initial study." (2 Kostka & Zischke, Practice Under the Cal. Environmental Quality Act, *supra,* § 21.11, pp. 1088–1089, italics added.) Because we conclude an EIR is required, we need not expand on how the checklist and Trash TMDL fail to satisfy negative declaration requirements or their functional equivalent.

12 The Water Boards also contend the trial court erred by staying the implementation schedule for the Trash TMDL pending this appeal. The matter is moot given our holding on the CEQA issue.

13 The Clean Water Act and applicable regulations do not define the maximum extend practicable standard. (*Building Industry Assn. of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 889, 22 Cal.Rptr.3d 128 (*BIA* ).) In *BIA*, the NPDES permit at issue defined the standard as "a highly flexible concept that depends on balancing numerous factors." (*Ibid.*)

14 We deny the Water Boards' June 16, 2005, request for judicial notice.

**End of Document**

35 Cal.4th 613
Supreme Court of California

CITY OF BURBANK, Plaintiff and Appellant,
v.
STATE WATER RESOURCES CONTROL BOARD et al., Defendants and Appellants.
City of Los Angeles, Plaintiff and Respondent,
v.
State Water Resources Control Board et al., Defendants and Appellants.

Nos. S119248, B151175, B152562.
|
April 4, 2005.
|
Rehearing Denied June 29, 2005. *

**Synopsis**

**Background:** Cities filed petitions for writs of mandate challenging pollutant limitations in wastewater discharge permits issued by regional water quality control boards. The Superior Court, Los Angeles County, Nos. BS060957 and BS060960, Dzintra I. Janavs, J., set aside permits. Regional board and state water resources control board appealed. The Court of Appeal consolidated the cases and reversed. The Supreme Court granted review, superseding the opinion of the Court of Appeal.

**Holdings:** The Supreme Court, Kennard, J., held that:

[1] regional board may not consider economic factors as justification for imposing pollutant restrictions in wastewater discharge permit which are less stringent than applicable federal standards, and

[2] when imposing more stringent pollutant restrictions that those required by federal law, regional board may take economic factors into account.

Judgment of Court of Appeal affirmed, and matter remanded.

Brown, J., filed concurring opinion.

Opinion, 4 Cal.Rptr.3d 27, superseded.

West Headnotes (5)

**[1] Environmental Law**
Purpose

Clean Water Act is a comprehensive water quality statute designed to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. Federal Water Pollution Control Act Amendments of 1972, § 101 et seq., as amended, 33 U.S.C.A. § 1251 et seq.

16 Cases that cite this headnote

**[2] Environmental Law**
Conditions and limitations

**States**
Environment; nuclear projects

Regional water quality control board may not consider economic factors as justification for imposing pollutant restrictions in wastewater discharge permit which are less stringent than applicable federal standards, despite statute directing board to take such factors into consideration, because the federal constitutional supremacy clause requires state law to yield to federal law. U.S.C.A. Const. Art. 6, cl. 2; Federal Water Pollution Control Act Amendments of 1972, §§ 101 et seq., 301(a), (b)(1)(B, C), 402(a)(1, 3), as amended, 33 U.S.C.A. §§ 1251 et seq., 1311(a), (b)(1)(B, C), 1342(a)(1, 3); West's Ann.Cal.Water Code §§ 13000 et seq., 13241(d), 13263, 13377.

*See 4 Witkin, Summary of Cal. Law (9th ed. 1987) Real Property, §§ 68, 69; 8 Miller & Starr, Cal. Real Estate (3d ed. 2001) § 23:54; Cal. Jur. 3d, Pollution and Conservation Laws, § 126.*

18 Cases that cite this headnote

**[3] Statutes**
Purpose and intent

When construing any statute, the court's task is to determine the Legislature's intent when it enacted the statute so as to adopt the construction that best effectuates the purpose of the law.

14 Cases that cite this headnote

**[4] States**
Conflicting or conforming laws or regulations

Under the federal Constitution's supremacy clause, a state law that conflicts with federal law is without effect. U.S.C.A. Const. Art. 6, cl. 2.

**[5] Environmental Law**
Conditions and limitations

When imposing more stringent pollutant restrictions in a wastewater discharge permit than those required by federal law, a regional water quality control board may take into account the economic effects of doing so. Federal Water Pollution Control Act Amendments of 1972, §§ 101 et seq., 101(b), 510, as amended, 33 U.S.C.A. §§ 1251 et seq., 1251(b), 1370; West's Ann.Cal.Water Code §§ 13000 et seq., 13241(d), 13263, 13377.

19 Cases that cite this headnote

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**Opinion**

KENNARD, J.

***618** ****864** Federal law establishes national water quality standards but allows the states to enforce their own water quality laws so long as they comply with federal standards. Operating within this federal-state framework, California's nine Regional Water Quality Control Boards establish water quality policy. They also issue permits for the discharge of treated wastewater; these permits specify the maximum allowable concentration of chemical pollutants in the discharged wastewater.

The question here is this: When a regional board issues a permit to a wastewater treatment facility, must the board take into account the facility's costs of complying with the board's restrictions on pollutants in the wastewater to be discharged? The trial court ruled that California law required a regional board to weigh the economic burden on the facility against the expected environmental benefits of reducing pollutants in the wastewater discharge. The Court of Appeal disagreed. On petitions by the municipal operators of three wastewater treatment facilities, we granted review.

We reach the following conclusions: Because both California law and federal law require regional boards to comply with federal clean water standards, and because the supremacy clause of the United States Constitution requires state law to yield to federal law, a regional board, when issuing a wastewater discharge permit, may not consider economic factors to justify imposing pollutant restrictions that are *less stringent* than the applicable federal standards require. When, however, a regional board is considering whether to make the pollutant restrictions in a wastewater discharge permit *more stringent* than federal law requires, California law allows the board to take into account economic ****865** factors, including the wastewater discharger's cost of compliance. We remand this case for further proceedings to determine whether the pollutant limitations in the permits challenged here meet or exceed federal standards.

***619 I. STATUTORY BACKGROUND**

The quality of our nation's waters is governed by a "complex statutory and regulatory scheme ... that implicates both federal and state administrative responsibilities." (*PUD No. 1 of Jefferson County v. Washington Department of Ecology* (1994) 511 U.S. 700, 704, 114 S.Ct. 1900, 128 L.Ed.2d 716.) We first discuss California law, then federal law.

**A. California Law**

In California, the controlling law is the Porter–Cologne Water Quality Control Act (Porter–Cologne Act), which was enacted in 1969. (Wat.Code, § 13000 et seq., added by Stats.1969, ch. 482, § 18, p. 1051.)[1] Its goal is "to attain the highest water *****307** quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible." (§ 13000.) The task of accomplishing this belongs to the State Water Resources Control Board (State Board) and the nine Regional Water Quality Control Boards; together the State Board and the regional boards comprise "the principal state agencies with primary responsibility for the coordination and control of water quality." (§ 13001.) As relevant here, one of those regional boards oversees the Los Angeles region (the Los Angeles Regional Board).[2]

Whereas the State Board establishes statewide policy for water quality control (§ 13140), the regional boards "formulate and adopt water quality control plans for all areas within [a] region" (§ 13240). The regional boards' water quality plans, called "basin plans," must address the beneficial uses to be protected as well as water quality objectives, and they must establish a program of implementation. (§ 13050, subd. (j).) Basin plans must be consistent with "state policy for water quality control." (§ 13240.)

**B. Federal Law**

**[1]** In 1972, Congress enacted amendments (Pub.L. No. 92–500 (Oct. 18, 1972) 86 Stat. 816) to the Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), which, as amended in 1977, is commonly known as the Clean ***620** Water Act. The Clean Water Act is a "comprehensive water quality statute designed 'to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.' " (*PUD No. 1 of Jefferson County v. Washington Dept. of Ecology, supra,* 511 U.S. at p. 704, 114 S.Ct. 1900, quoting 33 U.S.C. § 1251(a).) The Act's national goal was to eliminate by the year 1985 "the discharge of pollutants into the navigable waters" of the United States. (33 U.S.C. § 1251(a)(1).) To accomplish this goal, the Act established "effluent limitations," which are restrictions on the "quantities, rates, and concentrations of chemical,

physical, biological, and other constituents"; these effluent limitations allow the discharge of pollutants only when the water has been satisfactorily treated to conform with federal water quality standards. (33 U.S.C. §§ 1311, 1362(11).)

Under the federal Clean Water Act, each state is free to enforce its own water quality laws so long as its effluent limitations are not "less stringent" than those set out in the Clean Water Act. (33 U.S.C. § 1370.) This led the California Legislature in 1972 to amend the state's Porter–Cologne Act "to ensure consistency with the requirements for state programs implementing the Federal Water Pollution Control Act." (§ 13372.)

****866** Roughly a dozen years ago, the United States Supreme Court, in *Arkansas v. Oklahoma* (1992) 503 U.S. 91, 112 S.Ct. 1046, 117 L.Ed.2d 239, described the distinct roles of the state and federal agencies in enforcing water quality: "The Clean Water Act anticipates a partnership between the States and the Federal Government, animated by a shared objective: 'to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.' 33 U.S.C. § 1251(a). Toward *****308** this end, [the Clean Water Act] provides for two sets of water quality measures. 'Effluent limitations' are promulgated by the [Environmental Protection Agency (EPA)] and restrict the quantities, rates, and concentrations of specified substances which are discharged from point sources.[3] See §§ 1311, 1314. '[W]ater quality standards' are, in general, promulgated by the States and establish the desired condition of a waterway. See § 1313. These standards supplement effluent limitations 'so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels.' *EPA v. California ex rel. State Water Resources Control Bd.,* 426 U.S. 200, 205, n. 12, 96 S.Ct. 2022, 2025, n. 12, 48 L.Ed.2d 578 (1976).

***621** "The EPA provides States with substantial guidance in the drafting of water quality standards. See generally 40 CFR pt. 131 (1991) (setting forth model water quality standards). Moreover, [the Clean Water Act] requires, *inter alia,* that state authorities periodically review water quality standards and secure the EPA's approval of any revisions in the standards. If the EPA recommends changes to the standards and the State fails to comply with that recommendation, the Act authorizes the EPA to promulgate water quality standards for the State. 33 U.S.C. § 1313(c)." (*Arkansas v. Oklahoma, supra,* 503 U.S. at p. 101, 112 S.Ct. 1046.)

Part of the federal Clean Water Act is the National Pollutant Discharge Elimination System (NPDES), "[t]he primary means" for enforcing effluent limitations and standards under the Clean Water Act. (*Arkansas v. Oklahoma, supra,* 503 U.S. at p. 101, 112 S.Ct. 1046.) The NPDES sets out the conditions under which the federal EPA or a state with an approved water quality control program can issue permits for the discharge of pollutants in wastewater. (33 U.S.C. § 1342(a) & (b).) In California, wastewater discharge requirements established by the regional boards are the equivalent of the NPDES permits required by federal law. (§ 13374.)

With this federal and state statutory framework in mind, we now turn to the facts of this case.

## II. FACTUAL BACKGROUND

This case involves three publicly owned treatment plants that discharge wastewater under NPDES permits issued by the Los Angeles Regional Board.

The City of Los Angeles owns and operates the Donald C. Tillman Water Reclamation Plant (Tillman Plant), which serves the San Fernando Valley. The City of Los Angeles also owns and operates the Los Angeles–Glendale Water Reclamation Plant (Los Angeles–Glendale Plant), which processes wastewater from areas within the City of Los Angeles and the independent cities of Glendale and Burbank. Both the Tillman Plant and the Los Angeles–Glendale Plant discharge wastewater directly into the Los Angeles River, now a concrete-lined flood control channel that runs through the City of Los Angeles, ending at the Pacific Ocean. The State Board and the Los Angeles Regional Board consider the Los Angeles River to be a navigable water of the United States for purposes of the federal Clean Water Act.

The third plant, the Burbank Water Reclamation Plant (Burbank Plant), is owned and operated by the City of Burbank, *****309** serving residents and businesses within that city. The Burbank Plant discharges wastewater into the Burbank Western Wash, which drains into the Los Angeles River.

***622** All three plants, which together process hundreds of millions of gallons of sewage ****867** each day, are tertiary treatment facilities; that is, the treated wastewater they release is processed sufficiently to be safe not only for use in watering food crops, parks, and playgrounds, but also for

human body contact during recreational water activities such as swimming.

In 1998, the Los Angeles Regional Board issued renewed NPDES permits to the three wastewater treatment facilities under a basin plan it had adopted four years earlier for the Los Angeles River and its estuary. That 1994 basin plan contained general narrative criteria pertaining to the existing and potential future beneficial uses and water quality objectives for the river and estuary. [4] The narrative criteria included municipal and domestic water supply, swimming and other recreational water uses, and fresh water habitat. The plan further provided: "All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life." The 1998 permits sought to reduce these narrative criteria to specific numeric requirements setting daily maximum limitations for more than 30 pollutants present in the treated wastewater, measured in milligrams or micrograms per liter of effluent. [5]

The Cities of Los Angeles and Burbank (Cities) filed appeals with the State Board, contending that achievement of the numeric requirements would be too costly when considered in light of the potential benefit to water quality, and that the pollutant restrictions in the NPDES permits were unnecessary to meet the narrative criteria described in the basin plan. The State Board summarily denied the Cities' appeals.

Thereafter, the Cities filed petitions for writs of administrative mandate in the superior court. They alleged, among other things, that the Los Angeles Regional Board failed to comply with sections 13241 and 13263, part of California's Porter–Cologne Act, because it did not consider the economic burden on the Cities in having to reduce substantially the pollutant content of their discharged wastewater. They also alleged that compliance with the pollutant restrictions set out in the NPDES permits issued by the regional ***623** board would greatly increase their costs of treating the wastewater to be discharged into the Los Angeles River. According to the City of Los Angeles, its compliance costs would exceed $50 million annually, representing more than 40 percent of its entire budget for operating its four wastewater treatment plants and its sewer system; the City of Burbank estimated its added costs at over $9 million annually, a nearly 100 percent increase above its $9.7 million annual budget for wastewater treatment.

*****310** The State Board and the Los Angeles Regional Board responded that sections 13241 and 13263 do not require consideration of costs of compliance when a regional board issues a NPDES permit that restricts the pollutant content of discharged wastewater.

The trial court stayed the contested pollutant restrictions for each of the three wastewater treatment plants. It then ruled that sections 13241 and 13263 of California's Porter–Cologne Act required a regional board to consider costs of compliance not only when it adopts a basin or water quality plan but also when, as here, it issues an NPDES permit setting the allowable pollutant content of a treatment plant's discharged wastewater. The court found no evidence that the Los Angeles Regional Board had considered economic factors at either stage. Accordingly, the trial court granted the Cities' petitions for writs of mandate, and it ordered the Los Angeles Regional Board to vacate the contested restrictions on pollutants in the wastewater discharge permits issued to the three municipal plants here and to conduct hearings ****868** to consider the Cities' costs of compliance before the board's issuance of new permits. The Los Angeles Regional Board and the State Board filed appeals in both the Los Angeles and Burbank cases. [6]

The Court of Appeal, after consolidating the cases, reversed the trial court. It concluded that sections 13241 and 13263 require a regional board to take into account "economic considerations" when it adopts water quality standards in a basin plan but not when, as here, the regional board sets specific pollutant restrictions in wastewater discharge permits intended to satisfy those standards. We granted the Cities' petition for review.

## ***624 III. DISCUSSIONA. Relevant State Statutes**

The California statute governing the issuance of *wastewater permits* by a regional board is section 13263, which was enacted in 1969 as part of the Porter–Cologne Act. (See 26 Cal.Rptr.3d pp. 306–307, 108 P.3d p. 865, *ante.*) Section 13263 provides in relevant part: "*The regional board,* after any necessary hearing, *shall prescribe requirements as to the nature of any proposed discharge* [of wastewater]. *The requirements* shall implement any relevant water quality control plans that have been adopted, and *shall take into consideration* the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and *the provisions of Section 13241*." (§ 13263, subd. (a), italics added.)

Section 13241 states: "Each regional board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance; however, it is recognized that it may be possible for the quality of water to be changed to some degree without unreasonably affecting beneficial uses. Factors to be considered by a regional board in establishing water quality objectives shall include, but not necessarily be limited to, all of the following:

*****311** "(a) Past, present, and probable future beneficial uses of water.

"(b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.

"(c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.

"(d) *Economic considerations.*

"(e) The need for developing housing within the region.

"(f) The need to develop and use recycled water." (Italics added.)

The Cities here argue that section 13263's express reference to section 13241 requires the Los Angeles Regional Board to consider section 13241's listed factors, notably "[e]conomic considerations," before issuing NPDES permits requiring specific pollutant reductions in discharged effluent or treated wastewater.

**[2]** ***625** Thus, at issue is language in section 13263 stating that when a regional board "prescribe[s] requirements as to the nature of any proposed discharge" of treated wastewater it must "take into consideration" certain factors including "the provisions of Section 13241." According to the Cities, this statutory language requires that a regional board make an independent evaluation of the section 13241 factors, including "economic considerations," before restricting the pollutant content in an NPDES permit. This was the view expressed in the trial court's ruling. The Court of Appeal rejected that view. It held that a regional board need consider the section 13241 factors only when it adopts a basin or water quality plan, but not when, as in this case, it issues a wastewater discharge ****869** permit that sets specific numeric limitations on the various chemical pollutants in the wastewater to be discharged. As explained below, the Court of Appeal was partly correct.

**B. Statutory Construction**

**[3]** When construing any statute, our task is to determine the Legislature's intent when it enacted the statute "so that we may adopt the construction that best effectuates the purpose of the law." (*Hassan v. Mercy American River Hospital* (2003) 31 Cal.4th 709, 715, 3 Cal.Rptr.3d 623, 74 P.3d 726; *Esberg v. Union Oil Co.* (2002) 28 Cal.4th 262, 268, 121 Cal.Rptr.2d 203, 47 P.3d 1069.) In doing this, we look to the statutory language, which ordinarily is "the most reliable indicator of legislative intent." (*Hassan, supra,* at p. 715, 3 Cal.Rptr.3d 623, 74 P.3d 726.)

As mentioned earlier, our Legislature's 1969 enactment of the Porter–Cologne Act, which sought to ensure the high quality of water in this state, predated the 1972 enactment by Congress of the precursor to the federal Clean Water Act. Included in California's original Porter–Cologne Act were sections 13263 and 13241. Section 13263 directs regional boards, when issuing wastewater discharge permits, to take into account various factors, including those set out in section 13241. Listed among the section 13241 factors is "[e]conomic considerations." (§ 13241, subd. (d).) The plain language of sections 13263 and 13241 indicates the Legislature's intent in 1969, when these statutes were enacted, that a regional board consider the cost of compliance when setting effluent limitations in a wastewater discharge permit.

Our construction of sections 13263 and 13241 does not end with their plain statutory language, however. We must also analyze them in the context of the statutory scheme of which they are a part. ( *****312** *State Farm Mutual Automobile Ins. Co. v. Garamendi* (2004) 32 Cal.4th 1029, 1043, 12 Cal.Rptr.3d 343, 88 P.3d 71.) Like sections 13263 and 13241, section 13377 is part of the Porter–Cologne Act. But unlike the former two statutes, section 13377 was ***626** not enacted until 1972, shortly after Congress, through adoption of the Federal Water Pollution Control Act Amendments, established a comprehensive water quality policy for the nation.

**[4]** Section 13377 specifies that wastewater discharge permits issued by California's regional boards must meet the federal standards set by federal law. In effect, section 13377 forbids a regional board's consideration of any economic

  

hardship on the part of the permit holder if doing so would result in the dilution of the requirements set by Congress in the Clean Water Act. That act prohibits the discharge of pollutants into the navigable waters of the United States unless there is compliance with federal law (33 U.S.C. § 1311(a)), and publicly operated wastewater treatment plants such as those before us here must comply with the act's clean water standards, regardless of cost (see *id.,* §§ 1311(a), (b)(1)(B) & (C), 1342(a)(1) & (3)). Because section 13263 cannot authorize what federal law forbids, it cannot authorize a regional board, when issuing a wastewater discharge permit, to use compliance costs to justify pollutant restrictions that do not comply with federal clean water standards.[7] Such a construction of section 13263 would not only be inconsistent with federal law, it would also be inconsistent with the Legislature's ****870** declaration in section 13377 that all discharged wastewater must satisfy federal standards.[8] This was also the conclusion of the Court of Appeal. Moreover, under the federal Constitution's supremacy clause (art. VI), a state law that conflicts with federal law is " 'without effect.' " (*Cipollone v. Liggett Group, Inc.* (1992) 505 U.S. 504, 516, 112 S.Ct. 2608, 120 L.Ed.2d 407; *Dowhal v. SmithKline Beecham Consumer Healthcare* (2004) 32 Cal.4th 910, 923, 12 Cal.Rptr.3d 262, 88 P.3d 1.) To comport with the principles of federal supremacy, California law cannot authorize this ***627** state's regional boards to allow the discharge of pollutants into the navigable waters of the United States in concentrations *****313** that would exceed the mandates of federal law.

Thus, in this case, whether the Los Angeles Regional Board should have complied with sections 13263 and 13241 of California's Porter–Cologne Act by taking into account "economic considerations," such as the costs the permit holder will incur to comply with the numeric pollutant restrictions set out in the permits, depends on whether those restrictions meet or exceed the requirements of the federal Clean Water Act. We therefore remand this matter for the trial court to resolve that issue.

### C. Other Contentions

The Cities argue that requiring a regional board at the wastewater discharge permit stage to consider the permit holder's cost of complying with the board's restrictions on pollutant content in the water is consistent with federal law. In support, the Cities point to certain provisions of the federal Clean Water Act. They cite section 1251(a)(2) of title 33 United States Code, which sets, as a national goal "*wherever attainable,*" an interim goal for water quality that protects fish and wildlife, and section 1313(c)(2)(A) of the same title, which requires consideration, among other things, of waters' "*use and value* for navigation" when revising or adopting a "water quality standard." (Italics added.) These two federal statutes, however, pertain not to permits for wastewater discharge, at issue here, but to establishing water quality standards, not at issue here. Nothing in the federal Clean Water Act suggests that a state is free to disregard or to weaken the federal requirements for clean water when an NPDES permit holder alleges that compliance with those requirements will be too costly.

**[5]** At oral argument, counsel for amicus curiae National Resources Defense Council, which argued on behalf of California's State Board and regional water boards, asserted that the federal Clean Water Act incorporates state water policy into federal law, and that therefore a regional board's consideration of economic factors to justify greater pollutant concentration in discharged wastewater would conflict with the federal act even if the specified pollutant restrictions were not less stringent than those required under federal law. We are not persuaded. The federal Clean Water Act reserves to the states significant aspects of water quality policy (33 U.S.C. § 1251(b)), and it specifically grants the states authority to "enforce any effluent limitation" that is not "*less stringent* " than the federal standard (*id.* § 1370, italics added). It does not prescribe or restrict the factors that a state may consider when exercising this reserved authority, and thus it does not prohibit ***628** a state—when imposing effluent limitations that are *more stringent* than required by federal law—from taking into account the economic effects of doing so.

Also at oral argument, counsel for the Cities asserted that if the three municipal wastewater treatment facilities ceased releasing their treated wastewater into the concrete channel that makes up the Los Angeles River, it would (other than during the rainy season) contain no water at all, and thus would not be a "navigable water" of the ****871** United States subject to the Clean Water Act. (See *Solid Waste Agency v. United States Army Corps of Engineers* (2001) 531 U.S. 159, 172, 121 S.Ct. 675, 148 L.Ed.2d 576 ["The term 'navigable' has at least the import of showing us what Congress had in mind as its authority for enacting the CWA: its traditional jurisdiction over waters that were or had been navigable in fact or which could reasonably be so made."].) It is unclear when the Cities first raised this issue. The Court of Appeal did not discuss it in its opinion, and the Cities did not seek rehearing on this ground. (See *****314** Cal. Rules of Court,

rule 28(c)(2).) Concluding that the issue is outside our grant of review, we do not address it.

**CONCLUSION**

Through the federal Clean Water Act, Congress has regulated the release of pollutants into our national waterways. The states are free to manage their own water quality programs so long as they do not compromise the federal clean water standards. When enacted in 1972, the goal of the Federal Water Pollution Control Act Amendments was to *eliminate* by the year 1985 the discharge of pollutants into the nation's navigable waters. In furtherance of that goal, the Los Angeles Regional Board indicated in its 1994 basin plan on water quality the intent, insofar as possible, to remove from the water in the Los Angeles River toxic substances in amounts harmful to humans, plants, and aquatic life. What is not clear from the record before us is whether, in limiting the chemical pollutant content of wastewater to be discharged by the Tillman, Los Angeles–Glendale, and Burbank wastewater treatment facilities, the Los Angeles Regional Board acted only to implement requirements of the federal Clean Water Act or instead imposed pollutant limitations that exceeded the federal requirements. This is an issue of fact to be resolved by the trial court.

**DISPOSITION**

We affirm the judgment of the Court of Appeal reinstating the wastewater discharge permits to the extent that the specified numeric limitations on chemical pollutants are necessary to satisfy federal Clean Water Act requirements for treated wastewater. The Court of Appeal is directed to remand this ***629** matter to the trial court to decide whether any numeric limitations, as described in the permits, are "more stringent" than required under federal law and thus should have been subject to "economic considerations" by the Los Angeles Regional Board before inclusion in the permits.

WE CONCUR: GEORGE, C.J., BAXTER, WERDEGAR, CHIN, and MORENO, JJ.

Concurring Opinion by BROWN, J.

I write separately to express my frustration with the apparent inability of the government officials involved here to answer a simple question: How do the federal clean water standards (which, as near as I can determine, are the state standards) prevent the state from considering economic factors? The majority concludes that because "the supremacy clause of the United States Constitution requires state law to yield to federal law, a regional board, when issuing a wastewater discharge permit, may not consider economic factors to justify imposing pollutant restrictions that are *less stringent* than applicable federal standards require." (Maj. opn., *ante,* 26 Cal.Rptr.3d at p. 306, 108 P.3d at p. 864.) That seems a pretty self-evident proposition, but not a useful one. The real question, in my view, is whether the Clean Water Act prevents or prohibits the regional water board from considering economic factors to justify pollutant restrictions that *meet* the clean water standards in more cost-effective and economically efficient ways. I can see no reason why a federal law—which purports to be an example of cooperative federalism—would decree such a result. I do not think the majority's reasoning is at fault here. Rather, the agencies involved seemed to have worked hard to make this simple question impenetrably obscure.

A brief review of the statutory framework at issue is necessary to understand my concerns.

*****315 **872 I. Federal Law**

"In 1972, Congress enacted the Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), commonly known as the Clean Water Act (CWA) [Citation.] ... [¶] Generally, the CWA 'prohibits the discharge of any pollutant except in compliance with one of several statutory exceptions. [Citation.]' ... The most important of those exceptions is pollution discharge under a valid NPDES [National Pollution Discharge Elimination System] permit, which can be issued either by the Environmental Protection Agency (EPA), or by an EPA-approved state permit program such as California's. [Citations.] NPDES permits are valid for five years. [Citation.] [¶] Under the CWA's NPDES permit program, the states are required to develop *water quality standards.* [Citations.] A water quality standard 'establish[es] the desired condition of a waterway.' [Citation.] A water quality standard for any ***630** given waterway, or 'water body,' has two components: (1) the designated beneficial uses of the water body and (2) the *water quality criteria* sufficient to protect those uses. [Citations.] [¶] Water quality criteria can be either *narrative* or *numeric.* [Citation.]" (*Communities for a Better Environment v. State Water Resources Control Bd.* (2003) 109 Cal.App.4th 1089, 1092–1093, 1 Cal.Rptr.3d 76.)

With respect to satisfying water quality standards, "a polluter must comply with *effluent limitations.* The CWA defines an effluent limitation as 'any restriction established by a

State or the [EPA] Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance.' [Citation.] 'Effluent limitations are a means of *achieving* water quality standards.' [Citation.] [¶] NPDES permits establish effluent limitations for the polluter. [Citations.] CWA's NPDES permit system provides for a two-step process for the establishing of effluent limitations. First, the polluter must comply with *technology-based effluent limitations,* which are limitations based on the best available or practical technology for the reduction of water pollution. [Citations.] [¶] Second, the polluter must also comply with more stringent *water quality-based effluent limitations* (WQBEL's) where applicable. In the CWA, Congress 'supplemented the "technology-based" effluent limitations with "water quality-based" limitations "so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels.' " [Citation.] [¶] The CWA makes WQBEL's applicable to a given polluter whenever WQBEL's are 'necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations....' [Citations.] Generally, NPDES permits must conform to state water quality laws insofar as the state laws impose more stringent pollution controls than the CWA. [Citations.] Simply put, WQBEL's implement water quality standards." (*Communities for a Better Environment v. State Water Resources Control Bd., supra,* 109 Cal.App.4th at pp. 1093–1094, 1 Cal.Rptr.3d 76, fns. omitted.)

This case involves water quality-based effluent limitations. As set forth above, "[u]nder the CWA, states have the primary role in promulgating water quality standards." (*Piney Run Preservation Ass'n v. Commrs. of Carroll Co.* (4th Cir.2001) 268 F.3d 255, 265, fn. 9.) "Under the CWA, the water quality standards referred to in section 301 [see 33 U.S.C. § 1311] are primarily the states' handiwork." ***316** (*American Paper Institute, Inc. v. U.S. Envtl. Protection Agency* (D.C.Cir.1993) 996 F.2d 346, 349 (*American Paper* ).) In fact, upon the 1972 passage of the CWA, "[s]tate water quality standards in effect at the time ... were deemed to be the initial water quality benchmarks for CWA purposes.... The states were to revisit and, if ***631** necessary, revise those initial standards at least once every three years." (*American Paper,* at p. 349.) Therefore, "once a water quality standard has been promulgated, section 301 of the CWA requires all NPDES permits for point sources to incorporate discharge limitations necessary to satisfy that standard." (*American Paper,* at p. 350.) Accordingly, it appears that in most instances, ****873** state water quality standards are identical to the federal requirements for NPDES permits.

**II. State Law**

In California, pursuant to the Porter–Cologne Water Quality Control Act (Wat.Code, § 13000 et seq.; Stats.1969, ch. 482, § 18, p. 1051; hereafter Porter–Cologne Act), the regional water quality control boards establish water quality standards —and therefore federal requirements for NPDES permits— through the adoption of water quality control plans (basin plans). The basin plans establish water quality objectives using enumerated factors—including economic factors—set forth in Water Code section 13241.

In addition, as one court observed: "The Porter–Cologne Act ... established nine regional boards to prepare water quality plans (known as basin plans) and issue permits governing the discharge of waste. (Wat.Code, §§ 13100, 13140, 13200, 13201, 13240, 13241, 13243.) The Porter–Cologne Act identified these permits as 'waste discharge requirements,' and provided that the waste discharge requirements must mandate compliance with the applicable regional water quality control plan. (Wat.Code, §§ 13263, subd. (a), 13377, 13374.)[¶] Shortly after Congress enacted the Clean Water Act in 1972, the California Legislature added Chapter 5.5 to the Porter–Cologne Act, for the purpose of adopting the necessary federal requirements to ensure it would obtain EPA approval to issue NPDES permits. (Wat.Code, § 13370, subd. (c).) As part of these amendments, the Legislature provided that the state and regional water boards 'shall, as required or authorized by the [Clean Water Act], issue waste discharge requirements ... which apply and ensure compliance with all applicable provisions [of the Clean Water Act], together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.' (Wat.Code, § 13377.) Water Code section 13374 provides that '[t]he term "waste discharge requirements" as referred to in this division is the equivalent of the term "permits" as used in the [Clean Water Act].' [¶] California subsequently obtained the required approval to issue NPDES permits. [Citation.] Thus, the waste discharge requirements issued by the regional water boards ordinarily also serve as NPDES permits under federal law. (Wat.Code, § 13374.)" (*Building Industry Assn. of San Diego County v.*

*State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 875, 22 Cal.Rptr.3d 128.)

***632** Applying this federal-state statutory scheme, it appears that throughout this entire process, the Cities of Burbank and Los Angeles (Cities) were unable to have economic factors considered because the Los Angeles Regional Water Quality Control Board (Board)—the body responsible to enforce the statutory framework—failed to comply with its statutory mandate.

*****317** For example, as the trial court found, the Board did not consider costs of compliance when it initially established its basin plan, and hence the water quality standards. The Board thus failed to abide by the statutory requirement set forth in Water Code section 13241 in establishing its basin plan. Moreover, the Cities claim that the initial narrative standards were so vague as to make a serious economic analysis impracticable. Because the Board does not allow the Cities to raise their economic factors in the permit approval stage, they are effectively precluded from doing so. As a result, the Board appears to be playing a game of "gotcha" by allowing the Cities to raise economic considerations when it is not practical, but precluding them when they have the ability to do so.

Moreover, the Board acknowledges that it has neglected other statutory provisions that might have provided an additional opportunity to air these concerns. As set forth above, pursuant to the CWA, "[t]he states were to revisit and, if necessary, revise those initial standards at least once every three years—a process commonly known as triennial review. [Citation.] Triennial reviews consist of public hearings in which current water quality standards are examined to assure that they 'protect the public health or welfare, enhance the quality of water and serve the purposes' of the Act. [Citation.] Additionally, the CWA ****874** directs states to consider a variety of competing policy concerns during these reviews, including a waterway's 'use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes.' " (*American Paper, supra,* 996 F.2d at p. 349.)

According to the Cities, "[t]he last time that the narrative water quality objective for toxicity contained in the Basin Plan was reviewed and modified was 1994." The Board does not deny this claim. Accordingly, the Board has failed its duty to allow public discussion—including economic considerations—at the required intervals when making its determination of proper water quality standards.

What is unclear is why this process should be viewed as a contest. State and local agencies are presumably on the same side. The costs will be paid by taxpayers and the Board should have as much interest as any other agency in fiscally responsible environmental solutions.

***633** Our decision today arguably allows the Board to continue to shirk its statutory duties. The majority holds that when read together, Water Code sections 13241, 13263, and 13377 do not allow the Board to consider economic factors when issuing NPDES permits to satisfy federal CWA requirements. (Maj. opn., *ante,* 26 Cal.Rptr.3d at pp. 311–312, 108 P.3d at pp. 869–870.) The majority then bifurcates the issue when it orders the Court of Appeal "to remand this matter to the trial court to decide whether any numeric limitations, as described in the permits, are 'more stringent' than required under federal law and thus should have been subject to 'economic considerations' by the Los Angeles Regional Board before inclusion in the permits." (*Id.* at p. 314, 108 P.3d at p. 871.)

The majority overlooks the feedback loop established by the CWA, under which federal standards are linked to state-established water quality standards, including narrative water quality criteria. (See 33 U.S.C. § 1311(b)(1)(C); 40 C.F.R. § 122.44(d)(1) (2004).) Under the CWA, NPDES permit requirements include the state narrative criteria, which are incorporated into the Board's basin plan under the description "no toxins in toxic amounts." As far as I can determine, NPDES permits *****318** designed to achieve this narrative criteria (as well as designated beneficial uses) will usually implement the state's basin plan, while satisfying federal requirements as well.

If federal water quality standards are typically identical to state standards, it will be a rare instance that a state exceeds its own requirements and economic factors are taken into consideration. [1] In light of the Board's initial failure to consider costs of compliance and its repeated failure to conduct required triennial reviews, the result here is an unseemly bureaucratic bait-and-switch that we should not endorse. The likely outcome of the majority's decision is that the Cities will be economically burdened to meet standards imposed on them in a highly questionable manner. [2] In these times of tight fiscal budgets, it is difficult to imagine imposing

additional financial burdens on municipalities without at least allowing them to present alternative views.

Based on the facts of this case, our opinion today appears to largely retain the status quo for the Board. If the Board can actually demonstrate that only the precise limitations at issue here, implemented in only one way, will achieve the desired water standards, perhaps its obduracy is justified. That case has yet to be made.

***634** Accordingly, I cannot conclude that the majority's decision is wrong. The analysis ****875** may provide a reasonable accommodation of conflicting provisions. However, since the Board's actions "make me wanna holler and throw up both my hands," [3] I write separately to set forth my concerns and concur in the judgment—*dubitante.* [4]

**All Citations**

35 Cal.4th 613, 108 P.3d 862, 26 Cal.Rptr.3d 304, 60 ERC 1470, 35 Envtl. L. Rep. 20,071, 05 Cal. Daily Op. Serv. 2861, 2005 Daily Journal D.A.R. 3870

Footnotes

* Brown, J., did not participate therein.

1 Further undesignated statutory references are to the Water Code.

2 The Los Angeles water region "comprises all basins draining into the Pacific Ocean between the southeasterly boundary, located in the westerly part of Ventura County, of the watershed of Rincon Creek and a line which coincides with the southeasterly boundary of Los Angeles County from the ocean to San Antonio Peak and follows thence the divide between San Gabriel River and Lytle Creek drainages to the divide between Sheep Creek and San Gabriel River drainages." (§ 13200, subd. (d).)

3 A "point source" is "any discernable, confined and discrete conveyance" and includes "any pipe, ditch, channel ... from which pollutants ... may be discharged." (33 U.S.C. § 1362(14).)

4 This opinion uses the terms "narrative criteria" or descriptions, and "numeric criteria" or effluent limitations. Narrative criteria are broad statements of desirable water quality goals in a water quality plan. For example, "no toxic pollutants in toxic amounts" would be a narrative description. This contrasts with numeric criteria, which detail specific pollutant concentrations, such as parts per million of a particular substance.

5 For example, the permits for the Tillman and Los Angeles–Glendale Plants limited the amount of fluoride in the discharged wastewater to 2 milligrams per liter and the amount of mercury to 2.1 micrograms per liter.

6 Unchallenged on appeal and thus not affected by our decision are the trial court's rulings that (1) the Los Angeles Regional Board failed to show how it derived from the narrative criteria in the governing basin plan the specific numeric pollutant limitations included in the permits; (2) the administrative record failed to support the specific effluent limitations; (3) the permits improperly imposed daily maximum limits rather than weekly or monthly averages; and (4) the permits improperly specified the manner of compliance.

7 The concurring opinion misconstrues both state and federal clean water law when it describes the issue here as "whether the Clean Water Act prevents or prohibits the regional water board from considering economic factors to justify pollutant restrictions *that meet the clean water standards in more cost-effective and economically efficient ways.*" (Conc. Opn. of Brown, J., *post,* 26 Cal.Rptr.3d p. 314, 108 P.3d at p. 871, some italics added.) This case has nothing to do with meeting federal standards in more cost effective and economically efficient ways. State law, as we have said, allows a regional board to consider a permit holder's compliance cost to *relax* pollutant concentrations, as measured by numeric standards, for pollutants in a wastewater discharge permit. (§§ 13241 & 13263.) Federal law, by contrast, as stated above in the text, "prohibits the discharge of pollutants into the navigable waters of the United States unless there is compliance with federal law (33 U.S.C. § 1311(a)), and publicly operated wastewater treatment plants such as those before us here must comply with the [federal] act's *clean water standards, regardless of cost* (see *id.,* §§ 1311(a), (b)(1)(B) & (C), 1342(a)(1) & (3))." (Italics added.)

8 As amended in 1978, section 13377 provides for the issuance of waste discharge permits that comply with federal clean water law "together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance." We do not here decide how this provision would affect the cost-consideration requirementsof sections 13241 and 13263 when more stringent effluent standards or limitations in a permit are justified for some reason independent of compliance with federal law.

1 (But see *In the Matter of the Petition of City and County of San Francisco, San Francisco Baykeeper et al.* (Order No. WQ 95–4, Sept. 21, 1995) 1995 WL 576920.)

2 Indeed, given the fact that "water quality standards" in this case are composed of broadly worded components (i.e., a narrative criteria and "designated beneficial uses of the water body"), the Board possessed a high degree of discretion in setting NPDES permit requirements. Based on the Board's past performance, a proper exercise of this discretion is uncertain.

3 Marvin Gaye (1971) "Inner City Blues."

4 I am indebted to Judge Berzon for this useful term. (See *Credit Suisse First Boston Corp. v. Grunwald* (9th Cir.2005) 400 F.3d 1119 (conc. opn. of Berzon, J.).)

188 Cal.App.4th 794
Court of Appeal, Third District, California.

CLOVIS UNIFIED SCHOOL DISTRICT et al., Plaintiffs and Appellants,
v.
John CHIANG, as State Controller, etc., Defendant and Appellant.

No. C061696.
|
Sept. 21, 2010.
|
As Modified on Denial of Rehearing Oct. 14, 2010.

**Synopsis**

**Background:** School districts and community college districts brought action against State Controller's Office for declaratory and writ relief challenging auditing rules used in reducing state-mandated reimbursement claims for employee salary and benefit costs. The Superior Court, Sacramento County, No. 06CS00748 and 07CS00263, Lloyd G. Connelly, J., invalidated the Contemporaneous Source Document Rule (CSDR) as applied to Intradistrict Attendance Program and Collective Bargaining Program, granted no relief as to CSDR as applied to the School District of Choice Program (SDC) and the Emergency Procedures, Earthquake Procedures and Disasters Program (EPEPD), and upheld the Health Fee Rule. Plaintiffs appealed.

**Holdings:** The Court of Appeal, Butz, J., held that:

[1] CSDR implemented, interpreted, or made specific the regulatory Parameters and Guidelines (P&Gs) applied to state-mandated reimbursement claims;

[2] declaratory and traditional mandate relief was appropriate form of relief for use of CSDR as underground regulation; and

[3] amount of optional student fee was deducted from amount reimbursed to community college districts for state-mandated costs.

Reversed in part with directions and affirmed in part.

West Headnotes (14)

[1] **Declaratory Judgment**
Limitations and laches

**Mandamus**
Time to Sue, Limitations, and Laches

**States**
State expenses and charges and statutory liabilities

School districts' and community college districts' action against State Controller's Office, for declaratory and writ relief challenging audits that reduced state-mandated reimbursement claims for employee salary and benefit costs based on an auditing rule which was an invalid underground regulation in violation of the state Administrative Procedure Act (APA), was subject to the three-year statute of limitations for lawsuits based on statutory liability, since state-mandated reimbursement was a statutory liability. West's Ann.Cal.C.C.P. § 338(a); West's Ann.Cal.Gov.Code §§ 11340 et seq., 17500 et seq.

1 Cases that cite this headnote

[2] **Administrative Law and Procedure**
Rules, Regulations, and Other Policymaking

An Administrative Procedure Act (APA) regulation has two principal characteristics: it must apply generally; and it must implement, interpret, or make specific the law enforced or administered by the agency, or govern the agency's procedure. West's Ann.Cal.Gov.Code § 11342.600.

[3] **Administrative Law and Procedure**
Matters subject to rules or rulemaking in general

For a regulation to "apply generally," as required to be subject to the Administrative Procedure Act (APA), the rule need not apply universally; a rule applies generally so long as it declares how

a certain class of cases will be decided. West's Ann.Cal.Gov.Code § 11342.600.

**[4] States**

Administration of finances in general

State Controller's Office's Contemporaneous Source Document Rule (CSDR) applied generally, as required to be a regulation subject to the Administrative Procedure Act (APA), where the CSDR was applied generally to the auditing of reimbursement claims, and the Controller's auditors had no discretion to judge on a case-by-case basis whether to apply the CSDR. West's Ann.Cal.Gov.Code § 11342.600.

**[5] States**

State expenses and charges and statutory liabilities

State Controller's Office's Contemporaneous Source Document Rule (CSDR) implemented, interpreted, or made specific the regulatory Parameters and Guidelines (P&Gs) applied to state-mandated reimbursement claims for the School District of Choice (SDC) Program in effect before May 27, 2004, and thus was a regulation subject to the Administrative Procedure Act (APA), since there were substantive differences between the CSDR and the P&Gs then in effect; the CSDR barred the use of employee time declarations and certifications as source documents or equivalents even though the P&Gs had nothing to say on that subject, and the CSDR did not countenance the use of documented estimates even though such estimates were allowable under the P&Gs. West's Ann.Cal.Gov.Code §§ 11342.600, 17557, 17558.5(a); West's Ann.Cal.Educ.Code § 48209.9 (Repealed).

**[6] States**

State expenses and charges and statutory liabilities

State Controller's Office's Contemporaneous Source Document Rule (CSDR) implemented, interpreted, or made specific the regulatory Parameters and Guidelines (P&Gs) applied to state-mandated reimbursement claims for the Emergency Procedures, Earthquake Procedures and Disasters Program (EPEPD), and thus was a regulation subject to the Administrative Procedure Act (APA), since there were substantive differences between the CSDR and the P&Gs then in effect; unlike the P&Gs, the CSDR barred the use of employee time declarations and certifications as source documents, and the CSDR did not countenance the use of documented estimates. West's Ann.Cal.Gov.Code §§ 11342.600, 17557, 17558.5(a); West's Ann.Cal.Educ.Code §§ 35925–35927, 40041.5, 40042 (Repealed).

**[7] States**

State expenses and charges and statutory liabilities

State Controller's Office's Contemporaneous Source Document Rule (CSDR) implemented, interpreted, or made specific the regulatory Parameters and Guidelines (P&Gs) applied to state-mandated reimbursement claims for the Intradistrict Attendance Program, and thus was a regulation subject to the Administrative Procedure Act (APA), since there were substantive differences between the CSDR and the P&Gs then in effect; unlike the P&Gs, the CSDR barred the use of time studies or employee time declarations and certifications as source documents. West's Ann.Cal.Gov.Code §§ 11342.600, 17557, 17558.5(a); West's Ann.Cal.Educ.Code § 35160.5.

**[8] States**

State expenses and charges and statutory liabilities

State Controller's Office's Contemporaneous Source Document Rule (CSDR) implemented, interpreted, or made specific the regulatory Parameters and Guidelines (P&Gs) applied to state-mandated reimbursement claims for the school district Collective Bargaining Program, and thus was a regulation subject to the Administrative Procedure Act (APA), since there

  

were substantive differences between the CSDR and the P&Gs then in effect; unlike the P&Gs, the CSDR required source documents. West's Ann.Cal.Gov.Code §§ 3540 et seq., 11342.600, 17557, 17558.5(a).

1 Cases that cite this headnote

[9] **Declaratory Judgment**
State officers and boards

**Declaratory Judgment**
Education

**Mandamus**
Establishment, maintenance, and management of schools

Declaratory and accompanying traditional mandate relief was an appropriate form of relief, for school districts' challenge to State Controller's Office's policy of using an underground regulation to conduct audits in violation of the Administrative Procedure Act (APA), even though the underground regulation was later incorporated into valid regulations, where the dispute related to audit determinations under the invalid regulation which did not become final prior to the applicable statute of limitations, and there was no adequate administrative remedy because the Commission on State Mandates consistently refused to rule on underground regulation claims. West's Ann.Cal.Gov.Code § 11350.

3 Cases that cite this headnote

[10] **Evidence**
Administrative rules and regulations

In appeal from trial court's partial grant of declaratory and writ relief against underground regulations used by State Controller's Office in reducing state-mandated reimbursement claims for employee salary and benefit costs, Court of Appeal would not take judicial notice of a subsequent amendment of the regulatory Parameters and Guidelines (P&Gs) applied to the reimbursement claims, which brought the underground regulations into compliance with the Administrative Procedure Act (APA) after the time period at issue in the lawsuit. West's Ann.Cal.Gov.Code §§ 11340 et seq., 17500 et seq.

[11] **Evidence**
Official proceedings and acts

In appeal from trial court's partial grant of declaratory and writ relief against underground regulations used by State Controller's Office in reducing school districts' and community college districts' state-mandated reimbursement claims for employee salary and benefit costs, Court of Appeal would not take judicial notice of the Commission on State Mandates Incorrect Reduction Claim caseload summary or the Controller's list of final audit reports for California school districts and community college districts. West's Ann.Cal.Gov.Code § 17558.7(a).

1 Cases that cite this headnote

[12] **States**
State expenses and charges and statutory liabilities

Under the statutes requiring reimbursement to local government for state-mandated costs, the amount of an optional student health fee was deducted from the amount reimbursed to community college districts for the state-mandated cost of the Health Fee Elimination Program, even when districts chose not to charge their students those fees. West's Ann.Cal.Gov.Code §§ 17514, 17556(d); West's Ann.Cal.Educ.Code § 76355(a)(1); § 72246 (Repealed).

*See Cal. Jur. 3d, State of California, § 104; 9 Witkin, Summary of Cal. Law (10th ed. 2005) Taxation, § 121.*

[13] **States**
State expenses and charges and statutory liabilities

To the extent a local agency or school district has the authority to charge for a state-mandated program or increased level of service, that charge

  

cannot be recovered as a state-mandated cost. West's Ann.Cal. Const. Art. 13B, § 6; West's Ann.Cal.Gov.Code §§ 17514, 17556(d).

**[14] States**

State expenses and charges and statutory liabilities

State Controller's Office had the authority to rely on the Government Code, rather than only on the Parameters and Guidelines (P&Gs) adopted by the Commission on State Mandates, to uphold an audit rule excluding the amount of optional fees from the amount recoverable as state-mandated costs. West's Ann.Cal.Gov.Code §§ 17514, 17556(d).

**Attorneys and Law Firms**

****36** Lozano Smith, Gregory A. Wedner and Sloan R. Simmons, Sacramento, for Plaintiffs and Appellants.

Richard L. Hamilton for California School Boards Association and Its Education Legal Alliance, as Amicus Curiae on behalf of Plaintiffs and Appellants Clovis Unified School District, Fremont Unified School District, Newport–Mesa Unified School District, Norwalk–La Mirada Unified School District, Riverside Unified School District, San Juan Unified School District and Sweetwater Union High School District.

Edmund G. Brown, Jr., Attorney General, Jonathan K. Renner, Assistant Attorney General, Douglas J. Woods and Kathleen A. Lynch, Deputy Attorneys General, for Defendant and Appellant.

**Opinion**

BUTZ, J.

***797** This declaratory relief and writ of mandate action concerns the validity of two auditing rules used by defendant State Controller's Office (Controller). The Controller used these rules in reducing state-mandated reimbursement claims for employee salary and benefit costs submitted from plaintiff school districts and community college districts (hereafter plaintiffs).

***Contemporaneous Source Document Rule (CSDR)***

The first auditing rule is referred to by plaintiffs as the Contemporaneous Source Document Rule (CSDR). The Controller used this rule to reduce reimbursement claims for the following four state-mandated school district programs during the challenged period straddling fiscal years 1998 to 2003: (1) the School District of Choice Program (SDC); (2) the Emergency Procedures, Earthquake Procedures and Disasters Program (EPEPD); (3) the ***798** Intradistrict Attendance Program; and (4) the Collective Bargaining Program. We conclude this rule was an invalid underground regulation under the state Administrative Procedure Act (APA) during this period. (Gov.Code, § 11340 et seq.)[1] Consequently, we overturn the Controller's audits for these four programs during this period to the extent they were based on this rule.

***Health Fee Elimination Program: Health Fee Rule***

The second auditing rule is the Health Fee Rule, which the Controller used to reduce reimbursement claims for state-****37** mandated health services provided by the plaintiff community college districts pursuant to the Health Fee Elimination Program. We uphold the validity of this rule.

The trial court: (1) invalidated the CSDR as applied to the Intradistrict Attendance and Collective Bargaining Programs (from which the Controller appeals); (2) hinted at the CSDR's invalidity as applied to the SDC and EPEPD Programs but did not grant relief thereon, apparently deeming the administrative remedy sufficient (from which the school districts appeal); and (3) upheld the validity of the Health Fee Rule (from which the community college districts appeal). We shall affirm the judgment regarding the Intradistrict Attendance Program, the Collective Bargaining Program, and the Health Fee Rule, but reverse the judgment, with directions, regarding the SDC and EPEPD Programs.

Because the issues raised in this appeal are almost entirely legal ones subject to our independent review (see *Grier v. Kizer* (1990) 219 Cal.App.3d 422, 434, 268 Cal.Rptr. 244, disapproved on a different ground in *Tidewater Marine Western, Inc. v. Bradshaw* (1996) 14 Cal.4th 557, 577, 59 Cal.Rptr.2d 186, 927 P.2d 296 (*Tidewater* ) [whether an auditing rule is an APA regulation is a question of law] ), it is unnecessary to set forth a factual background at this stage. Instead, we will proceed straight to our discussion. First, we will briefly summarize the process of state-mandated reimbursement and the concept of underground regulation.

Then we will turn our attention to the programs and remedies at issue, weaving in the pertinent facts as we go.

**DISCUSSIONI. State-mandated Reimbursement Process**

In 1979, California's voters adopted article XIII B, section 6 of the state Constitution, which specifies that if the state imposes any "new program ***799** or higher level of service" on any local government (including a school district), the state must reimburse the locality for the costs of the program or increased level of service.

In 1984, the Legislature enacted statutes to govern the state mandate process. (§ 17500 et seq.) Under these statutes, the Commission on State Mandates (the Commission) determines, pursuant to a "test claim" process, whether a state program constitutes a reimbursable state mandate. (§§ 17551, subd. (c), 17553.)

Once the Commission determines that a state mandate exists, it adopts regulatory "[P]arameters and [G]uidelines" (P & G's) to govern the state-mandated reimbursement. (§ 17557.) The Controller, in turn, then issues nonregulatory "[C]laiming [I]nstructions" for each Commission-determined mandate; these instructions must derive from the Commission's test claim decision and its adopted P & G's. (§ 17558.) Claiming Instructions may be specific to a particular mandated program, or general to all such programs.

The Controller may audit a reimbursement claim filed by a local agency or school district within three years of the claim's filing or last amendment. (§ 17558.5, subd. (a).)

If the Controller reduces a specific reimbursement claim via an audit, the claimant may file an "[I]ncorrect [R]eduction [C]laim" with the Commission. (§ 17558.7, subd. (a).)

**II. The Concept of Invalid Underground Regulation**

**[1]** In their petitions for writ of mandate and complaints for declaratory relief, the school districts (comprising Clovis, ****38** Fremont, Newport–Mesa, Norwalk–La Mirada, Riverside, Sweetwater, and San Juan; hereafter collectively, School Districts) allege that the CSDR constitutes an invalid, unenforceable underground regulation under the APA as applied by the Controller in auditing salary and benefit costs in reimbursement claims for the SDC, EPEPD, Intradistrict Attendance, and Collective Bargaining Programs during the applicable periods roughly encompassing the fiscal years 1998 to 2003. [2]

***800** In their petition for writ of mandate and complaint for declaratory relief (actually appended to the School Districts' petition and complaint), the community college districts (comprising San Mateo, Santa Monica, State Center, and El Camino; hereafter collectively, College Districts) allege that the Health Fee Rule constitutes an invalid, unenforceable underground regulation under the APA as applied by the Controller in auditing reimbursement claims for the Health Fee Elimination Program or, alternatively, that the Controller's auditing actions in this respect were beyond its lawful authority.

The basic legal principles that apply to these allegations are as follows:

" 'If a rule constitutes a "regulation" within the meaning of the APA (other than an "emergency regulation" ...) it may not be adopted, amended, or repealed except in conformity with "basic minimum procedural requirements" ' " which include public notice, opportunity for comment, agency response to comment, and review by the state Office of Administrative Law. (*Morning Star Co. v. State Bd. of Equalization* (2006) 38 Cal.4th 324, 333, 42 Cal.Rptr.3d 47, 132 P.3d 249 (*Morning Star* ).) "These requirements promote the APA's goals of bureaucratic responsiveness and public engagement in agency rulemaking." (*Ibid.*)

Any regulation " 'that substantially fails to comply with these requirements may be judicially declared invalid' " and is deemed unenforceable. (*Morning Star, supra,* 38 Cal.4th at p. 333, 42 Cal.Rptr.3d 47, 132 P.3d 249; § 11350, subd. (a).)

**[2]** A "regulation" under the APA "means every rule, regulation, order, or standard of general application or the amendment, supplement, or revision of any rule, regulation, order, or standard adopted by any state agency to implement, interpret, or make specific the law enforced or administered by it, or to govern its procedure." (§ 11342.600.) As we will later explain more fully, an APA regulation has two principal characteristics: It must apply generally; and it must implement, interpret, or make specific the law enforced or administered by the agency, or govern the agency's procedure. (*Morning Star, supra,* 38 Cal.4th at pp. 333–334, 42 Cal.Rptr.3d 47, 132 P.3d 249; *Tidewater,* ****39** *supra,* 14 Cal.4th at p. 571, 59 Cal.Rptr.2d 186, 927 P.2d 296.)

  

***801 III. The CSDR as Applied to the SDC, EPEPD, Intradistrict Attendance, and Collective Bargaining Programs**

We will start with the SDC Program. We do so because, of these four programs, the Commission's APA-valid, pre-May 27, 2004 P & G's for the SDC Program most closely resemble the Controller's CSDR.[3] If we conclude, nevertheless, that the CSDR is an underground regulation that violates the APA in this context, we will have to conclude similarly for these three other programs. It is undisputed that the Controller's CSDR was not enacted in compliance with APA procedure.

As we shall explain, we conclude that the CSDR, as applied to the (pre-May 27, 2004) SDC Program, is an underground, unenforceable regulation under the APA. Accordingly, the CSDR is invalid as applied to the School Districts' SDC Programs for the applicable periods roughly encompassing the fiscal years 1998 to 2003 (see fn. 2, *ante* ), and invalid in parallel fashion to the three other programs as well.

The Commission determined, in the mid–1990's, that the SDC Program imposed a reimbursable state-mandated program on school districts by establishing the right of parents/guardians of students, who were prohibited from transferring to another school district, to appeal to the county board of education. (See former Ed.Code, § 48209.9, inoperative July 1, 2003.)

From August 24, 1995, until May 27, 2004, the Commission's P & G's for the SDC Program set forth the following two requirements for school districts seeking SDC state-mandated reimbursement for employee salary and benefit costs: (1) "Identify the employee(s) and their job classification, describe the mandated functions performed and specify the actual number of hours devoted to each function, the productive hourly rate and the related benefits. The average number of hours devoted to each function may be claimed if supported by a documented time study"; and (2) "For auditing purposes, all costs claimed must be traceable to source documents (e.g., employee time records, invoices, receipts, purchase orders, contracts, etc.) and/or worksheets that show evidence of and the validity of such claimed costs."

The Commission's SDC Program P & G's divide the subject of reimbursable costs into three categories: employee salaries and benefits; materials and supplies; and contracted services. The examples set forth in these P & G's for ***802** "source documents" align with these three categories: "employee time records" for employee salaries and benefits; "invoices," "receipts" and "purchase orders" for materials and supplies; and "contracts" for contracted services. At issue in this appeal for the SDC, EPEPD, Intradistrict Attendance, and Collective Bargaining Programs are just the cost category of employee salaries and benefits.

From the initial issuance of the Commission's SDC Program P & G's in 1995 until May 27, 2004, the Controller's SDC-specific Claiming Instructions substantively aligned with the SDC Program P & G's.

However, in September 2003, the Controller revised its general Claiming Instructions (that apply to state-mandated reimbursement claims in general) to set ****40** forth, for the first time, what has become known as the CSDR. The CSDR states:

"To be eligible for mandated cost reimbursement for any fiscal year, only actual costs may be claimed. Actual costs are those costs actually incurred to implement the mandated activities. Actual costs must be traceable and supported by source documents that show the validity of such costs, when they were incurred, and their relationship to the reimbursable activities. A source document is a document created at or near the same time the actual cost was incurred for the event or activity in question. Source documents may include, but are not limited to, employee time records or time logs, sign-in sheets, invoices, and receipts.

"Evidence corroborating the source documents may include, but is not limited to, worksheets, cost allocation reports (system generated), purchase orders, contracts, agendas, training packets, and declarations. Declarations must include a certification or declaration stating, 'I certify under penalty of perjury under the laws of the State of California that the foregoing is true and correct based upon personal knowledge.' Evidence corroborating the source documents may include data relevant to the reimbursable activities otherwise in compliance with local, state, and federal government requirements. However, corroborating documents cannot be substituted for source documents."

Substantial evidence showed that prior to the use of the CSDR in Controller audits, school districts obtained SDC state-mandated reimbursement for employee salary and benefit costs based on (1) declarations and certifications from the employees that set forth, after the fact, the time they had spent on SDC-mandated tasks; or (2) an annual accounting of time determined by the number of mandated activities and

the average time for each activity. After the Controller began using the CSDR in its auditing of SDC reimbursement claims, the Controller deemed these declarations, certifications, and accounting methods insufficient, and reduced the ***803** reimbursement claims accordingly. (Substantial evidence also showed that the Controller, in 2000, began applying a CSDR requirement in field audits of SDC reimbursement claims, before the CSDR was expressed in the Controller's general Claiming Instructions in September 2003 or adopted in the Commission's SDC Program P & G's on May 27, 2004.)

The question is whether the Controller's CSDR constituted an underground, unenforceable regulation that the Controller used in auditing the School Districts' SDC Program for the fiscal years 1998 to 2003, because the CSDR constituted a state agency regulation that was not adopted in conformance with the APA prior to its valid adoption in the Commission's SDC Program P & G's on May 27, 2004. We answer this question "yes."

**[3]** " '*A regulation subject to the APA ...* has *two principal identifying characteristics.* [Citation.] *First,* the agency must intend its rule to apply generally, rather than in a specific case. The rule need not, however, apply universally; a rule applies generally so long as it declares how a certain class of cases will be decided. [Citation.] *Second,* the rule must "implement, interpret, or make specific the law enforced or administered by [the agency], or ... govern [the agency's] procedure." ' " (*Morning Star, supra,* 38 Cal.4th at pp. 333–334, 42 Cal.Rptr.3d 47, 132 P.3d 249, quoting *Tidewater, supra,* 14 Cal.4th at p. 571, 59 Cal.Rptr.2d 186, 927 P.2d 296, italics added.)

**[4]** As to the first criterion—whether the rule is intended to apply generally—substantial evidence supports the trial ****41** court's finding that the CSDR was "applie[d] generally to the auditing of reimbursement claims ...; the Controller's auditors ha[d] no discretion to judge on a case[-]by[-]case basis whether to apply the rule." (The trial court made this finding in the context of ruling on the Intradistrict Attendance and Collective Bargaining Programs, but this finding is a general one that applies equally to the SDC Program. The trial court did not apply this general finding to the SDC Program only because the court reasoned that the CSDR was not an APA-violative underground regulation in the SDC context, as the Commission later adopted the CSDR into its SDC Program P & G's (see fn. 3, *ante* ). As we shall explain later, we reject this reasoning involving subsequent adoption.)

**[5]** The CSDR also meets the second criterion of being a regulation: It implements, interprets, or makes specific the law enforced or administered by the Controller. The Controller argues, to the contrary, that the CSDR "merely restates" the source document requirement found in the pre-May 27, 2004 Commission P & G's for the SDC Program, and that "source documents" are, by their sourceful nature, contemporaneous. As we explain, we reject this argument.

Admittedly, the pre-May 27, 2004 SDC Program P & G's stated that, "[f]or auditing purposes, all costs claimed must be traceable to source documents ***804** (e.g., employee time records, invoices, receipts, purchase orders, contracts, etc.) and/or worksheets that show evidence of and the validity of such claimed costs." However, the Controller's CSDR, in contrast to these P & G's, did not equate "source documents" with "worksheets," but relegated "worksheets" to the second-class status of "corroborating documents" that can only serve as evidence that corroborates "source documents." This is no small matter either. This is because, prior to the Controller using the CSDR to audit reimbursement claims, the School Districts, in making these claims, had used employee declarations and certifications and average time accountings to document the employee time spent on SDC-mandated activities; and such methods can be deemed akin to worksheets.

More significantly, the CSDR expressly states that employee declarations and certifications are only corroborating documents, *not* source documents; the pre-May 27, 2004 SDC Program P & G's had nothing to say on this subject. In effect, then, the CSDR bars the use of employee time declarations and certifications as source documents or source document-equivalent worksheets, in contrast to the pre-May 27, 2004 P & G's.

Along similar lines, the pre-May 27, 2004 SDC Program P & G's also stated that the "average number of [employee] hours devoted to each [mandated] function may be claimed if supported by a documented time study"; the record showed that such a time study is a documented estimate. The CSDR, which recognizes only actual costs traceable and supported by contemporaneous source documents, does not countenance such estimation.

Nor may the Controller point to the examples of the source documents listed in the pre-May 27, 2004 SDC Program P & G's and argue they show the contemporaneous nature of source documents: "employee time records, invoices,

  

receipts, purchase orders, contracts, etc." First, this argument ignores the source document-equivalent of "worksheets" set forth in these P & G's, as discussed above. And, second, while the CSDR lists "employee time records," "invoices," and "receipts" as source documents, it specifies that "purchase orders," "contracts" (and "worksheets") ****42** are only corroborating documents, not source documents.

Finally, the School Districts that had used employee declarations and certifications and average time accountings to document time for reimbursement claims also note that it is *now* physically impossible to comply with the CSDR's requirement of contemporaneousness that "[a] source document is a ***805** document *created at or near the same time the actual cost was incurred* for the event or activity in question."[4] (Italics added.)

Given these substantive differences between the Commission's pre-May 27, 2004 SDC Program P & G's and the Controller's CSDR, we conclude that the CSDR implemented, interpreted or made specific the following laws enforced or administered by the Controller: the Commission's pre-May 27, 2004 P & G's for the SDC Program (§ 17558) [the Commission submits regulatory P & G's to the Controller, who in turn issues nonregulatory Claiming Instructions based thereon]; and the Controller's statutory authority to audit state-mandated reimbursement claims (§ 17561, subd. (d)(2)).

Consequently, the CSDR meets the two criteria for being an APA regulation. And because the CSDR, as applied to the SDC Program, was not adopted as a regulation in compliance with the APA rule-making procedures until its May 27, 2004 incorporation into the SDC Program P & G's, this CSDR is an underground and unenforceable regulation as applied to the audits of the School Districts' SDC Programs for the applicable periods roughly encompassing the fiscal years 1998 to 2003. (See fn. 2, *ante.*) These audits are invalidated to the extent they used this CSDR.

**[6]** **[7]** **[8]** As we noted at the outset of this part of the opinion, if we were to conclude (as we now have done) that the CSDR is an underground regulation that violates the APA in the SDC Program context presented here, we would have to conclude similarly for the EPEPD, Intradistrict Attendance, and Collective Bargaining Programs too. This is because the Commission's P & G's for these latter three programs less resembled the Controller's CSDR than did the Commission's pre-May 27, 2004 P & G's for the SDC Program. We now turn to the EPEPD, Intradistrict Attendance, and Collective Bargaining Programs, which we will describe briefly in order.

The EPEPD Program was found to be a reimbursable state-mandated program in 1987. This program requires school districts to establish earthquake procedures for each of its school buildings, and to allow use of its buildings, grounds and equipment for mass care and welfare shelters during public disasters or emergencies. (Former Ed.Code, §§ 35925–35927, 40041.5, 40042.)

***806** From 1991 until June 2, 2003, the Commission's P & G's for the EPEPD Program required school districts seeking state-mandated reimbursement for employee salary and benefit costs: (1) to "provide a listing of each employee ... and the number of hours devoted to their [mandated] function"; and (2) "[f]or auditing purposes, all costs claimed may be ****43** traceable to source documents and/or worksheets that show evidence of the validity of such costs." The Controller's EPEPD-specific Claiming Instructions, since 1996, have stated that "Source documents required to be maintained by the [reimbursement] claimant may include, but are not limited to, employee time cards and/or cost allocation reports." (The Commission, in like fashion to what it did with the SDC Program, incorporated the CSDR into its P & G's for the EPEPD Program, effective June 2, 2003.)

These pre-June 2, 2003 P & G's for the EPEPD Program parallel the pre-May 27, 2004 P & G's for the SDC Program, but even less resemble the Controller's CSDR than did those SDC Program P & G's. For the reasons set forth above involving the SDC Program, then, we conclude that the Controller's CSDR is an underground, unenforceable regulation as applied to the audits of the School Districts' EPEPD Programs for the applicable periods roughly encompassing the fiscal years 1998 to 2003. (See fn. 2, *ante.*) These audits are invalidated to the extent they used this CSDR.

The Intradistrict Attendance Program, in 1995, was found to be a reimbursable state-mandated program. This program establishes a policy of open enrollment within a school district for district residents. (Former Ed.Code, § 35160.5.)

Since 1995, the Commission's P & G's for the Intradistrict Attendance Program have required school districts seeking state-mandated reimbursement for employee salary and benefit costs (1) to "[i]dentify the employee(s) and their job classification ... and specify the actual number

of hours devoted to each [mandated] function.... The average number of hours devoted to each function may be claimed if supported by a documented time study"; and (2) "[f]or auditing purposes, all costs claimed must be traceable to source documents and/or worksheets that show evidence of the validity of such costs." For the 1998 to 2003 period of fiscal years at issue, the Controller's Intradistrict Attendance Program-specific Claiming Instructions substantively mirrored P & G's for (1) above (except for the "average number of hours" provision), and stated as to source documents: "Source documents required to be maintained by the claimant may include, but are not limited to, employee time records that show the employee's actual time spent on this mandate." (In early 2010, the Commission incorporated the Controller's CSDR into the Intradistrict Attendance Program P & G's; see fn. 5, *post.*)

***807** Applying the same reasoning we have applied above with respect to the SDC and the EPEPD Programs, we conclude that the Controller's CSDR is an underground, unenforceable regulation as applied to the audits of the School Districts' Intradistrict Attendance Programs for the applicable periods roughly encompassing the fiscal years 1998 to 2003. (See fn. 2, *ante.*) These audits are invalidated to the extent they used this CSDR.

That leaves the Collective Bargaining Program, which was found to be a reimbursable state-mandated program in 1978 (by the Commission's predecessor, the State Board of Control). This program requires school district employers to collectively bargain with represented employees, and to publicly disclose the major provisions of their agreements prior to final adoption. (§ 3540 et seq.)

If the Commission's pre-May 27, 2004 P & G's for the SDC Program most closely resemble the Controller's CSDR, the P & G's for the Collective Bargaining Program bear the least resemblance. As pertinent, the Collective Bargaining Program P & G's require school districts seeking reimbursement ****44** for employee salary and benefit costs to simply "[s]upply workload data requested ... to support the level of costs claimed" and "[s]how the classification of the employees involved, amount of time spent, and their hourly rate"; nothing is said about "source documents." The Controller's Collective Bargaining Program-specific Claiming Instructions substantively mirror those of the Intradistrict Attendance Program, stating that source documents include employee time records that show the employee's actual time spent on the mandated function. (And as with the Intradistrict Attendance Program, the Commission, in early 2010, incorporated the Controller's CSDR into the Collective Bargaining Program P & G's; see fn. 5, *post.*)

Consequently, employing the same reasoning we have employed above, we conclude that the Controller's CSDR is an underground, unenforceable regulation as applied to the audits of the School Districts' Collective Bargaining Programs for the applicable periods roughly encompassing the fiscal years 1998 to 2003. (See fn. 2, *ante.*) These audits are invalidated to the extent they used this CSDR.

**IV. Declaratory and Related Writ of Mandate Relief**

The trial court declared that the Controller's CSDR, as applied to the audits of the Intradistrict Attendance and Collective Bargaining Programs for the 1998 to 2003 period of fiscal years, was an invalid and void underground regulation under the APA. Correspondingly, the trial court issued a peremptory writ of mandate (traditional mandamus) invalidating these CSDR-based audits to the extent they were not final audit determinations for more than ***808** three years before the School Districts filed their respective lawsuits on May 23, 2006 (Clovis et al.) and March 2, 2007 (San Juan). This three-year period is the applicable three-year statute of limitations under Code of Civil Procedure section 338, subdivision (a), for enforcing a statutory liability like state-mandated reimbursement. We are affirming this part of the trial court's judgment.

However, the trial court refused to provide, in parallel fashion, declaratory and writ of mandate relief for the CSDR-based audits involving the SDC and EPEPD Programs. The School Districts contend the trial court erred in this respect. We agree.

In refusing to provide this relief, the trial court reasoned that, since the Commission had incorporated the Controller's CSDR into the Commission's regulatory P & G's for the SDC and EPEPD Programs, there was no longer an actual and ongoing controversy upon which to grant declaratory and related mandate relief concerning the CSDR's invalidity as an underground regulation in this context; and the Commission could administratively determine, pursuant to the Incorrect Reduction Claim process, the past audits that had used the CSDR before its incorporation into the SDC and EPEPD Programs' P & G's. This is where we part company with the trial court.

Our departure is based on section 11350 of the APA and the legal principles set forth in *Californians for Native Salmon etc. Assn. v. Department of Forestry* (1990) 221 Cal.App.3d 1419, 271 Cal.Rptr. 270 (*Native Salmon* ) and its progeny.

Section 11350 of the APA specifies that "[a]ny interested person may obtain a judicial declaration as to the validity of any regulation ... by bringing an action for declaratory relief...." (§ 11350, subd. (a).)

In *Native Salmon,* the plaintiffs sought declaratory relief against the state forestry department, alleging that it was department policy, with respect to timber harvest plans: (1) to delay responses to public comments, and (2) to not evaluate the cumulative ****45** impact of logging activities in the plans. The *Native Salmon* court concluded that declaratory relief was appropriate in this context, stating: "[Plaintiffs] ... challenge not a specific [administrative] order or decision [which is generally subject to review only pursuant to a writ of *administrative* mandate, rather than traditional mandate], or even a series thereof, but an overarching, quasi-legislative policy set by an administrative agency. Such a policy is subject to review in an action for declaratory relief.... [¶] ... [R]eview of specific, discretionary administrative decisions [must not be confused] with review of a generalized agency policy. Declaratory relief directed to *policies* of administrative agencies is not an unwarranted control of discretionary, specific agency decisions." (*Native Salmon,* ***809** *supra,* 221 Cal.App.3d at p. 1429, 271 Cal.Rptr. 270, citations omitted; accord, *Venice Town Council, Inc. v. City of Los Angeles* (1996) 47 Cal.App.4th 1547, 1566, 55 Cal.Rptr.2d 465; see also *Simi Valley Adventist Hospital v. Bontá* (2000) 81 Cal.App.4th 346, 354–355, 96 Cal.Rptr.2d 633.)

**[9]** **[10]** **[11]** Similarly, here, the School Districts have challenged "an overarching, quasi-legislative policy set by an administrative agency" (*Native Salmon, supra,* 221 Cal.App.3d at p. 1429, 271 Cal.Rptr. 270) rather than a specific, discretionary administrative decision: i.e., the Controller's policy of using the (underground) CSDR to conduct audits in the SDC and EPEPD Programs for the period straddling the fiscal years 1998 to 2003. Declaratory and accompanying traditional mandate relief is appropriate in this context; this is an ongoing controversy limited by the three-year statute of limitations noted above. [5]

And there is no adequate administrative remedy. The trial court made a finding—supported by substantial evidence—that the Commission "consistently refuses to rule on underground regulation claims on the basis of an opinion that it lacks jurisdiction to decide such claims." (The trial court made this finding in discussing the Intradistrict Attendance and Collective Bargaining Programs, but the finding applies equally to the SDC and EPEPD Programs.)

We conclude that declaratory and accompanying traditional mandate relief applies not only to the Intradistrict Attendance and Collective Bargaining Programs, but also to the SDC and EPEPD Programs for the fiscal years at issue. [6]

***810 V. Health Fee Elimination Program**

**[12]** In 1986, and again in 1989 (after statutory amendment), the Commission determined ****46** that the Health Fee Elimination Program imposed a reimbursable state-mandated cost on those community college districts that provide health services, by requiring those districts to maintain in the future the level of service they had provided in the 1986–1987 fiscal year (termed, the "maintenance of effort" requirement); this "maintenance of effort" had to take place even if the districts, as they were and are permitted to do under the relevant statute, eliminated their nominal statutory student health fee ($7.50 per semester maximum (former Ed.Code, § 72246, Stats.1984, 2d Ex.Sess., ch. 1, p. 6642)); $10 per semester maximum (current Ed.Code, § 76355, subd. (a)(1)). [7]

The College Districts contend that the Controller's Claiming Instruction for the Health Fee Elimination Program is an underground regulation under the APA and beyond the Controller's authority. Specifically, the College Districts argue that the Controller's Health Fee Rule misapplies the Commission's Health Fee Elimination Program P & G's by automatically reducing reimbursement claims by the amount that districts are statutorily authorized to charge students for health fees, even when a district chooses not to charge its students those fees.

Since 1989, the Commission's Health Fee Elimination Program P & G's have stated in pertinent part:

"Any offsetting savings the claimant experiences as a direct result of this statute [i.e., the health fee statutes—formerly Ed.Code, § 72246; now Ed.Code, § 76355] must be deducted from the [reimbursement] costs claimed. In addition, reimbursement for this mandate received from any source, e.g., federal, state, etc., shall be identified and deducted from this claim. This shall include the amount

of $7.50 per full-time student per semester, $5.00 per full-time student for summer school, or $5.00 per full-time student per quarter, as authorized by Education Code section 72246[, subdivision] (a). This shall also include payments (fees) received from individuals other than students who are not covered by Education Code Section 72246 for health services."

***811** The Controller's Health Fee Rule (i.e., its Health Fee Elimination Program-specific Claiming Instruction) states in pertinent part:

"Eligible claimants will be reimbursed for health service costs at the level of service provided in the 1986/87 fiscal year. The reimbursement will be reduced by the amount of student health fees authorized per the Education Code [section] 76355."

The College Districts maintain that the Controller's Health Fee Rule constitutes an invalid, underground regulation—i.e., one not adopted pursuant to the APA—because it meets the two-part test of a "regulation": (1) the Controller generally applies it; and (2) the rule implements, interprets or makes specific the Commission's Health Fee Elimination Program P & G's. ****47** (*Morning Star, supra,* 38 Cal.4th at pp. 333–334, 42 Cal.Rptr.3d 47, 132 P.3d 249.)

There is no quibble with part (1)—general application. The real issue is with part (2) of the test—defining a "regulation" as implementing, interpreting, or making specific the Health Fee Elimination Program P & G's. The College Districts argue that those P & G's require that the mandate claimant have actually "experience[d]" or "received" an amount of health service money for that amount to be deducted from the reimbursement claim. That is, if a college district does not charge its students a health service fee, as the district is statutorily permitted to do, then the district has not "experienced" or "received" that fee, and that amount cannot be deducted. The College Districts note that the Health Fee Rule, by contrast, states flatly that "reimbursement will be reduced by the amount of student health fees authorized per the Education Code [section] 76355."

The College Districts' argument carries some weight, especially when viewed solely within the prism of comparing the Health Fee Elimination Program P & G's to the Health Fee Rule semantically. But the argument falters when exposed to the broader context of the nature of state-mandated costs and common sense.

As for the nature of state-mandated costs, section 17514 defines "costs mandated by the state" to mean "any *increased costs* which a local agency or school district is *required to incur* after July 1, 1980, as a result of any statute enacted on or after January 1, 1975, or any executive order implementing any statute enacted on or after January 1, 1975, which mandates a new program or higher level of service of an existing program within the meaning of Section 6 of Article XIIIB of the California Constitution." (Italics added.) And section 17556 reflects this definition by stating that costs are not deemed mandated by the state to the extent the "local agency or school district *has the authority* to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service." (§ 17556, subd. (d), italics added.)

**[13]** ***812** The College Districts point out, though, in a series of overlapping arguments, that sections 17514 and 17556 govern the *Commission's* determination of whether a program is a state-mandated program, not the *Controller's* determination as to audit reductions; and the Commission has already found the Health Fee Elimination Program to be a state-mandated program. This observation, however, does not diminish the basic principle underlying the state mandate process that sections 17514 and 17566, subdivision (d) embody: To the extent a local agency or school district "has the authority" to charge for the mandated program or increased level of service, that charge cannot be recovered as a state-mandated cost. [8] (See *Connell v. Superior Court* (1997) 59 Cal.App.4th 382, 401, 69 Cal.Rptr.2d 231 ["the plain language of [section 17556, subdivision (d) ] precludes reimbursement where the local agency has the authority, i.e., the right or the power, to levy fees sufficient to cover the costs of the state-mandated program"]; see *Connell,* at pp. 397–398, 69 Cal.Rptr.2d 231.)

And this basic principle flows from common sense as well. As the Controller succinctly ****48** puts it, "Claimants can choose not to require these fees, but not at the state's expense."

**[14]** The College Districts also argue that the Controller lacks the authority to rely on these Government Code sections to uphold its Health Fee Rule. The argument is that, since the Health Fee Rule is a claiming instruction, its validity must be determined *solely* through the Commission's P & G's. To accept this argument, though, we would have to ignore, and so would the Controller, the fundamental legal principles

  

underlying state-mandated costs. We conclude the Health Fee Rule is valid.

**DISPOSITION**

We direct the trial court to issue a peremptory writ of mandate that invalidates the Controller's audits of the School Districts' SDC and EPEPD Program reimbursement claims for the applicable periods identified in footnote 2, *ante,* encompassing the fiscal years 1998 to 2003, to the extent those audits were based on the CSDR and did not become final audit determinations prior to the applicable three-year statute of limitations. If it chooses to do so, the Controller may re-audit the relevant reimbursement claims based on the documentation requirements of the P & G's and claiming ***813** instructions when the mandate costs were incurred (i.e., not using the CSDR). In all other respects, the judgment is affirmed.

The parties shall each bear their own costs on appeal. (Cal. Rules of Court, rule 8.278(a)(3).)

We concur: SCOTLAND, P.J., and NICHOLSON, J.

**All Citations**

188 Cal.App.4th 794, 116 Cal.Rptr.3d 33, 260 Ed. Law Rep. 877, 10 Cal. Daily Op. Serv. 12,281, 2010 Daily Journal D.A.R. 14,831

Footnotes

1 Undesignated statutory references are to the Government Code.

2 Because of the large number of school districts and program audits involved, as well as the slightly varying fiscal years at issue corresponding to these districts and program audits, we will use the general phrasing "applicable periods roughly encompassing the fiscal years 1998 to 2003" to describe the audits at issue. The parties are well aware of the particular audits being challenged for this period. Regardless, the School Districts must meet the applicable three-year statute of limitations that governs lawsuits based on statutory liability (like state-mandated reimbursement) for any audits of the four programs that have been determined on the basis of the invalidated CSDR. (Code Civ. Proc., § 338; *Union of American Physicians & Dentists v. Kizer* (1990) 223 Cal.App.3d 490, 504, fn. 5, 272 Cal.Rptr. 886.) San Juan School District filed its petition and complaint on March 2, 2007. The rest of the School Districts, together, filed their petition and complaint on May 23, 2006. The trial court consolidated these two petitions and complaints on March 27, 2007.
The School Districts made challenges to other programs as well, but these challenges are not at issue on appeal.

3 On May 27, 2004, the Commission validly amended its SDC Program P & G's to adopt this CSDR language.

4 As a related aside, it is interesting to note that the Controller's SDC-specific Claiming Instructions that were in place during the pre–2004 P & G's stated that, "[f]or audit purposes, all supporting documents must be retained [by claimant] [only] for a period of two years after the end of the calendar year in which the reimbursement claim was filed or last amended, whichever is later"; but the Controller had three years in which to conduct a reimbursement audit "after the date that the actual reimbursement claim is filed or last amended, whichever is later." (§ 17558.5, subd. (a).)

5 The Controller had requested that, at a minimum, we stay this appeal in light of the Commission's pending decision to incorporate the Controller's CSDR into the Commission's P & G's for the Intradistrict Attendance and Collective Bargaining Programs, as the Commission has done for the SDC and EPEPD Programs. In a subsequent request for judicial notice, the Controller has now noted that the Commission, on January 29, 2010, amended its P & G's for the Intradistrict Attendance and Collective Bargaining Programs to adopt the CSDR for each program. We deny this request for judicial notice. This is because the central issue in the present appeal concerns the Controller's policy of using the CSDR *during the 1998 to 2003 fiscal years,* when the CSDR was an underground regulation. This issue is not resolved by the Commission's *subsequent* incorporation of the CSDR into its Intradistrict Attendance and Collective Bargaining Programs' P & G's.
Also, we deny the School Districts' request for judicial notice of the Commission's Incorrect Reduction Claim caseload summary and the Controller's list of final audit reports for California school districts and community college districts.

6 In light of our resolution, we need not consider the School Districts' alternative claim that the Controller's CSDR constitutes an unlawful retroactive rule, or the School Districts' additional claim that regardless whether an actual controversy exists for purposes of declaratory relief, the requested writ relief is not moot.

7 As Education Code section 76355, subdivision (a)(1) states: "The governing board of a district maintaining a community college may require community college students to pay a fee in the total amount of not more than ten dollars ($10) for each semester, seven dollars ($7) for summer school, seven dollars ($7) for each intersession of at least four weeks, or seven

  

dollars ($7) for each quarter for health supervision and services, including direct or indirect medical and hospitalization services, or the operation of a student health center or centers, or both." (An inflationary adjustment is provided for in subdivision (a)(2) of § 76355.)

8 In light of sections 17514 and 17556, subdivision (d), the Commission found the Health Fee Elimination Program to be a reimbursable state-mandated program to the extent the cost to community college districts of maintaining their level of health services at the 1986–1987 level, as required by the Health Fee Elimination Program mandate, is not covered by the nominal health fee authorized by section 76355, subdivision (a)(1) ($10 maximum per semester per student).

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22 Cal.App.3d 863, 99 Cal.Rptr. 710

COUNTY OF RIVERSIDE, Plaintiff and Respondent,
v.
MAMIE L. WHITLOCK et al., Defendants and Appellants; GROSS AND COMPANY, INC., Defendant and Respondent

Civ. No. 10988.
Court of Appeal, Fourth District, Division 2, California.
January 13, 1972.

## SUMMARY

The trial court entered judgment in favor of a county in its action to validate proceedings taken under the Improvement Act of 1913 for the construction of a gas distribution system for domestic service on the petition of landowners in the area to be served. The county's resolution of intention proposed the construction of the improvements in described streets and rights of way, the assessment of costs and expenses of the work on the lands within the proposed district, the issuance of bonds, and the performance of the work by a gas company holding a certificate to serve the area, with title to vest in the utility on completion of the work. Protests pursuant to the improvement act and pursuant to the Majority Protest Act were heard. Owners of 8.6 percent of the lands involved protested. The engineer's report estimated that the improvement would exceed one-half of the total "true value" of all lands to be assessed, but the board of supervisors, by a vote of 4 to 0, one member being absent, adopted a resolution to disregard the 50 percent assessment limitation of the Majority Protest Act as permitted by Sts. & Hy. Code, § 2905. (Superior Court of Riverside County, No. 97809, Robert E. Dauber, Judge.)

The Court of Appeal affirmed the judgment, rejecting the contention of certain property owners that provisions for landowner protests of the improvement act and of the protest act violated the "one person, one vote" principle. The court held that the protest scheme was not an election in fact, but, rather than resting its decision on that ground, went on to hold that the scheme did not offend the equal protection clause. Construction of the system by the gas company without competitive bidding and with title vesting in it upon completion was held proper under applicable statutes and not in violation of any constitutional principles. A contention that one of the four supervisors voting to disregard the assessment limitation was disqualified by his relationship with the engineering firm involved was rejected ***864** on the ground of lack of evidence of any impropriety. Finally, the court held, there was substantial evidence to support the trial court's finding that the streets in which the system was to be constructed were public streets. (Opinion by Tamura, J., with Gardner, P. J., and Kerrigan, J., concurring.)

## HEADNOTES

### Classified to California Digest of Official Reports

(1a, 1b)
Improvements-Public § 21--Proceedings--Protests--Applicability of "One-person, One-vote" Principle.
The majority protest schemes of the Improvement Act of 1913 and of the Majority Protest Act providing generally for protests by landowners included in an improvement district do not constitute elections in fact, and they do not offend the equal protection clause. The governmental decision involved is not one affecting all citizens in the county in important ways; within the district the impact on the landowners to be assessed is disproportionate to any remote effect it may have on resident nonlandowners; the landowners' right to protest the improvement is not a fundamental right guaranteed under the due process clause; and the governmental decision is not one which has been traditionally a subject of popular referendum. Moreover, landowners directly benefited are charged with the cost of the improvements in proportion to the benefit conferred; the land area bears some reasonable relationship to the amount of the assessment; and the final decision to proceed with the improvements rests with the county board of supervisors, a representative body duly elected under the "one-person, one-vote" principles.

[See **Cal.Jur.2d,** Public Improvements, § 34.]

(2)
Elections § 14--"One-person, One-vote" Principle.
The "one-person, one-vote" principle applies not only to election of federal and state officers, but to elections of public officials serving local governmental units with general governmental powers over an entire geographic area, and entities performing more limited governmental functions such as school districts.

[See **Cal.Jur.2d,** Elections, § 7; **Am.Jur.2d,** Elections, § 16 et seq.]

(3)
Elections § 14--"One-person, One-vote" Principle.
Once a state has decided to use the process of popular election, and once the class of voters is chosen and their qualifications specified, there is no constitutional way by which equality of voting power may be evaded. ***865**

(4)
Elections § 14--"One-person, One-vote" Principle.
The "one-person, one-vote" principle applies only where the state has provided, or is constitutionally required to provide, for public participation in government decision-making through the ballot box.

(5)
Elections § 14--"One-person, One-vote" Principle.
When all citizens are affected in important ways by a governmental decision subject to a referendum, the Constitution does not permit weighted voting or the exclusion of otherwise qualified citizens from the franchise.

(6)
Improvements-Public § 21--Proceedings--Protest.
The determination whether a public improvement shall be constructed is unaffected by the constitutional guarantee of due process of law, and no opportunity to protest the making of an improvement need be given.

(7)
Improvements-Public § 8--Statutes and Ordinances--Constitutionality.
A resolution of intention by a county board of supervisors with respect to construction of a gas distribution system under the Improvement Act of 1913 properly provided for construction of the system by a gas company, a regulated public utility obligated by law to manage and operate its system to provide service to the inhabitants of the land within the district, and that upon completion the system would be owned and operated by the company for that purpose as provided by Sts. & Hy. Code, §§ 10110, 10111. When a municipality, lawfully so empowered, undertakes to furnish, to its inhabitants who will pay therefor, the utilities and facilities of urban life, it is thereby performing a municipal and public function, and the fact that improvements constructed will be owned and operated by a public utility does not detract from the public character of the improvements; there is no gift of public property in violation of Cal. Const., art. XIII, § 25.

(8)
Improvements-Public § 6--Improvements Supporting Assessments.
The test of the public character of an improvement is the use to which it is to be put, not the person by whom it is to be operated.

(9)
Improvements-Public § 5--Power of Local Authorities--Necessity for Competitive Bidding.
A county board of supervisors properly authorized, without competitive bidding, a contract with a gas company for the construction of a gas distribution line under the Improvement Act of 1913. Sts. & Hy. Code, § 10110 authorizes the legislative body to enter into such a contract and does not require competitive bidding. In any event, competitive bidding would have been unavailing, inasmuch as the company had been issued a certificate by the Public Utilities ***866** Commission to provide domestic natural gas service to the area in question and the service rates and charges for construction of like facilities were governed by a rate schedule approved by the commission.

(10)
Improvements-Public § 15--Proceedings--Membership of Local Boards-- Disqualification.
In an action by a county to validate proceedings for the construction of a gas distribution system in public streets under the Improvement Act of 1913, the trial court properly found it untrue that one of the county supervisors voting to disregard the assessment limitation of the Majority Protest Act was disqualified, where, though the supervisor had received campaign contributions from the firm of civil engineers employed by the board as engineer of the work, there was no evidence that the campaign contributions were made in return for a promise, express or implied, that the engineers would be awarded the contract in question or any other contract with the county.

(11)

  

Improvements-Public § 42--Assessment Districts--Boundaries of District.
Inclusion by a county board of supervisors of non-benefited lands within the boundaries of an assessment district formed under the Improvement Act of 1913 for the purpose of constructing a gas distribution system, even if irregular, did not invalidate the proceedings, where there was no showing of any prejudice resulting from the inclusion of such lands within the exterior boundaries of the district, where the timely filed assessment schedule listed all parcels within the proposed district that would be assessed and those that would not, and where all interested persons were given notice of and afforded an opportunity to be heard with respect to the lands to be assessed as well as the extent of the district.

(12a, 12b)
Highways, Streets, and Bridges § 14--Establishment--Dedication.
In an action by a county to validate proceedings for the construction of a gas distribution system in public streets under the Improvement Act of 1913, the evidence supported the trial court's finding that the streets in which the distribution lines were to be constructed were public streets, where, though some of the streets depicted and offered for dedication on recorded maps had not been officially accepted by the county, there was evidence of continuous public use of undetermined duration, and where the county right-of-way agent testified that there were no "private road" signs or barriers forbidding public use of the streets and that fence lines of adjoining properties extended only to the exterior limits of the streets as shown on the recorded maps. ***867**

(13)
Highways, Streets, and Bridges § 14--Establishment--Dedication.
A common law dedication of a street may be proved either by showing acquiescence and consent to public use under circumstances negating the idea that the use was under a license, or by open and continuous adverse public use for the prescriptive period. When dedication by acquiescence for a period of less than five years is claimed, the owner's actual consent to the dedication must be proved and his intent is the crucial factor.

COUNSEL
Macomber & Eley and William B. Eley for Defendants and Appellants.
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F. Mackenzie Brown for Defendant and Respondent.

**TAMURA, J.**

The primary issue posed by this appeal is whether the majority protest schemes provided by the Municipal Improvement Act of 1913 [1] and the Special Assessment Investigation, Limitation and Majority Protest Act of 1931 [2] are subject to the "one-person, one-vote" equal protection standard governing distribution of the elective franchise.

The following is a brief background of the events leading to this appeal:

Upon receipt of a petition by landowners in the Meade Valley area of Riverside County requesting institution of proceedings under the Improvement Act of 1913 for the construction of a gas distribution system for domestic service to the area, [3] the board of supervisors employed a firm of civil engineers to serve as engineer of work and undertook the requisite proceedings under the principal act and the Majority Protest Act. The resolution of intention proposed, inter alia, the construction of the improvements ***868** in the streets and rights of way therein described, the assessment of the costs and expenses of the work upon the lands within the proposed district, the issuance of serial bonds under the Improvement Act of 1911, [4] and the performance of the work by the Southern California Gas Company with title to vest in the utility upon completion of the work.

Upon the filing of the engineer's reports under the principal act and the majority Protest Act, the board set a date for concurrent hearings on three matters, protests under the principal act, protests to the investigation report filed pursuant to the Majority Protest Act, and a hearing on the public character of the streets in which the distribution lines were to be constructed. Owners of 8.6 percent of the area of the lands proposed to be assessed made written or oral protest. Following the hearings, the board adopted a resolution pursuant to the provisions of the Majority Protest Act finding that the proposed project was feasible, that the lands to be assessed will be able to carry the burdens of the proposed assessments, that the assessment limitations of the Majority Protest Act should be disregarded, that the improvements should be accomplished under the Improvement Act of 1913, and that serial bonds should be issued under the Improvement Act of 1911. The board also found that the streets in which the improvements were to be constructed were public streets. Thereafter the board authorized the execution of a contract

  

with Southern California Gas Company for the construction of the improvement, accepted a bid from Gross and Company, Inc. for the 1911 improvement bonds and ordered the work to be done. [5]

Upon completion of the proceedings but before actual commencement of work, the county instituted the present validation action. [6] Several property owners and contract purchasers of properties, appearing for themselves as well as others similarly situated, answered the validation petition and challenged the validity of the assessment proceedings on numerous grounds, including the "one-person, one-vote" attack on the majority protest provisions of the applicable statutes. Gross and Company, Inc. responded to the validation petition and requested a judicial declaration concerning the power of the board of supervisors to enter into a negotiated construction contract with the Southern California Gas Co. without competitive bidding and the legality of the contemplated transfer of title to the improvements to the utility on completion of the work. ***869**

Following trial on the issues raised by the petition and answers, the court made findings in favor of the county, concluded that the assessment proceedings, contract and bonds were valid and entered a judgment so decreeing. The property owners have appealed from the judgment. Gross and Company, Inc. did not appeal but has filed a brief as an interested party urging this court to uphold the judgment particularly as it relates to the legality of the contract with the Southern California Gas Co.

Appellants attack the validation decree on the following grounds: (1) The majority protest schemes provided by the principal act and the Majority Protest Act violate the "one-person, one-vote" principle; (2) the contemplated transfer of title to the improvements to the gas company to be maintained and operated by it as a part of its system constitutes a gift of public property in violation of article XIII, section 25 of the state Constitution; (3) the resolution of the board of supervisors to disregard the assessment limitations of the Majority Protest Act lacked the requisite four-fifths vote because one of the voting supervisors was disqualified by reason of a conflict of interest; (4) certain procedural requirements of the assessment proceedings were not followed; and (5) the evidence does not support the trial court's finding that the streets in which the distribution system is to be constructed were public streets. For the reasons which follow, we have concluded that the contentions are nonmeritorious.

**I Validity Of The Majority Protest Schemes**

() Both the Improvement Act of 1913 under which the improvements are to be constructed and the Majority Protest Act provide for landowner protests to the proposed improvement. At the time these proceedings were conducted, the Improvement Act of 1913 provided that if written protests against the improvement were made by "the owners of more than one-half of the area of the land included within the assessment district," further proceeding are barred unless the protests are overruled by four-fifths vote of the legislative body conducting the proceedings. [7] ( ***870** Sts. & Hy. Code, § 10311.) Under the Majority Protest Act, upon protest by owners of the majority of the land area proposed to be assessed, the proceedings must be abandoned. (Sts. & Hy. Code, § 2930; *Hoffman v. City of Red Bluff*, 63 Cal.2d 584, 588 [47 Cal.Rptr. 553, 407 P.2d 857]; *City of Del Mar v. Burnett*, 223 Cal.App.2d 754, 757-758 [35 Cal.Rptr. 920].) [8]

Appellants contend that the majority protest scheme is in effect a "referendum election" and as such is violative of the "one-person, one-vote" principle in two respects: (1) The use of land area as the measure of the sufficiency of protests discriminates against small landowners, and (2) the exclusion of resident nonlandowners disenfranchises persons who will be substantially affected by the decision to construct the improvements. For the reasons which follow, we have concluded that the majority protest scheme is not subject to the strictures of the "one-person, one-vote" principle and does not otherwise offend the equal protection clause of the Fourteenth Amendment.

The issue which underlies appellants' "one-person, one-vote" attack on the majority protest scheme involves the choice of the proper equal protection standard by which the validity of the protest scheme must be tested. In several recent significant decisions, our Supreme Court has summarized as follows the "two-level" tests evolved by the United States Supreme Court for the evaluation of legislative classifications challenged on equal protection grounds: "In the area of economic regulation, the high court has exercised restraint, investing legislation with a presumption of constitutionality and requiring merely that distinctions drawn by a challenged statute bear some rational relationship to a conceivable legitimate state purpose. [Citations.] [¶] On the other hand, in cases involving 'suspect classifications' or touching on 'fundamental interests,' the court has adopted an attitude of active and critical analysis, subjecting the classification to strict scrutiny. [Citations.]

Under the strict standard applied in such cases, the state bears the burden of establishing not only that it has a *compelling* interest which justifies the law but that the distinctions drawn by the law are *necessary* to further its purpose." (Italics supplied.) (*Westbrook v. Mihaly*, 2 Cal.3d 765, 784-785 [87 Cal.Rptr. 839, 471 P.2d 487] [vacated on other grounds, 403 U.S. 915 (29 L.Ed.2d 692, 91 S.Ct. 224)]; ***871** *Serrano v. Priest*, 5 Cal.3d 584, 597 [96 Cal.Rptr. 601, 487 P.2d 1241]; *In re Antazo*, 3 Cal.2d 100, 110-111 [89 Cal.Rptr. 2255, 473 P.2d 999].)

Interests determined to be "fundamental" and therefore deserving of special judicial scrutiny under the equal protection clause have been held to include the right to vote (*Reynolds v. Sims*, 377 U.S. 533 [12 L.Ed.2d 506, 84 S.Ct. 1362]), right of a defendant in a criminal case (*Griffin v. Illinois*, 351 U.S. 12 [100 L.Ed. 891, 76 S.Ct. 585, 55 A.L.R.2d 1055]), right of procreation (*Skinner* v. *Oklahoma*, 316 U.S. 535 [86 L.Ed. 1655, 62 S.Ct. 1110]) and opportunity for equal education ( *Serrano v. Priest, supra*, pp. 604-610; *Developments - Equal Protection*, 82 Harv. L.Rev. 1065, 1127-1128). No precise standards have been articulated to identify a particular interest as being "fundamental"; the United States Supreme Court has treated the cases on an ad hoc basis. (See *Developments - Equal Protection, supra*, 82 Harv. L.Rev. 1065, 1130.) In the recent case of *Dandridge* v. *Williams*, 397 U.S. 471 [25 L.Ed.2d 491, 90 S.Ct. 1153], the court indicated that the types of interests deemed to be "fundamental" under the equal protection clause may be rather limited. In declining to apply the strict standard of review to a state program for allocation of AFDC welfare grants, the court stated at page 484 [ 25 L.Ed.2d at page 501]: "For here we deal with state regulation in the social and economic filed, *not affecting freedoms guaranteed by the Bill of Rights*, and claimed to violate the Fourteenth Amendment only because the regulation results in some disparity in grants of welfare payment to the largest AFDC families." (Italics supplied.) The question we must decide is whether the majority protest scheme involves the same "fundamental" interest underlying the elective franchise.

The "consistent theme" of recent United States Supreme Court "one-person, one-vote" decision is that "the right to vote in an election is protected by the United States Constitution against dilution or debasement" (*Hadley v. Junior College District*, 397 U.S. 50, 54 [25 L.Ed.2d 45, 50, 90 S.Ct. 791]) because the elective franchise "constitute[s] the foundation of our representative society" (*Kramer v. Union Free School Dist.*, 395 U.S. 621, 626 [23 L.Ed.2d 583, 588, 89 S.Ct. 1886]) and is "preservative of other basic civil and political rights" (*Reynolds v. Sims, supra*, 377 U.S. 533, 562 [12 L.Ed.2d 506, 527]). () The "one-person, one-vote" principle applies not only to election of federal and state officers, but to elections of public officials serving local governmental units "with general governmental powers over an entire geographic area" (*Avery v. Midland County*, 390 U.S. 474, 485-486 [20 L.Ed.2d 45, 54, 88 S.Ct. 1114]), such as counties and cities ( *Avery v. Midland County, supra; Wiltsie v. Board of Supervisors*, 65 Cal.2d 314 [54 Cal.Rptr. 320, 419 P.2d 440]), and entities performing more limited governmental functions such ***872** as school districts ( *Hadley v. Junior College District, supra*). Our Supreme Court recently held the principle to be applicable to the election of trustees of a special improvement district possessing most of the same powers as a city (*Burrey v. Embarcadero Mun. Improvement Dist.*, 5 Cal.3d 671 [97 Cal.Rptr. 203, 488 P.2d 395]).

Strict scrutiny of legislative restrictions on the right to vote extends to elections on local propositions having a substantial impact on all citizens. (*Phoenix v. Kolodziejski*, 399 U.S. 204 [26 L.Ed.2d 523, 90 S.Ct. 1990] [general obligation bonds]; *Cipriano v. City of Houma*, 395 U.S. 701 [23 L.Ed.2d 647, 89 S.Ct. 1897] [municipal revenue bonds]; *Westbrook* v. *Mihaly, supra*, 2 Cal.3d 765 (vacated on other grounds 403 U.S. 915) [school district bonds].) The determinative factor has been held to be the fundamental nature of the voting franchise and not the type or purpose of the election. (*Hadley* v. *Junior college District, supra*, 397 U.S. 50, 59 [25 L.Ed.2d 45, 52]; *Kramer v. Union Free School Dist., supra*, 395 U.S. 621, 629 [23 L.Ed.2d 583, 590]; *Westbrook v. Mihaly, supra*, 2 Cal.3d 765, 786.) () Consequently, "once a State has decided to use the process of popular election and 'once the class of voters is chosen and their qualifications specified, ... [there is] no constitutional way by which equality of voting power may be evaded.'" (*Hadley* v. *Junior College District, supra*, 397 U.S. 50, 59 [25 L.Ed.2d 45, 52]; *Kramer* v. *Union Free School Dist., supra*, 395 U.S. 621, 629.)

() However, the "one-person, one-vote" principle applies only where the state has provided, or is constitutionally required to provide, for public participation in governmental decision-making through the ballot box. Thus, where the law provided for the selection of a public official by appointment rather than by popular election, the "one-person, one-vote" principle was held to have "no relevancy." (*Sailors v. Kent Board of Education*, 387 U.S. 105, 111 [18 L.Ed.2d 650, 655, 87 S.Ct.

1549]; *People* ex rel. *Younger v. County of El Dorado*, 5 Cal.3d 480, 504-505 [96 Cal.Rptr. 553, 487 P.2d 1193].)

In the special assessment proceedings in question, an election is neither provided nor is one constitutionally required. The Legislature may validly vest in the local legislative body the sole power to decide whether the public improvement shall be constructed. (*Goodrich* v. *Detroit*, 184 U.S. 432 [46 L.Ed. 627, 22 S.Ct. 397]; *Ferry v. O'Brien*, 188 Cal. 629, 636-637 [206 P. 449].) Although the majority protest scheme in question bears some superficial resemblance to a referendum election, it lacks many of the essential attributes of an election in the popular sense. It does not provide an opportunity for an affirmative "vote" in favor of the governmental decision; it presumes that those who fail to register a written protest favor ***873** the governmental decision; the safeguards of secret balloting are not provided; unlike a vote at an election, a protestant may change his mind and withdrawn his protest at any time before the conclusion of the protest hearing. (Sts. & Hy. Code, § 2930.) The majority protest scheme is thus not an election in fact. However, we do not rest our decision on this narrow ground. We pursue our inquiry into what we believe to be the fundamental issue posed by this appeal.

While the protest scheme may not be an election in fact, it nevertheless does involve limited public participation in a governmental process. The question is whether it therefore touches the same "fundamental interest" as the right to vote. In the resolution of this thorny issue, the subject as well as the impact of the governmental decision are significant factors. We are mindful of the decisions in which the United States Supreme Court and our high court have declared that where legislative restrictions are imposed on the voting franchise, the nature of the right asserted and not the purpose or type of election determines the necessity for close scrutiny. Apart from the fact that the very issue at hand is the nature of the right asserted, the context in which those pronouncements were made does not justify the broad generalization that the nature and impact of the governmental decisions are never relevant factors even where an election is provided. They were made in response to the suggestion that the "one-person, one-vote" principle should only apply to elections of lawmakers as distinguished from administrators ( *Hadley v. Junior College District, supra*, 397 U.S. 50; see *Kramer v. Union Free School Dist., supra*, 395 U.S. 621) or, at the very most, to elections of public officials and not to elections involving other governmental choices such as those involving public fiscal matters ( *Westbrook* v. *Mihaly, supra*, 2 Cal.3d 765 [vacated on other grounds 403 U.S. 915]). Those cases all involved governmental decisions having a substantial effect on all citizens. The election of a public official of an entity with general governmental power "over an entire geographic area," whether his duties be legislative or administrative, affects all citizens; the decision of incur a municipal indebtedness, whether it be by issuance of general obligation bonds or revenue bonds, likewise has a substantial impact on all residents. The principle we derive from the cases is that where a governmental decision subject to a referendum will have a substantial impact on all residents, the need for strict judicial scrutiny turns, not on the purpose of the election, but on the fundamental nature of the elective franchise. () As the court stated in *Phoenix v. Kolodziejski, supra*, 399 U.S. at page 209 [26 L.Ed.2d at page 527], "When *all citizens are affected in important ways* by a governmental decision subject to a referendum, the Constitution does not permit weighted voting or the ***874** exclusion of otherwise qualified citizens from the franchise." (Italics supplied.) That the type of election may, however, in certain circumstances be a relevant factor was expressly recognized in *Hadley v. Junior College District, supra*, 397 U.S. 50, 56 [25 L.Ed.2d 45, 51] where the court observed: "It is of course possible that there might be cases in which a State elects certain functionaries whose duties are so far removed from normal governmental activities and so disproportionately affect different groups that a popular election in compliance with *Reynolds, supra*, might not be required, ..." If those considerations can be relevant where an election has in fact been provided, they are necessary significant in determining whether other more limited forms of public participation in governmental decision-making involve the same "fundamental interest" as the right to vote.

There are myriad situations in which government provides for some form of participation by interested persons in certain types of governmental decision-making other than through an election. In order to determine whether a particular scheme of participation involves the same fundamental interest as the right of suffrage, it is necessary to consider such factors as the nature of the governmental decision, whether it is a decision which has been a traditional subject of popular referendum, its impact on the citizenry, and the nature and extent of participation accorded by the scheme. Situations may be envisioned where all residents would be so affected in important ways by a governmental decision - for example, a general property tax rate increase, the incurrence of a municipal bonded indebtedness for public improvements benefiting the public generally, the adoption of a regulatory ordinance, or the selection of a public official - that a protest

  

referendum scheme concerning such decision should properly by subjected to the same strict judicial scrutiny to which legislative restrictions on the right to vote at a popular election are subjected. However, this is not such a case.

The special assessment proceeding under the Improvement Act of 1913 is not one for the formation of a public entity empowered "to exercise general governmental powers." The "district" simply denotes the land area benefited by the proposed improvements and to be assessed for the costs thereof. The assessment proceeding is an administrative procedure provided by the Legislature to enable authorized governmental entitles to provide public improvements of special benefit to only a limited area and to spread the costs upon the lands so benefited in proportion to the benefits conferred. [9] ***875**

Landowners have no constitutional right to have the proceedings abandoned or abated by protests; the right to protest the proposed improvement is purely a creature of statute. (*Cowart v. Union Paving Co.*, 216 Cal. 375, 380 [14 P.2d 764, 83 A.L.R. 1185]; *Ferry v. O'Brien, supra*, 188 Cal. 629, 636-637; *Shepherd v. Chapin*, 45 Cal.App. 645, 652 [188 P. 571]; see *Spencer v. Merchant*, 125 U.S. 345 [31 L.Ed. 763, 8 S.Ct. 921].) () "It is settled that the determination *whether* a public improvement shall be constructed is unaffected by the constitutional guarantee of due process of law, and no opportunity to protect the making of an improvement need be given." ( *Hoffman v. City of Red Bluff, supra*, 63 Cal.2d 584, 594.) [10] Nor is the governmental decision to make the improvement one which is subject to the initiative or referendum rights reserved to electors by the state Constitution. (*Starbuck v. City of Fullerton*, 34 Cal.App. 683 [168 P. 583]; see *Johnson v. City of Claremont*, 49 Cal.2d 826, 836 [323 P.2d 71].)

() Unlike the general obligation bonds in *Phoenix v. Kolodziejski, supra*, 399 U.S. 204, or the revenue bonds in *Cipriano v. City of Houma, supra*, 395 U.S. 701, the 1911 improvement bonds do not represent an indebtedness of the governmental entity conducting the proceeding. The bonds must expressly provide that neither the entity nor any officer thereof shall be liable for the payment of the principal or interest. (Sts. & Hy. Code, § 6460.) Each bond is issued against a specially described parcel ***876** of land. In event of default in the payment of principal or interest, the parcel described in the bond is subject to foreclosure and sale on demand of the bond holder. (Sts. & Hy. Code, § 6500.) Except as to tax liens, the assessment lien is superior to all liens, including mortgages. (*Cullinan v. Grey*, 18 Cal.2d 247, 252 [115 P.2d 460]; *O'Dea v. Mitchell*, 144 Cal. 374, 381 [77 P. 1020]; *San Mateo County Bank v. Dupret*, 124 Cal.App. 395, 396 [12 P.2d 669].)

The governmental decision involved in the instant case is not one which affects all citizens in the county in "important ways"; within the "district" the impact on the landowners to be assessed is "disproportionate" to any remote effect it may have on resident nonlandowners; the landowners' right to protest the improvement is not a fundamental right guaranteed under the due process clause; and the governmental decision is not one which has been traditionally a subject of popular referendum. [11] We cannot equate protest rights under the majority protest scheme in question with the voting franchise. It is our conclusion that the protest scheme is valid under the equal protection clause if it meets the rational basis test.

Since only those landowners who are directly benefited are charged with the cost of the improvements in proportion to the benefit conferred and since land area bears some reasonable relationship to the amount of the assessment, there is a rational basis for making the governmental decision subject to landowners' protest and in measuring the sufficiency of the protest by the land area protested. The protest scheme in question does not leave small landowners at the mercy of larger owners. The debt limitation provisions of the Majority Protest Act protect all owners against the abuse of over-assessment. Moreover, the final decision to proceed with the improvements rests with the board of supervisors, a representative body duly elected under "one-person, one-vote" principles. The board must determine that the project is feasible and that the burdens of the assessments are reasonable.

We conclude that the majority protest scheme in the instant case does not offend the equal protection clause of the Fourteenth Amendment.

**II Validity of the Contract with Southern California Gas Co.**

() The contract for the construction of the distribution system by the Southern California Gas Co. provides that upon completion of the work, ***877** the system will be owned and operated by the utility to provide domestic gas service to the lands within the district. Appellants make the bald assertion, without supporting authorities, that the arrangement constitutes a gift of public property in violation

of article XIII, section 25, of the California Constitution. The contention is without substance.

The contract with the gas company was entered into pursuant to the express provisions of the Improvement Act of 1913. The act authorizes its use for the installation in public streets of "[m]ains, pipes, and other necessary works and appliances for providing gas service" (Sts. & Hy. Code, § 10100) and empowers the legislative body to enter into a contract with a regulated public utility for the installation of the improvements (Sts. & Hy. Code, § 10110) and for the vesting of title to the improvements in the utility to be "used, operated, maintained and managed by it as a part of [its] system" (Sts. & Hy. Code, § 10111).

The fact title to the improvements vests in the utility upon completion of the work does not invalidate the arrangement. Public funds may be expended for a public purpose even though there may be incidental benefits to private persons. (*The Housing Authority v. Dockweiler*, 14 Cal.2d 437, 451 [94 P.2d 794]; *Veterans' Welfare Board v. Jordan*, 189 Cal. 124, 145 [208 P. 284, 22 A.L.R. 1515].) Expenditure of public funds to provide inhabitants of a municipality with utility services is an expenditure for a public purpose. "[W]hen a municipality, lawfully so empowered, undertakes to furnish, to its inhabitants who will pay therefor, the utilities and facilities of urban life, it is thereby performing a municipal and public function." (*Irish* v. *Hahn*, 208 Cal. 339, 344 [281 P. 385, 66 A.L.R. 1382].) The fact that the improvements will be owned and operated by a public utility does not detract from the public character of the improvements. The gas company is a regulated public utility obligated by law to manage and operate its system to provide service to the inhabitants of the lands within the district. () "The test of the public character of an improvement is the use to which it is to be put, not the person by whom it is to be operated." (*Milheim v. Moffat Tunnel Improvement Dist.*, 262 U.S. 710, 719 [67 L.Ed. 1194, 1200, 43 S.Ct. 694].)

() Gross and Company, Inc., the successful bidder for the 1911 improvement bonds, raises an additional issue pertaining to the validity of the contract with the utility; namely, whether the fact that the contract was awarded without competitive bidding rendered it invalid. The Improvement Act of 1913 provides that contracts for improvements shall be let to the lowest responsible bidder after competitive bidding. (Sts. & Hy. Code, § 10501.)

Where the improvements are to be owned, managed and operated by a ***878** regulated public utility upon completion of construction, the provisions of the Improvement Act of 1913 authorize the legislative body to enter into a contract such as was entered into in the instant case. (Sts. & Hy. Code, § 10110.) Section 10110 does not require competitive bidding. Competitive bidding is necessary only when required by statute.

Moreover, where the nature of the improvements to be constructed or services to be provided are such that competitive proposals would be unavailing or not produce an advantage, statutes requiring competitive bidding do not apply. (*Los Angeles Dredging Co. v. Long Beach*, 210 Cal. 348, 354 [291 P. 839, 71 A.L.R. 161]; *Los Angeles Gas & Elec. Corp. v. Los Angeles*, 188 Cal. 307, 319 [205, P. 125].) In the instant case Southern California Gas Co. has been issued a certificate by the Public Utilities Commission to provide domestic natural gas service to area in question and the service rates and charges for construction of like facilities were governed by a rate schedule approved by the commission. In these circumstances competitive bidding would have been unavailing and was therefore not required.

**III Disregard of the Assessment Limitations of the Majority Protest Act**

() The Majority Protest Act provides that if the investigation report shows that the estimated assessment upon any parcel would exceed one-half of its "true value" [12] or that the total estimated cost of the improvements will exceed one-half of the "true value" of all lands proposed to be assessed, the proceedings must be abandoned or be modified to bring the cost within those limits unless the limitations are "overruled" by the legislative body. (Sts. & Hy. Code, § 2900.) The legislative body is empowered to disregard the assessment limitations if it finds by a four-fifths vote of all of its members that the proposed project is feasible and that the lands proposed to be assessed will be able to carry the burdens of the proposed assessments. (Sts. & Hy. Code, § 2905.)

In the present case the engineer's investigation report disclosed that the total estimated cost of the improvement would exceed one-half of the total "true value" of all lands to be assessed by $26,475. The board of supervisors by a vote of 4 to 0, one member being absent, adopted a resolution to disregard the assessment limitation of the Majority Protest Act. Appellants urge that one member of the board who voted for the resolution was disqualified because he had

received a campaign contribution ***879** from the firm of civil engineers employed by the board as engineer of work and that consequently the resolution to disregard the assessment limitation lacked the requisite four-fifths vote.

The only facts adduced on the issue of disqualification were the following: The engineering firm contributed $300 to the board member's 1966 primary election campaign fund. A $50 contribution was made on May 31, 1966, and $250 contribution on June 2, 1966. The campaign statement of the supervisor showed a total contribution from all sources of $6,355. The contract for the employment of the engineer for his services in connection with the special assessment proceedings was entered into on October 14, 1968.

On the foregoing evidence the court found it to be untrue that the supervisor was disqualified from voting on the resolution to disregard the assessment limitations. That finding was clearly compelled on the showing made by appellants. There was no evidence of impropriety either on the part of the supervisor or the engineer. There was no evidence that the campaign contributions were made in return for a promise, express or implied, that the engineers would be awarded the contract in question or any other contract with the county.

**IV Compliance with the Procedural Requirements of the Municipal Improvement Act of 1913**

() A general statute governing special assessment proceedings provides that the "proposed boundaries of the assessment district to be assessed" must be described by resolution adopted by the legislative body prior to the hearing on the formation or extent of the district and that the description must be by reference to a map "which shall indicate by a boundary line the extent of the territory included in the proposed assessment district." (Sts. & Hy. Code, § 3110.) The clerk of the legislative body must file the original of the map in his office and, within 15 days after the adoption of the resolution fixing the time and place of hearing on the formation of the district, but in no event later than 15 days before the hearing, file a copy of the map with the county recorder. (Sts. & Hy. Code, § 3111.) The principal act (Improvement Act of 1913) defines "assessment district" as "the district of land to be benefited by the improvement and to be specially assessed to pay the costs and expenses of the improvement ...." (Sts. & Hy. Code, § 10008.)

Appellants contend the county failed to comply with the statutory requirements in that the copy of the map of the district boundaries filed ***880** with the county recorder in the instant proceedings failed to show "any interior boundaries of land-locked areas of nil assessment." To put it another way, appellants appear to be urging that the exterior boundaries of the district should have only encompassed lands which are to be assessed for the improvement.

The record discloses that the map filed with the county recorder delineated the exterior boundaries of the proposed district but included within those boundaries were islands of "nil assessed lands," that is, lands which would not be benefited by the proposed improvement and were not therefore to be assessed.

The county urges that the fact that "nonassessable lands" were included within the exterior boundaries did not invalidate the proceedings citing *Southlands Co. v. City of San Diego*, 211 Cal. 646, 667 [297 P. 52]; "It is too well settled to require citation of authority that nonassessable land may be included within an assessment district, without affecting the validity of the district." An examination of that case reveals that the "nonassessable lands" referred to were government-owned "nonassessable lands," not lands which were "nonassessable" because they would derive no benefit from the improvement. Moreover, *Southlands, supra*, did not involve proceedings under the Improvement Act of 1913; the proceedings there in question were undertaken under the Acquisition and Improvement Act of 1925.

The propriety of including nonbenefited lands within the boundaries of an assessment district formed under the Improvement Act of 1913 was considered in *Azzaro v. Board of Supervisors*, 273 Cal.App.2d 16 [77 Cal.Rptr. 692]. The court disposed of the issue with the following comment: "Plaintiffs rely upon the basic proposition that section 10008 [the section of the Improvement Act of 1913 defining the meaning of "assessment district" as used in that act] forbids the inclusion within a district of property that is not to be benefited by the improvement. With this we agree." (273 Cal.App.2d at p. 18.) Later in the opinion the court stated: "It is the purpose of section 10008 to insure that property noncontiguous to the improvement is not made a part of the district unless it is benefited by the proposed improvement and, a fortiori, that there shall be no assessment unless there is a benefit." Property not to be benefited and not to be assessed should perhaps, therefore, have been delineated within the exterior boundaries of the district in the present case.

The foregoing irregularity, if it be such, however, did not invalidate the proceedings. There is no showing of any

  

prejudice resulting from the inclusion within the exterior boundaries of lands that were not to be assessed and in essence were not to be a part of the district. The record reveals that the assessment schedule, which was timely filed, listed all parcels within the proposed district which were to be assessed and those ***881** which would not. The record reveals that all interested persons were given notice of and afforded an opportunity to be heard with respect to the lands to be assessed as well as the extent of the district. The deficiency in the map was an irregularity that was not of due process proportion and did not invalidate the proceedings. (*McGarry* v. *Ellis*, 54 Cal.App. 622, 626 [202 P. 463]; see *Brill v. City of Los Angeles*, 209 Cal. 705, 708 [289 P. 850]; *Perine* v. *Erzgraber*, 102 Cal. 234 [36 P. 585]; *Capital Freight Lines* v. *City of Sacramento*, 206 Cal.App.2d 279, 283 [23 Cal.Rptr. 752]; *Hutton* v. *Newhouse*, 41 Cal.App. 689 [183 P. 276].)

**V Public Character of the Streets**

() Finally, appellants attack the proceedings and validation decree on the ground the evidence did not support the court's finding that the streets in which the distribution lines are to be constructed are public streets. The contention is without substance.

The evidence adduced before the board of supervisors and the trial court revealed that some of the streets in which the improvements were to be constructed were depicted and offered for dedication as public streets on recorded maps but had not been officially accepted by the county. However, there was evidence that all such streets had been improved in varying degrees and had been used by the public. Some of the streets were paved, some were graveled, some were simply graded earth and some were characterized as "trails."

() A common law dedication may be proved either (1) by showing acquiescence and consent to public use under circumstances which negate "the idea that the use was under a license," or (2) by open and continuous adverse public use for the prescriptive period. (*Union Transp. Co.* v. *Sacramento County*, 42 Cal.2d 235, 240-241 [267 P.2d 10]; *Gion v. City of Santa Cruz*, 2 Cal.3d 29, 38 [84 Cal.Rptr. 162, 465 P.2d 50].) When dedication by acquiescence for a period of less than five years is claimed, the owner's actual consent to the dedication must be proved and his intent is the crucial factors. ( *Union Transp. Co. v. Sacramento County, supra*, p. 241.)

() In the instant case there was substantial evidence to support the finding of dedication by acquiescence and consent. The recorded tract maps depicted the streets as public streets and offered them for dedication. Though of an undetermined duration, there was evidence of continuous public use. There was testimony by the county right-of-way agent that there were no "private road" signs or barriers forbidding public use of the streets ***882** and that fence lines of adjoining properties extended only to the exterior limits of the street as shown on the recorded maps. The evidence was sufficient to support a finding of dedication by acquiescence and consent.

Judgment is affirmed.

Gardner, P. J., and Kerrigan, J., concurred. ***883**

Footnotes

1 Division 12, Streets and Highways Code, hereinafter referred to as Improvement Act of 1913.

2 Division 4, Streets and Highways Code, hereinafter referred to as the Majority Protest Act.

3 The character of the area in which the improvements are to be constructed is described by the county surveyor in his preliminary report to the board of supervisors as follows: "The lines will offer service to an existing 588 homes, 94 trailers, and 8 churches, or a total of 690. An additional 40 homes and 9 trailers are scattered in the district and not situated on the proposed mains."

4 Division 7, Streets and Highways Code.

5 The board also adopted a resolution ordering that refunds received by the county from the utility for subsequent connections to the distribution system would, after deduction of administrative expenses, be refunded to the property owners assessed for the improvements.

6 The action was instituted pursuant to section 860 et seq. of the Code of Civil Procedure and section 10601 of the Streets and Highways Code.

7 Section 10311 of the Streets and Highways Code was amended in 1970, effective November 23, 1970, to provide for termination of the proceedings if protest is made by "owners of more than one-half of the area of the *land to be assessed for the improvements* ...." (Italics supplied.)

  

Section 10011 of the Streets and Highways Code defines "owner" as follows: "'Owner' means the person owning the fee, or the person in whose name the legal title to the property appears, by deed duly recorded in the county recorder's office of the county in which the property is situated, or the person in possession of the property or buildings under claim of, or exercising acts of ownership over the same for himself, or as the executor, administrator, or guardian of the owner. If the property is leased, the possession of the tenant or lessee holding and occupying such property shall be deemed to be the possession of the owner."

8 When the improvement is for sewerage or drainage facilities, the majority protest may be overruled by a four-fifths vote of the legislative body. (Sts. & Hy. Code, § 2932; *Hoffman v. City of Red Bluff*, 63 Cal.2d 584, 588-589 [47 Cal.Rptr. 553, 407 P.2d 857].)

Where proceedings are conducted by a chartered city or county or chartered city and county, a majority protest may be overruled by four-fifths vote of the legislative body without regard to the nature of the improvement. (Cal. Const., art. XIII, § 17.)

9 The following extract from an Assembly Legislative Committee Report contains an excellent summation of the distinction between a special assessment proceeding under the 1913 and 1911 Improvement Acts and a bond proceeding:

"A special assessment is a lien on the property. The lien is imposed as a result of a procedure which assigns to individual pieces of property a proportionate share in the cost of a public improvement which has directly benefited that property. Traditionally, various political subdivisions have used some form of special assessment proceeding to finance those types of necessary public improvements which benefited only a limited area (e.g., streets, storm and sanitary sewers, sidewalks, curbs, etc.). Such a procedure has the obvious advantage of billing only those property owners immediately benefited by the improvement and, furthermore, of billing them in proportion to the benefit they receive. In addition, the procedure compels property owners who may not favor the improvement in question to pay their fair share of the project. Another advantage of these assessment procedures is that after the lien has attached, the property owner has the option of paying this obligation in cash or in installments over a period of years. Thus the property owner who is compelled to accept the financial burden of the assessment is relieved of any undue hardship which might occur if full payment were demanded immediately:

"The special assessment lien, it must be noted, is prior in right to all previous contract liens, including mortgages. It is superior to all other liens except a lien for taxes, with which it is on a parity." (6 Assem. Interim Com. Report No. 20 (1961-1963).)

10 Before the assessment is made, however, due process requires that the affected owners be given notice and opportunity to object to the proposed assessment of their property. (*Londoner* v. *Denver*, 210 U.S. 373 [52 L.Ed. 1103, 28 S.Ct. 708]; *Ferry v. O'Brien, supra*, 188 Cal. 629, 636-639; *Hoffman v. City of Red Bluff, supra*, 63 Cal.2d 584, 594.)

11 To our knowledge no state provides for an election in a special assessment proceeding of the type involved in the instant case. (*Recent Developments*, 67 Mich.L.Rev. 1260, 1268, fn. 43.)

12 Under the statute, "true value" is double the assessed value. (Sts. & Hy. Code, § 2983.)

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

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| **STATE OF CALIFORNIA DEPARTMENT OF FINANCE, et al.,**<br>Petitioners,<br>**v.**<br>**COMMISSION ON STATE MANDATES,**<br>Respondent,<br>**COUNTY OF LOS ANGELES, et al.,**<br>Real Parties in Interest. | Case No. BS130730<br><br>[AMENDED PROPOSED] **JUDGMENT**<br><br>Dept.: 86<br>Judge: The Honorable Amy D. Hogue<br>Action Filed: July 20, 2010 |
| **COUNTY OF LOS ANGELES, et al.,**<br>Cross-Petitioners,<br>**v.**<br>**COMMISSION ON STATE MANDATES,**<br>Cross-Respondent,<br>**STATE OF CALIFORNIA DEPARTMENT OF FINANCE, et al.,**<br>Cross-Real Parties in Interest. | |

On January 31, 2018, a post-remand hearing was held on the Petition for Writ of Mandate and Cross-Petition for Writ of Mandate in the Superior Court of the State of California, Los Angeles County, Department 86, the Honorable Amy D. Hogue presiding. Nelson R. Richards, Deputy Attorney General, California Department of Justice, Office of the Attorney General, appeared on behalf of Petitioners and Cross-Real Parties in Interest the State of California Department of Finance, State Water Resources Control Board, and California Regional Water Quality Control Board, Los Angeles Region. Howard Gest of Burhenn & Gest LLP appeared on behalf of Real Parties in Interest and Cross-Petitioners County of Los Angeles, and Cities of Bellflower, Carson, Commerce, Downey, and Signal Hill. No appearance was made on behalf of Respondent Commission on State Mandates.

On February 9, 2018, the Court issued a minute order granting the Petition and denying the Cross-Petition. A copy of that order is incorporated herein and attached as Exhibit A. For the reasons set forth in that order, IT IS ORDERED, ADJUDGED, AND DECREED that:

JUDGMENT on the Petition is entered in FAVOR of Petitioners and Cross-Real Parties in Interest the State of California Department of Finance, State Water Resources Control Board, and California Regional Water Quality Control Board, Los Angeles Region, and AGAINST Respondent Commission on State Mandates and Real Parties in Interest and Cross-Petitioners County of Los Angeles, and Cities of Bellflower, Carson, Commerce, Downey, and Signal Hill; the peremptory writ of mandate requested in the Petition is GRANTED; let a writ of mandate issue to Respondent Commission on State Mandates; and,

JUDGMENT on the Cross-Petition is entered in FAVOR of Respondent Commission on State Mandates and Petitioners and Cross-Real Parties in Interest the State of California Department of Finance, State Water Resources Control Board, and California Regional Water Quality Control Board, Los Angeles Region, and AGAINST and Real Parties in Interest and Cross-Petitioners County of Los Angeles, and Cities of Bellflower, Carson, Commerce, Downey, and Signal Hill on the grounds that the Cross-Petition is moot; the peremptory writ of mandate requested in the Cross-Petition is DENIED as moot.

Dated: JUL 09 2018

AMY D. HOGUE, JUDGE
The Honorable Amy D. Hogue
Judge of the Los Angeles Superior Court

APPROVED AS TO FORM

Dated: May 17, 2018

BURHENN & GEST LLP

HOWARD GEST
*Attorneys for Real Parties in Interest and Cross-Petitioners County of Los Angeles, and Cities of Bellflower, Carson, Commerce, Downey, and Signal Hill*

Dated: May 14 2018

CAMILLE SHELTON
CHIEF LEGAL COUNSEL
COMMISSION ON STATE MANDATES
*Attorneys for Respondent Commission on State Mandates*

# EXHIBIT A

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF LOS ANGELES

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| STATE OF CALIFORNIA DEPARTMENT OF FINANCE, et al.,<br><br>Petitioners,<br><br>vs.<br><br>COMMISSION ON STATE MANDATES,<br><br>Respondent,<br><br>COUNTY OF LOS ANGELES, et al.,<br><br>Real Parties in Interest.<br><br>AND RELATED CROSS-PETITION. | Case No.: BS130730<br><br>ORDER GRANTING PETITION FOR WRIT OF MANDATE (POST-REMAND) AND DENYING CROSS-PETITIONS AS MOOT<br><br>Hearing Date: January 31, 2018<br>Dept.: 86 |

## I. Introduction

In December 2001, the Los Angeles Regional Water Quality Control Board ("Regional Board") issued a municipal stormwater permit (the "permit") to the County of Los Angeles, Los

Angeles County Flood Control District, and 84 cities (the "Operators"). (AR 1560-1634.) The permit imposed requirements to regulate discharges from and pollutants entering the Operators' municipal separate storm sewer systems ("MS4s"). Among other provisions, the permit required the permittees to (1) place and maintain trash receptacles at transit stops (AR 1610); and (2) inspect various commercial facilities (AR 1590-92), industrial facilities (AR 1592-93) and construction sites (AR 1604-05).

In 2003, the Operators filed "test claims" with the Commission on State Mandates ("Commission") seeking a subvention of funds under article XIII B, section 6 for these permit requirements. Article XIII B, section 6 provides in part that "[w]henever the Legislature or any state agency mandates a new program or higher level of service on any local government, the State shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service . . . ." The Commission originally refused jurisdiction over the claims because Government Code § 17516(c)'s definition of "executive order" excluded permits issued by the Regional Boards. On appeal, the Second District held that exclusion of the Regional Board permits from the definition of "executive order" was unconstitutional.

Thereafter, the Operators re-filed their test claims with the Commission. On July 31, 2009 the Commission issued a Statement of Decision (SOD). (AR 5555 – 5626.) In the SOD, the Commission concluded, as to Issue 1, that the challenged permit conditions were subject to article XIII B, section 6 of the California constitution and made the following findings: (A) the permit is an executive order within the meaning of article XIII B, section 6 of the California constitution and Government Code section 17516 (AR 5574); (B) the challenged sections of the permits were not undertaken at the option or discretion of the claimants (AR 5575); and (C) none of the challenged provisions in the permit (the transit trash receptacle and inspection permit provisions in Parts 4C2a, 4C2b, 4E and 4F5c3) was a federal mandate (AR 5576 – 5603). The Commission's SOD concluded, on Issue 2, that all of the challenged provisions imposed a new program or higher level of service within the meaning of article XIII B, section 6 of the California constitution. (AR 5603.) Addressing Issue 3, the Commission's SOD examined whether the challenged provisions imposed costs mandated by the state within the meaning of Government Code sections 17514 and

17556 or qualified for any exceptions under Government Code section 17556. (AR 5605.) With respect to the provisions requiring inspections, the Commission concluded the exception in Section 17556(d) applied because various statutes give the local authorities discretion to impose fees. (AR 5625.) However, the Commission concluded the permit's requirements (under part 4F5c3) for the placement and maintenance of trash receptacles was a program that qualified as a state mandate subject to subvention. (AR 5625.)

Petitioners Department of Finance, State Water Resources Control Board ("State Board") and Regional Board (collectively "Petitioners" or "State Agencies") filed a petition for writ of mandate to set aside the Commission's decision arguing it was an abuse of discretion to conclude the challenged permit provisions were state mandates subject to article XIII B section 6 and that the SOD was erroneous because (1) the permit terms were required by federal law and thus not state mandates (Petition ¶ 33(a)); (2) the permit terms did not impose a new program or higher level of service (Petition ¶ 34); and (3) the permittees had authority to levy fees to pay for the trash receptacle requirement (Petition ¶ 35). The County and several cities filed a cross-petition seeking to set aside the Commission's determination the inspection costs were not reimbursable because the Operators had the ability to assess fees to cover them.

In August 2011, this Court (Judge Ann I. Jones presiding) issued a decision concluding the challenged permit terms were federal mandates and thus not reimbursable state mandates under Government Code section 17556(c). The Court did not address the cross-petition. On October 16, 2013, the Second District affirmed this ruling. On August 29, 2016, the Supreme Court reversed holding that the permit requirements were not federal mandates. (*Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 772.) The Supreme Court remanded the matter back to this Court to address the "other arguments in [the State's] writ petition" as well as "the issues presented in the Operators' cross-petition." (*Id.* at 772.)

Petitioners and Cross-Petitioners have both filed briefs in support of their additional arguments. Petitioners seek a writ of mandate setting aside the Commission's decision in part arguing (1) the permit terms did not impose a new program or higher level of service and (2) the permittees had fee authority to pay for the trash receptacle. Cross-Petitioners also seek a writ of

mandate setting aside the Commission's decision in part arguing that they did not have authority to levy fees to pay for inspections of commercial, industrial, and construction sites.

## II. Statutory Framework

### *A. The Clean Water Act*

The permit at issue in this case was issued pursuant to obligations imposed by the Clean Water Act (CWA) (33 U.S.C. §§ 1251-1387) which was originally enacted as an amendment to the Federal Water Pollution Control Act. Section 1311(a) of the CWA articulates a broad federal prohibition against water pollution ("Except in compliance with this section and [other sections], the discharge of any pollutant by any person shall be unlawful") and imposes criminal penalties against any knowing violation. (33 U.S.C. § 1311(a), § 1319.) The Act's primary means for enforcing effluent limitations and standards is the National Pollution Discharge Elimination System (NPDES). "The NPDES sets out the conditions under which the federal EPA or a state with an [EPA] approved water quality control program can issue permits for the discharge of pollutants in wastewater. (33 U.S.C. § 1342(a) & (b).) In California, wastewater discharge requirements established by [permits issued by the regional boards] are the equivalent of the NPDES permits required under federal law." (*City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 621.)

In 1987 amendments, "Congress distinguished between industrial and municipal storm water discharges. With respect to *industrial* storm water discharges, Congress provided that NPDES permits 'shall meet all applicable provisions of this section and section 1311 [requiring the EPA to establish effluent limitations under specific timetables] ....'" (*Building Industry Ass'n of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 874 [citing 33 U.S.C. § 1342(p)(3)(A)].) "With respect to *municipal* storm water discharges, Congress clarified that the EPA had the authority to fashion NPDES permit requirements to meet water quality standards without specific numerical effluent limits and instead to impose 'controls to

reduce the discharge of pollutants to the maximum extent practicable ....'" (*Ibid* [citing 33 U.S.C. § 1342(p)(3)(B)(iii)].) The law requires permits for municipal stormwater discharge to be prohibitory, stating that such permits "shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers" and "shall require controls to reduce the discharge of pollutants to the maximum extent practicable . . . ." (33 U.S.C. 1342(p)(3)(B)(ii) and (iii).)

*B.* *California Porter-Cologne Water Quality Control Act*

In 1969, California enacted the Porter-Cologne Water Quality Control Act. (Wat. Code, § 13000 *et seq.*) The Act established the State Water Resources Control Board, responsible for establishing statewide policy, as well as nine regional water quality control boards, responsible for creating water quality control plans and issuing permits to govern the discharge of waste. (Wat. Code, § 13001; *Building Industry, supra*, 124 Cal.App.4th at 875.) Shortly after Congress enacted the Clean Water Act in 1972, the California Legislature added chapter 5.5 to the Porter-Cologne Act to ensure that it would obtain approval to implement the provisions of the Clean Water Act. (Wat. Code, § 13370(c); *Building Industry, supra*, 124 Cal.App.4th at 875.) In 1973, California obtained approval to issue NPDES permits. (*Environmental Protection Agency v. California ex rel. State Water Resources Control Bd.* (1976) 426 U.S. 200, 209.)

Under chapter 5.5 of the Porter-Cologne Act, the Water Boards issue "waste discharge requirements" which "ensure compliance with all applicable provisions of the [Clean Water Act] . . . together with any more stringent effluent standards or limitations necessary to implement water quality control plans . . . ." (Wat. Code § 13377.) These "wastewater discharge requirements established by the regional boards are the equivalent of the NPDES permits required by federal law." (Wat. Code § 13374; *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 621.)

*C. The 2001 Permit*

In December 2001, the Regional Board issued to the Operators the municipal stormwater permit at issue in this case. (AR 1560-1634.) The permit imposed requirements to regulate discharges from and pollutants entering the Operators' MS4s. Among other provisions, the permit required the permittees to (1) place and maintain trash receptacles at transit stops (AR 1610); and (2) inspect various commercial facilities (AR 1590-92), industrial facilities (AR 1592-93) and construction sites (AR 1604-05). (See *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 758.)

## III. Standard of Review

Code of Civil Procedure section 1094.5 is the administrative mandamus provision providing the procedure for judicial review of adjudicatory decisions rendered by administrative agencies. (*Topanga Ass'n for a Scenic Community v. County of Los Angeles*, (1974) 11 Cal. 3d 506, 514-15.) Section 1094.5(a) states, in pertinent part, that "[w]here the writ is issued for the purpose of inquiring into the validity of any final administrative order or decision made as the result of a proceeding in which by law a hearing is required to be given, evidence is required to be taken, and discretion in the determination of facts is vested in the inferior tribunal, corporation, board, or officer, the case shall be heard by the court sitting without a jury." Under Section 1094.5(b), the pertinent issues are: (1) whether the respondent has proceeded without jurisdiction; (2) whether there was a fair trial; and (3) whether there was a prejudicial abuse of discretion. An abuse of discretion is established if the respondent has not proceeded in the manner required by law, the decision is not supported by the findings, or the findings are not supported by the evidence. (Code Civ. Proc. § 1094.5(b).)

In general, an agency is presumed to have regularly performed its official duties. (Evid. Code § 664.) Therefore, the petitioner seeking administrative mandamus has the burden of proof. (*Steele v. Los Angeles County Civil Service Commission*, (1958) 166 Cal. App. 2d 129, 137; see

also *Alford v. Pierno* (1972) 27 Cal.App.3d 682, 691 ["[T]he burden of proof falls upon the party attacking the administrative decision to demonstrate wherein the proceedings were unfair, in excess of jurisdiction or showed prejudicial abuse of discretion."].)

In this case, the determination whether the permit is a state-mandated program or higher level of service under article XIII B, section 6 is a question of law that the Court reviews *de novo*. (*County of San Diego v. State*, (1997) 15 Cal.4th 68, 109; *Carmel Valley Fire Protection Dist. v. State of California*, (1987) 190 Cal.App.3d 521, 536.) When reviewing the Commission's determination, the Court reviews the record to determine if substantial evidence supports the decision. (Gov. Code § 17559(b).)

## IV. Analysis

### *A. Petitioners Did Not Waive the Arguments in their Writ Petition*

After determining that the permit conditions were not federally mandated, the Supreme Court remanded the matter with the following instructions:

> Although we have upheld the Commission's determination on the federal mandate question, the State raised other arguments in its writ petition. Further, the issues presented in the Operators' cross-petition were not addressed by either the trial court or the Court of Appeal. We remand the matter so those issues can be addressed in the first instance.

(*Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749, 772.) Cross-Petitioners argue that Petitioners waived the arguments they now assert ((1) that the permit requirements did not impose a new program or higher level of service; and (2) that the Operators have fee authority sufficient to pay for the trash receptacle requirement) because they failed to raise those arguments in their original "Memorandum of Points and Authorities in Support of Petition for Writ of Administrative Mandamus" filed on June 10, 2011. However, Petitioners did raise those arguments in their original *writ petition* filed on February 17, 2011. (See Petition ¶ 34,

35.) The Supreme Court's mandate directs this Court to address the State's "other arguments in its writ petition." The Court therefore finds Petitioners may assert them on remand.

*B.* *The Permit Is Not a State Mandated Program or Policy for which the Operators Are Entitled to a Subvention of Funds Under Article XIII B*

Article XIII B, section 6 provides in part that "[w]henever the Legislature or any state agency mandates a new program or higher level of service on any local government, the State shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service . . . ." In this action, the Operators seek a subvention of funds to pay for the trash receptacle and inspection requirements imposed by the 2001 municipal stormwater permit (the "permit").

The Commission concluded the receptacle and inspection requirements constituted "a program within the meaning of article B, section 6." (AR 5603.) It pointed out the requirements "are limited to local government entities" and "[provide] a service to the public by preventing or abating pollution in waterways and beaches in Los Angeles County." (*Id.*) The Commission also cited page 13 of the permit which states, "The objective of this Order is to protect the beneficial uses of receiving waters in Los Angeles County." (*Id.*)

Petitioners contend that the Operators are not entitled to reimbursement because the Clean Water Act is a law of general applicability that prohibits both public and private entities from discharging pollutants from point sources to waters of the United States without an NPDES permit. In support of this argument, Petitioners cite several cases addressing state legislation: *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, *City of Sacramento v. State of California* (1990) 50 Cal.3d 51, and *City of Richmond v. Commission on State Mandates* (1998) 64 Cal.App.4th 1190.

In *County of Los Angeles*, the County of San Bernardino and City of Los Angeles filed test claims seeking reimbursement for expenditures mandated by newly enacted laws increasing the amounts which employers, including local governments, must pay in workers' compensation

benefits to injured employees and families of deceased employees. (*County of Los Angeles, supra*, 43 Cal.3d at 50-51.) The Supreme Court held that the reimbursement claims were properly denied by the State Board because "the state need not provide subvention for, the costs incurred by local agencies in providing to their employees the same increase in workers' compensation benefits that employees of private individuals or organizations receive." (*Id.* at 57-58.) The Supreme Court explained:

> "[W]hen the voters adopted article XIII B, section 6, their intent was not to require the state to provide subvention whenever a newly enacted statute resulted incidentally in some cost to local agencies. Rather, the drafters and the electorate had in mind subvention for the expense or increased cost of programs administered locally **and for expenses occasioned by laws that impose unique requirements on local governments and do not apply generally to all state residents or entities.**

(*Id.* at 46-50, emphasis added.)

In *City of Sacramento*, the City of Sacramento and County of Los Angeles filed claims with the State Board seeking subvention of the costs imposed on them by statutes which extended mandatory coverage under the state's unemployment insurance law to state and local governments and nonprofit corporations. (*City of Sacramento*, 50 Cal.3d at 59.) The City and County argued that the statutes imposed a unique requirement on them because it applied only to them and compelled costs to which they were not previously subject. (*Id.* at 68.) The Supreme Court held that the statute did not constitute a "new program" or "higher level of service" because "[m]ost private employers in the state already were required to provide unemployment protection to their employees" and thus the statute "merely [made] the local agencies 'indistinguishable in this respect from private employers.' " (*Id.* at 67.)

In *City of Richmond*, the city filed a test claim with the Commission on State Mandates seeking subvention of the costs imposed on it by a statute extending workers' compensation death benefits. (*City of Richmond, supra*, 64 Cal.App.4th at 1193.) The appellate court held that the City was not entitled to reimbursement because "the law ma[de] the workers' compensation death benefit requirements as applicable to local governments as they are to private employers" and thus

"impose[d] no 'unique requirement' on local governments." (*Id.* at 1199.) The court observed that, "while the result of chapter 478 is that local safety members of PERS now are eligible for two death benefits and local governments will have to fund the workers' compensation benefit, chapter 478 does not mandate double death benefits. Instead, it merely eliminates the offset provisions of Labor Code section 4707. In this regard, the law makes the workers' compensation death benefit requirements as applicable to local governments as they are to private employers. It imposes no "unique requirement" on local governments." (*Id.* at 1199.)

Although in each of these cases, the "state mandate" under consideration was legislation of general applicability, whereas in this case, the "state mandate" is the particular NPDES permit ("executive order") challenged in the test cases, this Court does not regard that distinction as making any difference. Under Government Code § 17514, "costs mandated by the state" are defined to include statutes and executive orders. In the first round of appeals in this case, the appellate court in *County of Los Angeles v. Commission on State Mandates* (2007) 150 Cal.App.4th 898 rejected, as unconstitutional, the provision in Section 17516(c), which purported to exempt "any order, plan requirement, rule or regulation" of the State Water Resources Control Board from the definition of an "executive order" potentially subject to subvention. The language in that court's discussion of the matters to be remanded to the Commission specifies that the "state mandate" under consideration is the permit:

> "The Commission urges that should this court conclude Section 17516(c) is unconstitutional, the appropriate remedy is to afford the Commission the opportunity to pass on the merits of the subject test claims on the issues of whether (1) *the subject permit* qualifies as a state-mandated program under article XIII B, section 6; (2) *the permit* amounts to a new program or higher level of services; and (3) *the permit* imposes costs on local entities. (Gov. Code, § § 17514, 17556. We find its position persuasive."

(*Id.* at 905, emphasis added.) The court further noted that the question "[w]hether *the permit* in question . . . governs both public and private pollution dischargers to the same extent present[ed] factual issues not yet resolved." (*Id.* at 919, emphasis added.) Consistent with this language, the Commission concluded "the issue is not whether NPDES permits generally constitute a 'program'

within the meaning of article XIII B, section 6," but "whether the permit in this test claim . . . constitutes a program because this permit is the only one over which the Commission has jurisdiction." (AR 5604.) On remand, the Commission resolved this issue, concluding that the permit applied exclusively to local agencies and therefore constituted a "program" within the meaning of article XIII B, section 6. (AR 5603.) Based on the language in *County of Los Angeles* quoted above, this Court agrees with the Commission that the question before this Court is whether the Operators' permit includes one or more state mandates subject to subvention. As explained below, this Court concludes it does not.

In *County of Los Angeles, supra,* the Supreme Court provided two alternative definitions for "program" under article XIII B, section 6, explaining they could either be "programs that carry out the governmental function of providing services to the public, or laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state." (*County of Los Angeles, supra,* 43 Cal.3d at 56.) The Supreme Court based these definitions on the intent behind constitutional amendment as evidenced by the Ballot Pamphlet presented to the voters. The court focused on language in the Pamphlet emphasizing the measure would "not allow the state government to force programs on local governments without the state paying for them." (*Id.*) Based on this language, the Supreme Court concluded "the intent underlying section 6 was to require reimbursement to local agencies for the costs involved in carrying out functions peculiar to government, not for expenses incurred by local agencies as an incidental impact of laws that apply generally to all state residents and entities." From the Supreme Court's point of view, "[l]aws of general application are not passed by the Legislature to 'force' programs on localities." (*Id.* at 57.) The Supreme Court concluded "the intent underlying section 6 was to require reimbursement to local agencies for the costs involved in carrying out functions peculiar to government, not for expenses incurred by local agencies as an incidental impact of laws that apply generally to all state residents and entities." (*Id.* at 56-57.)

As noted above, the Commission concluded the receptacle and permitting requirements in the permit constituted "programs" subject to subvention apparently referencing the first alternative definition of "program" in *County of Los Angeles.* This Court is not, however, persuaded the

receptacle and inspection requirements are "programs that carry out the governmental function of providing services to the public." Unlike the executive order establishing minimum clothing and equipment requirements for firefighters addressed in *Carmel Valley Fire Protection District v. State of California* (1987) 190 Cal.App.3d 521, 537, an NPDES permit enforcing a prohibition against polluting is not a government program in the usual sense of the word. Indeed, a ban on contaminated discharges is more akin to a criminal law than a program delivering a service to the public at the taxpayers' expense. It is noteworthy that Section 17556(g) exempts from subvention costs mandated by statutes creating new crimes "for that portion of the crime relating directly to the enforcement of the crime ...." By analogy, costs incurred to enforce the anti-pollution laws should not be treated as state mandated programs entitled to reimbursement by the state.

The Court also disagrees with the Operators' contention "the collection of trash and the enforcement of statutes and regulations intended to prevent pollution" constitute "programs" for purposes of subvention. (Opp. p. 9.) As noted above, these conditions enforce a prohibition rather than initiate or upgrade "classic" or "peculiarly governmental functions[s]" like the firefighting services affected by the executive order in *Carmel Valley*. (*Id.*) Because the requirements were implemented to prevent pollution (enforce a ban on pollution) rather than to provide a service to the public, it is difficult to regard them as "programs that carry out the governmental function of providing services to the public."

Addressing *County of Los Angeles'* second alternative definition of "programs," it is a closer question whether the permit's receptacle and inspection requirements are "laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state." (*County of Los Angeles*, *supra*, 43 Cal.3d at 56.) There is no doubt the permit (which only applies to local governments) "uniquely" imposes the receptacle and inspection requirements on local governments. However, the relevant "state policy" implemented by the permit is the federal and state law prohibition against unlawful discharges. That policy "appl[ies] generally to all residents and entities in the state." In contrast with the upgrade in firefighter clothing and equipment mandated by the executive order in *Carmel*

*Valley*, this is not the type of policy the voters intended to embrace in the ballot measure giving rise to section 6.

The NPDES policy implemented by the permit effectuates laws of general application that prohibit both public and private entities from discharging contaminants into the waterways except as specified in an NPDES permit. By its terms, the Operators' NPDES permit is the means by which the state ensures that public entities abide by the same prohibitions against contaminated discharges that the law imposes on private parties. Although it is true that, like the workers compensation statute at issue in *County of Los Angeles*, the NPDES permit is "administered by the state," that does not necessarily mean the state has forced the expense of its program or policy onto the local governments. (*Id.* at 58.)

Moreover, just because the requirements are "unique" to the local governments and cause them to incur costs does not mean the local entities are necessarily entitled to reimbursement from the state. Whereas a private industrial discharger has considerable power to control its operations and employees to prevent contaminated discharges, municipalities cannot prevent contaminated discharges without inducing or policing the public to refrain from harmful conduct. It is therefore inevitable that the Operators' NPDES permit includes measures "unique" to local governments such as the receptacle and inspection requirements at issue here. Indeed, because the anti-pollution laws, the permit and the policies behind them implement a ban on unlawful discharges that applies to both public and private entities, the state must, as a practical matter, impose "unique" requirements on local governments to ensure that their required compliance is "indistinguishable . . . from private employers." (*Id.*)

Given that the "state policy" advanced by the permit is to enforce a ban of general application rather than to initiate or expand waste collection and/or inspection services, it is not reasonable to interpret the receptacle and inspection requirements as a policy (or program) initiated by the State Water Board "to 'force' [trash collection and inspection] programs on localities." (*Id.*) As noted in *County of Los Angeles*, "the intent underlying section 6 was to require reimbursement to local agencies for the costs involved in carrying out functions peculiar to government, *not for*

*expenses incurred by local agencies as an incidental impact of laws that apply generally to all state residents and entities.*" (*Id.* at 56-57, emphasis added.)

In this case, the costs incurred by the local governments are an "incidental impact of laws [and policies] that apply generally to all state residents and entities" rather than the result of a state mandate shifting the costs of a state initiated program to the local governments. (*County of Los Angeles,* 43 Cal.3d at 57.) This Court finds the receptacle and inspection requirements are not state mandated programs subject to subvention and grants the petition for writ of mandate.

*C. Petitioners' and Cross-Petitioners' Remaining Arguments Are Moot*

Because the Court has determined the Operators are not entitled to reimbursement for the costs of complying with the permit's receptacle or inspection requirements, the parties' remaining arguments (as to whether the Operators had fee authority to levy service charges to pay for the trash receptacle requirement and inspection requirement) are moot.

**V. Conclusion**

For the reasons stated above, the Court GRANTS the Petition for Writ of Mandate and remands this matter to the Commission on State Mandates for proceedings consistent with this decision.

Dated: FEB 09 2018

AMY D. HOGUE, JUDGE

JUDGE OF THE SUPERIOR COURT

# SUPERIOR COURT OF CALIFORNIA, COUNTY OF LOS ANGELES

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| DATE: 02/09/18 | | | DEPT. 86 |
| HONORABLE AMY D. HOGUE | JUDGE | F. BECERRA | DEPUTY CLERK |
| HONORABLE | JUDGE PRO TEM | | ELECTRONIC RECORDING MONITOR |
| | Deputy Sheriff | | Reporter |

BS130730

STATE OF CA DEPT OF FINANCE ET

VS

COMMISSION ON STATE MANDATES

PETITION GRANTED POST REMAND

Plaintiff Counsel: NO APPEARANCES.

Defendant Counsel:

**NATURE OF PROCEEDINGS:**

RULING ON SUBMITTED MATTER
- HEARING ON PETITION FOR WRIT OF MANDATE(POST REMAND)
- HEARING ON CROSS-PETITION FOR WRIT OF MANDATE

The Court, having previously taken the matter under submission on 01/31/18, issues its ruling in accordance with the "ORDER GRANTING PETITION FOR WRIT OF MANDATE (POST-REMAND) AND DENYING CROSS-PETITIONS AS MOOT" consisting of 14 pages, filed this date and incorporated herein by reference to the Court file.

Summary of the court's Ruling:

The petition for writ of mandate is granted. Cross-petitions are denied as moot.

Petitioner's exhibit 1 is ordered returned forthwith to the party who lodged it, to be preserved unaltered until a final judgment is rendered in this case and is to be forwarded to the court of appeal in the event of an appeal.

Administrative record to be picked up directly from Department 86 within 10 days from this order.

Counsel for petitioner is to prepare, serve, and lodge the proposed judgment within ten days. The Court will hold the proposed judgment at least ten days for objections.



MINUTES ENTERED
02/09/18
COUNTY CLERK

# SUPERIOR COURT OF CALIFORNIA, COUNTY OF LOS ANGELES

| | |
|---|---|
| DATE: 02/09/18 | DEPT. 86 |
| HONORABLE AMY D. HOGUE JUDGE | F. BECERRA DEPUTY CLERK |
| HONORABLE JUDGE PRO TEM | ELECTRONIC RECORDING MONITOR |
| Deputy Sheriff | Reporter |

BS130730

STATE OF CA DEPT OF FINANCE ET

VS

COMMISSION ON STATE MANDATES

PETITION GRANTED POST REMAND

Plaintiff Counsel: NO APPEARANCES

Defendant Counsel:

**NATURE OF PROCEEDINGS:**

CLERK'S CERTIFICATE OF MAILING

I, the below-named Executive Officer/Clerk of the above-entitled court, do hereby certify that I am not a party to the cause herein, and that on this date I served the above dated minute order and ORDER GRANTING PETITION FOR WRIT OF MANDATE (POST-REMAND) AND DENYING CROSS-PETITIONS AS MOOT upon each party or counsel named below by placing the document for collection and mailing so as to cause it to be deposited in the United States mail at the courthouse in Los Angeles, California, one copy of the original filed/entered herein in a separate sealed envelope to each address as shown below with the postage thereon fully prepaid, in accordance with standard court practices.

Dated: February 9, 2018

Sherri R. Carter, Executive Officer/Clerk

By: F. Becerra, Deputy

Nelson Richard
Office of the Attorney General
2550 Mariposa Mall, Room 5090
Fresno, CA 93721



MINUTES ENTERED
02/09/18
COUNTY CLERK

# SUPERIOR COURT OF CALIFORNIA, COUNTY OF LOS ANGELES

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|---|---|
| DATE: 02/09/18 | DEPT. 86 |
| HONORABLE AMY D. HOGUE JUDGE | F. BECERRA DEPUTY CLERK |
| HONORABLE JUDGE PRO TEM | ELECTRONIC RECORDING MONITOR |
| Deputy Sheriff | Reporter |

BS130730

STATE OF CA DEPT OF FINANCE ET

VS

COMMISSION ON STATE MANDATES

PETITION GRANTED POST REMAND

Plaintiff Counsel: NO APPEARANCES

Defendant Counsel:

**NATURE OF PROCEEDINGS:**

Howard Gest
Burhenn & Gest LLP
624 South Grand Avenue, Ste 2200
Los Angeles, CA 90017



MINUTES ENTERED
02/09/18
COUNTY CLERK

## DECLARATION OF SERVICE BY U.S. MAIL

Case Name: *Department of Finance, et al. v. Commission on State Mandates*
No.: BS130730

I declare:

I am employed in the Office of the Attorney General, which is the office of a member of the California State Bar, at which member's direction this service is made. I am 18 years of age or older and not a party to this matter. I am familiar with the business practice at the Office of the Attorney General for collection and processing of correspondence for mailing with the United States Postal Service. In accordance with that practice, correspondence placed in the internal mail collection system at the Office of the Attorney General is deposited with the United States Postal Service with postage thereon fully prepaid that same day in the ordinary course of business.

On May 16, 2018, I served the attached **AMENDED PROPOSED JUDGMENT** by placing a true copy thereof enclosed in a sealed envelope in the internal mail collection system at the Office of the Attorney General at 2550 Mariposa Mall, Room 5090, Fresno, CA 93721, addressed as follows:

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I declare under penalty of perjury under the laws of the State of California the foregoing is true and correct and that this declaration was executed on May 16, 2018, at Fresno, California.

| Lynda Gonzales | Lynda Gonzales |
| --- | --- |
| Declarant | Signature |

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KeyCite Yellow Flag - Negative Treatment
Declined to Extend by Cachil Dehe Band of Wintun Indians of the Colusa Indian Community v. California, 9th Cir.(Cal.), October 24, 2008

33 Cal.4th 1055
Supreme Court of California

Bill LOCKYER, as Attorney General, etc., Petitioner,
v.
CITY AND COUNTY OF SAN FRANCISCO et al., Respondents.
Barbara Lewis et al., Petitioners,
v.
Nancy Alfaro, as County Clerk, etc., Respondent.

Nos. S122923, S122865.
|
Aug. 12, 2004.

**Synopsis**

**Background:** The Attorney General and three city residents filed petitions for writs of mandate, and requests for an immediate stay, alleging that actions of city officials in issuing marriage licenses to same–sex couples and solemnizing and registering the marriages of such couples were unlawful, and Supreme Court consolidated the two cases for decision.

**Holdings:** The Supreme Court, George, C.J., held that:

[1] city mayor exceeded scope of his authority by requesting that county clerk and county recorder determine what changes were necessary to render marriage licensing forms nondiscriminatory as to gender and sexual orientation;

[2] a local executive official, who is charged with the ministerial duty of enforcing a statute, does not possess the authority to disregard the terms of a statute in the absence of a judicial determination that it is unconstitutional, based solely upon the official's opinion that the governing statute is unconstitutional;

[3] city and county officials lacked authority to issue marriage licenses to, solemnize marriages of, and register certificates of marriage for same–sex couples; and

[4] marriages conducted between same–sex couples in violation of the applicable statutes were void and of no legal effect.

Petition granted with directions.

Moreno, J., filed concurring opinion.

Kennard, J., filed concurring and dissenting opinion.

Werdegar, J., filed concurring and dissenting opinion.

West Headnotes (17)

[1] **Marriage and Cohabitation**
Regulation and control in general

Legislature has full control of the subject of marriage and may fix the conditions under which the marital status may be created or terminated, except as restricted by the Constitution. West's Ann.Cal.Fam.Code §§ 300–310.

3 Cases that cite this headnote

[2] **Marriage and Cohabitation**
Regulation and control in general

**Municipal Corporations**
Local legislation

Marriage is a matter of statewide concern rather than a municipal affair. West's Ann.Cal. Const. Art. 11, §§ 4, 5, 6.

1 Cases that cite this headnote

[3] **Marriage and Cohabitation**
Authority to issue license

**Marriage and Cohabitation**
Certificate

Under the relevant statutes, the only local officials to whom the state has granted authority to act with regard to marriage licenses and marriage certificates are the county clerk and the county recorder. West's Ann.Cal.Health & Safety Code §§ 102100, 102180, 102200, 102295, 103125.

3 Cases that cite this headnote

[4] **Marriage and Cohabitation**
Authority to issue license
**Marriage and Cohabitation**
Return, record, and registration

A mayor has no authority to expand or vary the authority of a county clerk or county recorder to grant marriage licenses or register marriage certificates under the governing state statutes, or to direct those officials to act in contravention of those statutes. West's Ann.Cal.Health & Safety Code §§ 102100, 102180, 102200, 102295, 103125.

4 Cases that cite this headnote

[5] **Marriage and Cohabitation**
Licenses and Licensing Officers
**Municipal Corporations**
Mayor or other chief executive

City mayor exceeded scope of his authority by requesting county clerk and county recorder to "determine what changes should be made to the forms and documents used to apply for and issue marriage licenses in order to provide marriage licenses on a non–discriminatory basis, without regard to gender or sexual orientation" based on his asserted "sworn duty to uphold the California Constitution, including specifically its equal protection clause." West's Ann.Cal. Const. Art. 1, § 7; West's Ann.Cal.Fam.Code §§ 300, 355; West's Ann.Cal.Fam.Code § 359 (1996); West's Ann.Cal.Health & Safety Code §§ 102100, 102180, 102200, 102295, 103125.

4 Cases that cite this headnote

[6] **Marriage and Cohabitation**
Duties of officers in general
**Marriage and Cohabitation**
Return, record, and registration

Duties of county clerk and county recorder in issuing marriage licenses and recording certificate of registry of marriage are mandatory, once statutory procedural and substantive prerequisites have been satisfied, and thus discharge of such duties is ministerial rather than discretionary. West's Ann.Cal.Health & Safety Code §§ 102100, 102180, 102200, 102295, 103125.

2 Cases that cite this headnote

[7] **Public Employment**
Duties

A ministerial act is an act that a public officer is required to perform in a prescribed manner in obedience to the mandate of legal authority and without regard to his own judgment or opinion concerning such act's propriety or impropriety, when a given state of facts exists.

[8] **Constitutional Law**
Encroachment on Judiciary
**Public Employment**
Duties

Pursuant to state common law and practical considerations, a local executive official, who is charged with the ministerial duty of enforcing a statute, does not possess the authority to disregard the terms of the statute in the absence of a judicial determination that it is unconstitutional, based solely upon the official's opinion that the governing statute is unconstitutional.

7 Cases that cite this headnote

[9] **Constitutional Law**
Presumptions and Construction as to Constitutionality

A statute, once duly enacted, is presumed to be constitutional.

*See 7 Witkin, Summary of Cal. Law (9th ed. 1988) Constitutional Law, § 58.*

6 Cases that cite this headnote

[10] **Constitutional Law**
Clearly, positively, or unmistakably unconstitutional
**Constitutional Law**
Doubt

  

The unconstitutionality of a statute must be clearly shown, and doubts as to its constitutionality will be resolved in favor of its validity.

9 Cases that cite this headnote

**[11] Public Employment**
Authority and Powers

When a public official's authority to act in a particular area derives wholly from statute, the scope of that authority is measured by the terms of the governing statute.

2 Cases that cite this headnote

**[12] Municipal Corporations**
Powers and functions of local government in general

**Municipal Corporations**
Judicial Supervision

**Municipal Corporations**
Nature and scope of legislative power in general

In establishing a governmental structure for the purpose of managing municipal affairs, the Legislature, through statutes, or local entities, through charter provisions and the like, may combine executive, legislative, and judicial functions in a manner different from the structure that the California Constitution prescribes for state government. West's Ann.Cal. Const. Art. 3, § 3.5.

4 Cases that cite this headnote

**[13] Marriage and Cohabitation**
Duties of officers in general

Unconstitutionality of state marriage statutes limiting marriage to couple comprised of a man and a woman under state equal protection clause was not so patent or clearly established that actions of city and county officials in issuing marriage licenses to same–sex couples, and solemnizing and registering the marriages of such couples, would fall within narrow exception, applicable when it would be absurd or unreasonable to require public official to comply with statute that was clearly unconstitutional, to general rule that a local executive official, who is charged with the ministerial duty of enforcing a statute, does not possess the authority to disregard the terms of the statute in the absence of a judicial determination that it is unconstitutional, based solely upon the official's opinion that the governing statute is unconstitutional. West's Ann.Cal. Const. Art. 1, § 7; West's Ann.Cal.Fam.Code §§ 300, 355; West's Ann.Cal.Fam.Code § 359 (1996); West's Ann.Cal.Health & Safety Code §§ 102100, 102180, 102200, 102295, 103125.

14 Cases that cite this headnote

**[14] Marriage and Cohabitation**
Authority to issue license

City and county officials lacked authority to refuse to perform their ministerial duty in conformity with current state marriage statutes, and, based on view that statutory limitation of marriage to couple comprised of a man and a woman violated state equal protection clause, to alter form prescribed by State Registrar of Vital Statistics, issue marriage licenses to, solemnize marriages of, and register certificates of marriage for same–sex couples. West's Ann.Cal. Const. Art. 1, § 7; West's Ann.Cal.Fam.Code §§ 300, 355; West's Ann.Cal.Fam.Code § 359; West's Ann.Cal.Health & Safety Code §§ 102100, 102180, 102200, 102295, 103125.

*See Hogoboom & King, Cal. Practice Guide: Family Law (The Rutter Group 2003) ¶¶ 19:6.5, 19:24–24.1(CAFAMILY Ch. 19-A).*

7 Cases that cite this headnote

**[15] States**
Preemption in general

Federal supremacy clause does not itself grant a state or local official the authority to refuse to enforce a statute that the official believes to be unconstitutional. U.S.C.A. Const. Art. 6, cl. 2.

**[16] Mandamus**

  

Scope and extent of relief in general

As a general matter, the nature of the relief warranted in a mandate action is dependent upon the circumstances of the particular case, and a court is not necessarily limited by the prayer sought in the mandate petition but may grant the relief it deems appropriate.

1 Cases that cite this headnote

**[17] Marriage and Cohabitation**

Sex or gender; same-sex marriage

All same–sex marriages authorized, solemnized, or registered by city and county officials in contravention of statute defining marriage as a "personal relationship arising out of a civil contract between a man and a woman" and the legislative history of this provision demonstrating that the purpose of this limitation was to "prohibit persons of the same sex from entering lawful marriage" were void and of no legal effect from their inception, despite fact that affected same–sex couples were not parties to mandate proceeding challenging such marriages, as validity of marriages was purely legal question, and numerous amicus curiae briefs were filed on behalf of such couples, so that their legal arguments in support of validity of existing marriages were heard and fully considered. West's Ann.Cal.Fam.Code § 300.

10 Cases that cite this headnote

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Roger Jon Diamond, Santa Monica, CA, as Amicus Curiae on behalf of Respondents.

**Opinion**

GEORGE, C.J.

We assumed jurisdiction in these original writ proceedings to address an important but relatively narrow legal issue —whether a local executive official who is charged with the ministerial duty of enforcing a state ***1067** statute exceeds his or her authority when, without any court having determined that the statute is unconstitutional, the official deliberately declines to enforce the statute because he or she determines or is of the opinion that the statute is unconstitutional.

In the present case, this legal issue arises out of the refusal of local officials in the City and County of San Francisco to enforce the provisions of California's marriage statutes that limit the granting of a marriage license and marriage certificate only to a couple comprised of a man and a woman.

The same legal issue and the same applicable legal principles could come into play, however, in a multitude of situations. For example, we would face the same legal issue if the statute in question were among those that restrict the possession or require the registration of assault weapons, and a local official, charged with the ministerial duty of enforcing those statutes, refused to apply their provisions because of the official's view that they violate the Second Amendment of the federal Constitution. In like manner, the same legal issue would be presented if the statute were one of the environmental measures that impose restrictions upon a property owner's ability to obtain a building permit for a development that interferes with the public's access to the California coastline, and a local official, charged with the ministerial ****463** duty of issuing building permits, refused to apply the statutory limitations because of his or her belief that they effect an uncompensated "taking" of property in violation of the just compensation clause of the state or federal Constitution.

Indeed, another example might illustrate the point even more clearly: the same legal issue would arise if the statute at the center of the controversy were the recently enacted provision (operative January 1, 2005) that imposes a ministerial duty upon local officials to accord the same rights and benefits to registered domestic partners as are granted to spouses (see Fam.Code, § 297.5, added by Stats.2003, ch. 421, § 4), and a local official—perhaps an officeholder in a locale where domestic partnership *****230** rights are unpopular —adopted a policy of refusing to recognize or accord to registered domestic partners the equal treatment mandated by statute, based solely upon the official's view (unsupported by any judicial determination) that the statutory provisions granting such rights to registered domestic partners are unconstitutional because they improperly amend or repeal the provisions of the voter-enacted initiative measure commonly known as Proposition 22, the California Defense of Marriage Act (Fam.Code, § 308.5) without a confirming vote of the electorate, in violation of article II, section 10, subdivision (c) of the California Constitution.

As these various examples demonstrate, although the present proceeding may be viewed by some as presenting primarily a question of the substantive ***1068** legal rights of same-sex couples, in actuality the legal issue before us implicates the interest of all individuals in ensuring that public officials execute their official duties in a manner that respects the limits of the authority granted to them as officeholders. In short, the legal question at issue—the scope of the authority entrusted to our public officials—involves the determination of a fundamental question that lies at the heart of our political system: the role of the rule of law in a society that justly prides itself on being "a government of laws, and not of men" (or women). [1]

As indicated above, that issue—phrased in the narrow terms presented by this case—is whether a local executive official, charged with the ministerial duty of enforcing a statute, has the authority to disregard the terms of the statute in the absence of a judicial determination that it is unconstitutional, based solely upon the official's opinion that the governing statute is unconstitutional. As we shall see, it is well established, both in California and elsewhere, that—subject to a few narrow exceptions that clearly are inapplicable here—a local executive official does *not* possess such authority.

This conclusion is consistent with the classic understanding of the separation of powers doctrine—that the legislative power is the power to enact statutes, the executive power is the power to execute or enforce statutes, and the judicial power is the power to interpret statutes and to determine their constitutionality. It is true, of course, that the separation of powers doctrine does not create an absolute or rigid division of functions. (*Superior Court v. County of Mendocino* (1996) 13 Cal.4th 45, 52, 51 Cal.Rptr.2d 837, 913 P.2d 1046.) Furthermore, legislators and executive officials may take into account constitutional considerations in making discretionary decisions within their authorized sphere of action—such as whether to enact or veto proposed legislation or exercise prosecutorial discretion. When, however, a duly enacted statute imposes a ministerial duty upon an executive official to follow the dictates of the statute in performing a mandated act, the official generally has no *****231** ****464** the statutory mandate based on the official's own determination that the statute is unconstitutional. (See, e.g., *Kendall v. United States* (1838) 37 U.S. (12 Pet.) 524, 613, 9 L.Ed. 1181 ["To contend that the obligation imposed on the president to see the ***1069** laws faithfully executed implies a power to forbid their execution is a novel construction of the constitution, and entirely inadmissible"].)

Accordingly, for the reasons that follow, we agree with petitioners that local officials in San Francisco exceeded their authority by taking official action in violation of applicable statutory provisions. We therefore shall issue a writ of mandate directing the officials to enforce those provisions unless and until they are judicially determined to be unconstitutional and to take all necessary remedial steps to undo the continuing effects of the officials' past unauthorized actions, including making appropriate corrections to all relevant official records and notifying all affected same-sex couples that the same-sex marriages authorized by the officials are void and of no legal effect.

To avoid any misunderstanding, we emphasize that the substantive question of the constitutional validity of California's statutory provisions limiting marriage to a union between a man and a woman is not before our court in this proceeding, and our decision in this case is not intended, and should not be interpreted, to reflect any view on that issue. We hold only that in the absence of a judicial determination that such statutory provisions are unconstitutional, local executive officials lacked authority to issue marriage licenses to, solemnize marriages of, or register certificates of marriage for same-sex couples, and marriages conducted between same-sex couples in violation of the applicable statutes are void and of no legal effect. Should the applicable statutes be judicially determined to be unconstitutional in the future, same-sex couples then would be free to obtain valid marriage licenses and enter into valid marriages.

## I

The events that gave rise to this proceeding began on February 10, 2004, when Gavin Newsom, the Mayor of the City and County of San Francisco and a respondent in one of the consolidated cases before us, [2] sent a letter to ***1070** Nancy Alfaro, identified in the letter as the San Francisco County Clerk, [3] requesting that she "determine *****232** what changes should be made to the forms and documents used to apply for and issue marriage licenses in order to provide marriage licenses on a non-discriminatory basis, without regard to gender or sexual orientation." The mayor stated in his letter that "[t]he Supreme Courts in other states have held that equal protection provisions in their state constitutions prohibit ****465** discrimination against gay men and lesbians with respect to the rights and obligations flowing

from marriage," and explained that it is his "belief that these decisions are persuasive and that the California Constitution similarly prohibits such discrimination." The mayor indicated that the request to the county clerk was made "[p]ursuant to [his] sworn duty to uphold the California Constitution, including specifically its equal protection clause...." [4]

In response to the mayor's letter, the county clerk designed what she describes as "a gender-neutral application for public marriage licenses, and a gender-neutral marriage license," to be used by same-sex couples. The newly designed form altered the official state-prescribed form for the "Application ***1071** for Marriage License" and the "License and Certificate of Marriage" by eliminating the terms "bride," "groom," and "unmarried man and unmarried woman," and by replacing them with the terms "first applicant," "second applicant," and "unmarried individuals." The revised form also contained a new warning at the top of the form, advising applicants that "[b]y entering into marriage you may lose some or all of the rights, protections and benefits you enjoy as a domestic partner" and that "marriage of gay and lesbian couples may not be recognized as valid by any jurisdiction other than San Francisco, and may not be recognized as valid by any employer," and encouraging same-sex couples "to seek legal advice regarding the effect of entering into marriage." [5]

*****233** The county clerk, using the altered forms, began issuing marriage licenses to same-sex couples on February 12, 2004, and the county recorder thereafter registered marriage certificates submitted on behalf of same-sex couples who had received licenses from the city and had participated in marriage ceremonies. The declaration of the county clerk, filed in this court on March 5, 2004, indicates that as of that date, the clerk had issued more than approximately 4,000 marriage licenses to same-sex couples. In more recent filings, the city has indicated that approximately 4,000 same-sex marriages have been performed under licenses issued by the County Clerk of the City and County of San Francisco.

On February 13, 2004, two separate actions were filed in San Francisco County Superior Court seeking to halt the city's issuance of marriage licenses to same-sex couples and the solemnization and registration of marriages of such couples. (*Thomasson v. Newsom* (Super. Ct. S.F. City and County, 2004, No. CGC–04–428794)); ****466** *Proposition 22 Legal Defense and Education Fund v. City and County of San Francisco* (Super. Ct. S.F. City and County, 2004, No. CPF–04–50943 (hereafter *Proposition 22 Legal Defense* ).) In each case, a request for an immediate stay of the city's actions was denied by the superior court after a hearing. [6]

***1072** On February 27, 2004, the Attorney General filed in this court a petition for an original writ of mandate, prohibition, certiorari, and/or other relief, and a request for an immediate stay. The petition asserted that the actions of the city officials in issuing marriage licenses to same-sex couples and solemnizing and registering the marriages of such couples are unlawful, and that the problems and uncertainty created by the growing number of these marriages justify intervention by this court. The petition pointed out that despite a directive issued by the state Registrar of Vital Statistics, the San Francisco County Recorder had not ceased the practice of registering marriage certificates submitted by same-sex couples on forms other than those approved by the State of California, and that officials of the federal Social Security Administration had raised questions regarding that agency's processing of name-change applications resulting from California marriages—not confined to single-sex marriages—because of the uncertainty as to whether certain marriage certificates issued in California are valid under state law. Noting that "[t]he Attorney General has the constitutional duty to see that the laws of the state are uniformly and adequately enforced" (see Cal. Const., art. V, § 13), the petition maintained that the existing "conflict and uncertainty, and the potential for future ambiguity, instability, *****234** and inconsistent administration among various jurisdictions and levels of government, present a legal issue of statewide importance that warrants immediate intervention by this Court." The petition requested that this court issue an order (1) directing the local officials to comply with the applicable statutes in issuing marriage licenses and certificates, (2) declaring invalid the same-sex marriage licenses and certificates that have been issued, and (3) directing the city to refund any fees collected in connection with such licenses and certificates.

Anticipating that the respondent city officials likely would oppose the petition by arguing that the applicable state laws are unconstitutional, the petition maintained that such a claim could not justify the officials' issuance of same-sex marriage licenses in violation of state law "because article III, section 3.5 of the California Constitution prohibits administrative agencies from declaring state laws unconstitutional in the absence of an appellate court determination." The petition asserted that "[t]he county is a political subdivision of the state charged with administering state government, and local registrars of vital statistics act as state officers. The state's

  

agents at the local level simply cannot refuse to enforce state law."

***1073** Although the Attorney General's petition acknowledged that the court could grant the relief requested in the petition without reaching the substantive question of the constitutionality of the California statutes limiting marriage to a man and a woman, the petition urged that we also resolve the substantive constitutional issue at this time, arguing that "[a]s the issues presented are pure legal issues, and there is no need for the development of a factual record, these issues are ready for this Court's review."

On February 25, 2004, two days prior to the filing of the petition in *Lockyer,* the petition in *Lewis* was filed in this court. In *Lewis,* three residents and taxpayers in the City and County of San Francisco sought a writ of mandate to compel the county clerk to cease and desist issuing marriage licenses to couples other than those who meet state law marriage requirements and on forms that do not comply with state law license requirements, and also sought an immediate stay ****467** pending the court's determination of the petition.

After receiving the petitions in *Lockyer* and *Lewis,* we requested that the city file an opposition to the petition in each case on or before March 5, 2004. The city filed its opposition to the petitions on March 5, arguing that the provisions of article III, section 3.5 of the California Constitution do not apply to local officials and that, in any event, under the supremacy clause of the United States Constitution, California Constitution article III, section 3.5 could not properly be applied to preclude a local official from refusing to enforce a statute that the official believes violates the federal Constitution. With regard to the question of the constitutionality of California's statutory ban on same-sex marriages, the opposition maintained that "the issue is one best left to the lower courts in the first instance to undertake the extensive fact-finding that will be necessary." [7]

On March 11, 2004, we issued an order in both *Lockyer* and *Lewis* directing the city officials to show cause why a writ of mandate should not issue requiring the officials to apply and abide by the current California marriage statutes in the absence *****235** of a judicial determination that the statutory provisions are unconstitutional. Pending our determination of these matters, we directed the officials to enforce the existing marriage statutes and refrain from issuing marriage licenses or certificates not authorized by such provisions. We also stayed all proceedings in the two pending San Francisco County Superior Court cases (the *Proposition 22 Legal Defense* action and the *Thomasson v. Newsom* action), but specified that the stay "does not ***1074** preclude the filing of a separate action in superior court raising a substantive constitutional challenge to the current marriage statutes."

Our March 11 order also specified that the return to be filed by the city officials in each case was to be limited "to the issue whether respondents are exceeding or acting outside the scope of their authority in refusing to enforce the provisions of Family Code sections 300, 301, 308.5, and 355 in the absence of a judicial determination that such provisions are unconstitutional," and that in addressing this issue, the return "should discuss not only the applicability and effect of article III, section 3.5 of the California Constitution" but also any other constitutional or statutory provisions or legal doctrines that bear on the question whether the city officials acted outside the scope of their authority in refusing to comply with the applicable statutes in the absence of a judicial determination that the statutes are unconstitutional.

Our March 11 order further established an expedited briefing schedule and indicated that the court would hear oral argument in these matters at its late May 2004 or June 2004 oral argument calendar. After receiving the briefs filed by the parties and numerous amici curiae, we requested that the parties file supplemental letter briefs addressing several questions relating to the validity of the marriage licenses and certificates of registry of marriage that already had been issued or registered by city officials to or on behalf of same-sex couples. The supplemental briefs were timely filed, and the cases were argued before this court on May 25, 2004. After oral argument, we filed an order consolidating the two cases for decision.

**II**

**[1]** It is well settled in California that "the Legislature has full control of the subject of marriage and may fix the conditions under which the marital status may be created or terminated...." (*McClure v. Donovan* (1949) 33 Cal.2d 717, 728, 205 P.2d 17.) "The regulation of marriage and divorce is solely within the province of the Legislature, except as the same may be restricted by the Constitution." (*Beeler v. Beeler* (1954) 124 Cal.App.2d 679, 682, 268 P.2d 1074; see, e.g., *Estate of DePasse* (2002) 97 Cal.App.4th 92, 99, 118 Cal.Rptr.2d 143.) In view of the primacy of the Legislature's role in this area, we begin by setting forth the relevant statutes relating to marriage that have some bearing on the issue

before us. As we shall ****468** see, the Legislature has dealt with the subject of marriage in considerable detail.

As applicable to the issues presented by this case, the relevant statutes dealing with marriage are contained in the Family Code and the Health and Safety Code.

***1075** The provisions regarding the validity of marriage are set forth in Family Code sections 300 to 310.

Section 300 provides in full: "*Marriage is a personal relation arising out of a civil contract between a man and a woman,* to which the consent of the parties capable of making that contract is necessary. Consent alone does not constitute marriage. Consent must be followed by the issuance of a license and solemnization as authorized *****236** by this division, except as provided by Section 425 [8] and Part 4 (commencing with Section 500).[9]" (Italics added.)

Section 301 provides: "*An unmarried male of the age of 18 years or older, and an unmarried female of the age of 18 or older,* and not otherwise disqualified, *are capable of consenting to and consummating marriage.*" (Italics added.)

Section 308.5 provides: "*Only marriage between a man and a woman is valid or recognized in California.*" (Italics added.)

In the opposition filed in this court, the city takes the position that neither section 301 nor section 308.5 is relevant to the question whether current California statutes limit marriages performed in California to marriages between a man and a woman,[10] but the city concedes that section 300, both ***1076** by its terms and its purpose, imposes such a limitation on marriages performed in California.[11] Because we agree that section 300 clearly establishes that current California statutory law limits marriage to couples comprised of a man and a woman, we need not and do not *****237** address the scope or effect of sections 301 and 308.5 in this case.

The Family Code provisions relating to marriage licenses and to the certificate of ****469** registry of marriage are set forth in Family Code sections 350 to 360. These statutes provide that "before entering a marriage, ... the parties shall first obtain a marriage license from a county clerk" (Fam.Code, § 350), and the provisions state what information must be contained on the license (Fam.Code, § 351) and place the responsibility on the county clerk to ensure that the statutory requirements for obtaining a marriage license are satisfied. (Fam.Code, § 354.) The statutes also specifically provide that the forms for (1) the application for a marriage license, (2) the marriage license, and (3) the certificate of registry of marriage that are to be used by the county clerk and provided to the applicants "shall be prescribed by the State Department of Health Services." (Fam.Code, §§ 355, 359.)[12]

***1077** Provisions regarding the solemnization of marriage are set forth in Family Code sections 400 to 425. These statutes contain a list of the numerous persons who may solemnize a marriage under California *****238** law (Fam.Code, § 400), and require the person solemnizing a marriage (1) to require the applicants to present the marriage license to him or her prior to solemnization (Fam.Code, § 421), (2) to sign and endorse upon or attach to the marriage license a statement, "in the form prescribed by the State Department of Health Services," setting forth specified information (Fam.Code, § 422), and (3) to return the marriage license, with the requisite endorsement, to the county recorder of the county in which the license was issued within 30 days after the marriage ceremony. ****470** (Fam.Code, § 423.)[13]

The Health and Safety Code contains numerous additional provisions prescribing in detail the procedures governing marriage licenses and marriage ***1078** certificates as part of the state's registration and maintenance of vital statistics. These statutes designate the California Director of Health Services as the State Registrar of Vital Statistics (Health & Saf.Code, § 102175) and provide that "[e]ach live birth, fetal death, death, and *marriage* that occurs in this state shall be registered as provided in this part *on the prescribed certificate forms* ...." (Health & Saf.Code, § 102100, italics added.) The statutes also specify that "[t]he State Registrar is charged with the execution of this part in this state, *and has supervisory power over local registrars, so that there shall be uniform compliance with all the requirements of this part* " (Health & Saf.Code, § 102180, italics added), that "[t]he Attorney General will assist in the enforcement of this part upon request of the State Registrar" (Health & Saf.Code, § 102195), and that "[t]he State Registrar *shall prescribe and furnish all record forms for use in carrying out the purpose of this part, ... and no record forms or formats other than those prescribed shall be used.*" (Health & Saf.Code, § 102200, italics added.)[14] The code also contains a specific provision pertaining to all of the official forms related to marriage, which expressly provides that "[*t* ]*he forms for the application for license to marry, the certificate of registry of marriage including the license to marry, and the marriage*

*certificate shall be prescribed by the State Registrar.*" (Health & Saf.Code, § 103125, italics added.)

The relevant Health and Safety Code statutes also specify that "[t]he county recorder is the local registrar of marriages and shall perform all the duties of the local registrar of marriages" (Health & Saf.Code, § 102285), and that "[e]ach local registrar is hereby charged with the enforcement of this part in his or her registration district *under the supervision and direction of the State Registrar and shall make an immediate report to the State* ***239** *Registrar of any violation of this law coming to his or her knowledge.*" (Health & Saf.Code, § 102295, italics added.) The statutes also provide that "[t]he local registrar of marriages shall carefully examine each certificate before acceptance for registration and, if it is incomplete or unsatisfactory, he or she shall require any further information to be furnished as may be necessary to make the record satisfactory before acceptance for registration." (Health & Saf.Code, § 102310.)

Pursuant to the foregoing provisions, the State Registrar of Vital Statistics (who, as noted, is also the California Director of Health Services) has prescribed a form—Department of Health Services Form VS–117—which serves as the application for license to marry, the license to marry, and the certificate of registry of marriage. One of the principal California family law practice guides describes the relevant portions of the form as follows: "The ***1079** first three sections of the form (Groom Personal Data, Bride Personal Data, and Affidavit) constitute the application for license to marry. The personal data sections are filled out by the court clerk, using information and/or documents provided by the applicants. The bride and groom must both sign the application (*see* ****471** lines 23 [entitled Signature of Groom], 24 [entitled Signature of Bride] ) after the personal data sections have been completed. The fourth section of the form (lines 25A–25F) constitutes the license to marry. This section is to be completed by the clerk." (1 Kirkland et al., Cal. Family Law: Practices and Procedure (2d ed. 2003) Validity of Marriage, Forms, § 10.100[1], p. 10–80.)

The city acknowledges that the county clerk altered the form prescribed by the State Registrar of Vital Statistics by replacing references to "bride," "groom," and "unmarried man and unmarried woman" with references to "first applicant," "second applicant," and "unmarried individuals," that the county clerk further issued marriage licenses to same-sex couples, and that the county recorder registered certificates of registry of marriage for such couples, despite the knowledge of these officials that the current California statutes do not authorize such actions. The city defends the actions of these officials on the ground that they were based on the belief that the statutory restriction in California law limiting marriage to a man and a woman is unconstitutional. The principal question before us is whether the local officials exceeded or acted outside of their authority in taking these actions.

**III**

In light of several questions raised by the briefs filed by the city in this court, we begin with a brief discussion of the respective roles of state and local officials with regard to the enforcement of the marriage statutes (in particular, the issuance of marriage licenses and the registering of marriage certificates), and of the nature of the duties of local officials under the applicable statutes.

**A**

**[2]** As is demonstrated by the above review of the relevant statutory provisions, the Legislature has enacted a comprehensive scheme regulating marriage in California, establishing the substantive standards for eligibility for marriage and setting forth in detail the procedures to be followed and the public officials who are entrusted with carrying out these procedures. In light of both the historical understanding reflected in this statutory scheme and the statutes' repeated emphasis on the importance of having uniform rules and procedures apply throughout the ***240** state to the subject of marriage, ***1080** there can be no question but that marriage is a matter of "statewide concern" rather than a "municipal affair" (see Cal. Const., art. XI, §§ 4, 5, 6; see, e.g., *California Fed. Savings & Loan Assn. v. City of Los Angeles* (1991) 54 Cal.3d 1, 17, 283 Cal.Rptr. 569, 812 P.2d 916), and that state statutes dealing with marriage prevail over any conflicting local charter provision, ordinance, or practice.

**[3]** **[4]** Furthermore, the relevant statutes also reveal that the only local officials to whom the state has granted authority to act with regard to marriage licenses and marriage certificates are *the county clerk* and *the county recorder.* The statutes do not authorize the mayor of a city (or city and county, as is San Francisco) or any other comparable local official to take any action with regard to the process of issuing marriage licenses or registering marriage certificates. Although a mayor may have authority under a local charter to supervise and control the actions of a county clerk or

county recorder with regard to other subjects, a mayor has no authority to expand or vary the authority of a county clerk or county recorder to grant marriage licenses or register marriage certificates under the governing state statutes, or to direct those officials to act in contravention of those statutes. (See, e.g., *Coulter v. Pool* (1921) 187 Cal. 181, 187, 201 P. 120 ["A public officer is a public agent and as such acts only on behalf of his principal.... The most general characteristic of a public officer ... is that a public duty is delegated and entrusted to him, as agent, *the performance of which is an exercise of a part of the governmental functions of the particular political unit for which he, as agent, is acting*" (Italics added) ]; *Sacramento v. Simmons* (1924) 66 Cal.App. 18, 24–25, 225 P. 36 [when state statute designated local health officers as local registrars of vital statistics, "to the extent [such officials] are discharging such duties they are acting as state officers. *They are state officers performing state functions and are under the* ****472** *exclusive jurisdiction of the state registrar of vital statistics* " (italics added) ]; *Boss v. Lewis* (1917) 33 Cal.App. 792, 794, 166 P. 843 [city clerk, when acting as local registrar of vital statistics under state law, is state officer].)

**[5]** Accordingly, to the extent the mayor purported to "direct" or "instruct" the county clerk and the county recorder to take specific actions with regard to the issuance of marriage licenses or the registering of marriage certificates, we conclude he exceeded the scope of his authority. (See, e.g., *Sacramento v. Simmons, supra,* 66 Cal.App. 18, 24–28, 225 P. 36.) [15] Furthermore, if the county clerk or the county recorder acted in this case in contravention of the ***1081** applicable statutes solely at the behest of the mayor and not on the basis of the official's own determination that the statutes are unconstitutional, such official also would appear to have acted improperly by abdicating the statutory responsibility imposed directly on him or her as a state officer. (See, e.g., *****241** *California Radioactive Materials Management Forum v. Department of Health Services* (1993) 15 Cal.App.4th 841, 874, 19 Cal.Rptr.2d 357, disapproved on another point in *Carmel Valley Fire Protection Dist. v. State of California* (2001) 25 Cal.4th 287, 305, fn. 5, 105 Cal.Rptr.2d 636, 20 P.3d 533 ["An executive or administrative officer can no more abdicate responsibility for executing the laws than the Legislature can be permitted to usurp it"].)

Although it is not clear that the county clerk and the county recorder acted on the basis of each individual official's own opinion or determination as to the unconstitutionality of the applicable statutes (see fn. 15, *ante* ), and the actions of these officials might be vulnerable to challenge on that ground alone, it is nonetheless appropriate in this case to address the question whether a public official may refuse to enforce a statute when he or she determines the statute to be unconstitutional. The city maintains that when, as here, a public official has asserted in a mandate proceeding that a statutory provision that the official has refused to enforce is unconstitutional, a court may not issue a writ of mandate to compel the official to perform a ministerial duty prescribed by the statute unless the court first determines that the statute is constitutional. If, however, the controlling rule of law requires such an official to carry out a ministerial duty dictated by statute unless and until the statute has been judicially determined to be unconstitutional, it follows that such an official cannot *compel* a court to rule on the constitutional issue by refusing to apply the statute and that a writ of mandate properly may issue, without a judicial determination of the statute's constitutionality, directing the official to comply with the statute unless and until the statute has been judicially determined to be unconstitutional. Accordingly, in deciding whether a writ of mandate should issue, it is appropriate to determine whether the city officials were obligated to comply with the ministerial duty prescribed by statute without regard to their view of the constitutionality of the statute.

**B**

**[6]** **[7]** In addition, we believe it is appropriate to clarify at the outset that, under the statutes reviewed above, the duties of the county clerk and the county recorder at issue in this case properly are characterized as *ministerial* rather than discretionary. When the substantive and procedural requirements ***1082** established by the state marriage statutes are satisfied, the county clerk and the county recorder each has the respective mandatory duty to issue a marriage license and record a certificate of registry of marriage; in that circumstance, the officials have no discretion to withhold a marriage license or refuse to record a marriage certificate. By the same ****473** token, when the statutory requirements have not been met, the county clerk and the county recorder are not granted any discretion under the statutes to issue a marriage license or register a certificate of registry of marriage. As we stated recently in *Kavanaugh v. West Sonoma County Union High School Dist.* (2003) 29 Cal.4th 911, 916, 129 Cal.Rptr.2d 811, 62 P.3d 54: " 'A ministerial act is an act that a public officer is required to perform in a prescribed manner in obedience to the mandate of legal authority and without regard to his own judgment or opinion concerning such act's propriety or impropriety, when a given state of facts exists.' "

  

Thus, the issue before us is whether under California law the authority of a local executive official, charged with the ministerial duty of enforcing a state statute, includes the authority to disregard the statutory requirements when the official is of the opinion the provision is unconstitutional ***242 but there has been no judicial determination of unconstitutionality.

**IV**

**[8]** In the opposition and supplemental opposition filed in this court, the city maintains that a local executive official's general duty and authority to apply the law includes the authority to refuse to apply a statute whenever the official believes it to be unconstitutional, even in the absence of a judicial determination of unconstitutionality and even when the duty prescribed by the statute is ministerial. The city asserts that such authority flows from every public official's duty "to conform [his or her] acts to constitutional norms." The Attorney General argues, by contrast, that it is well established that a duly enacted statute is presumed to be constitutional, and he maintains that "the prospect of local governmental officials unilaterally defying state laws with which they disagree is untenable and inconsistent with the precepts of our legal system."

As we shall explain, we conclude that a local public official, charged with the ministerial duty of enforcing a statute, generally does not have the authority, in the absence of a judicial determination of unconstitutionality, to refuse to enforce the statute on the basis of the official's view that it is unconstitutional. [16]

***1083 A**

In the initial petitions filed in this matter, petitioners relied primarily on the provisions of article III, section 3.5 of the California Constitution (hereafter generally referred to as article III, section 3.5) in maintaining that the challenged actions of the local officials were improper.

Article III, section 3.5 provides in full: "An administrative agency, including an administrative agency created by the Constitution or an initiative statute, has no power: [¶] (a) To declare a statute unenforceable, or refuse to enforce a statute, on the basis of its being unconstitutional unless an appellate court has made a determination that such statute is unconstitutional. [¶] (b) To declare a statute unconstitutional. [¶] (c) To declare a statute unenforceable, or to refuse to enforce a statute on the basis that federal law or federal regulations prohibit the enforcement of such statute unless an appellate court has made a determination that the enforcement of such statute is prohibited by federal law or federal regulations."

Article III, section 3.5 does not define the term "administrative agency" as used in this constitutional provision. Petitioners maintain that in light of the purpose of the provision, the term "administrative agency" should be interpreted to include local executive officials, particularly local officials who **474 are acting as state officers in carrying out a function prescribed by state statute.

Article III, section 3.5 was proposed by the Legislature and placed before the voters as Proposition 5 at the June 6, 1978 ***243 election, and was adopted by the electorate. The ballot argument in favor of Proposition 5, contained in the election brochure distributed to voters prior to the election, stated in part: "Every statute is enacted only after a long and exhaustive process, involving as many as four open legislative committee meetings where members of the public can express their views. If the agencies question the constitutionality of a measure, they can present testimony at the public hearing during legislative consideration. Committee action is followed by full consideration by both houses of the Legislature. [¶] Before the Governor signs or vetoes a bill, he receives analyses from the agencies which will be called upon to implement its provisions. If the Legislature has passed the bill over the objections of the agency, the Governor is not likely to ignore valid apprehensions of his department, as he is Chief Executive of the State and is *1084 responsible for most of its administrative functions. [¶] Once the law has been enacted, however, it does not make sense for an administrative agency to refuse to carry out its legal responsibilities because the agency's members have decided the law is invalid. Yet, administrative agencies are so doing with increasing frequency. These agencies are all part of the Executive Branch of government, charged with the duty of enforcing the law. [¶] The Courts, however, constitute the proper forum for determination of the validity of State statutes. There is no justification for forcing private parties to go to Court in order to require agencies of government to perform the duties they have sworn to perform. [¶] Proposition 5 would prohibit the State agency from refusing to act under such circumstances, unless an appellate court has ruled the statute is invalid. [¶] We urge you to support this Proposition 5 in order to insure that appointed officials do not refuse to carry out their duties by usurping the authority of the Legislature and the Courts. Your passage of Proposition 5 will help preserve the

  

concept of the separation of powers so wisely adopted by our founding fathers." (Ballot Pamp. Primary Elec. (June 6, 1978) argument in favor of Prop. 5, p. 26.) Petitioners maintain that the rationale set forth in this ballot argument applies to local executive officials as well as state administrative agencies, and thus that the term "administrative agency" as used in the provision properly should be construed to apply to local executive officials.

The city vigorously contests petitioners' suggested interpretation of article III, section 3.5, maintaining that this provision is addressed only to state, not local, administrative agencies, and that in any event the local officials here at issue are not an "administrative agency" within the meaning of article III, section 3.5. The city concedes there may be some anomaly in article III, section 3.5's application only to state administrative agencies and not to local executive officials, but insists such an anomaly "would not be license to rewrite Section 3.5 and give it a meaning nobody had in mind when it was passed." The city argues that "[t]he voters were responding to a specific problem [involving state administrative agencies] when they enacted Section 3.5, and they chose specific means to address that problem. In the end, if some in hindsight question the wisdom of that choice, the answer lies in amending California's Constitution, not judicially rewriting it." In sum, the city asserts that the existing terms of article III, section 3.5 cannot properly be interpreted to include local executive officials.

Although one Court of Appeal decision contains language directly supporting petitioners' argument that article III, section 3.5's reference to administrative agencies properly is interpreted to include local executive officials such as county clerks ***244 (*Billig v. Voges* (1990) 223 Cal.App.3d 962, 969, 273 Cal.Rptr. 91 (*Billig* )), the city maintains that the question of the proper scope of article III, section 3.5 never was raised in *Billig,* and further that the *1085 pertinent language in *Billig* clearly is dictum. Accordingly, the city argues, the appellate court's decision in *Billig* cannot properly be viewed as resolving **475 the issue whether article III, section 3.5 applies to local officials. [17]

As we shall explain, we have determined that we need not (and thus do not) decide in this case whether the actions of the local executive officials here at issue fall within the scope or reach of article III, section 3.5, because *1086 we conclude that prior to the adoption of article III, section 3.5, it already was established under California law—as in the overwhelming majority of other states (see, ***245 *post,* 17 Cal.Rptr.3d at pp. 260–263, 95 P.3d at pp. 486–490)—that a local executive official, charged with a ministerial duty, generally lacks authority to determine that a statute is unconstitutional and on that basis refuse to apply the statute. Because the adoption of article III, section 3.5 plainly *did not grant or expand* the authority of local executive officials to determine that a statute is unconstitutional and to act in contravention of the statute's terms on the basis of such a determination, we conclude that the city officials do not possess this authority and that the actions challenged in the present case were unauthorized and invalid.

**B**

We begin with a few basic legal principles that were well established prior to the adoption of article III, section 3.5 in 1978.

**[9]** **[10]** First, one of the fundamental principles of our constitutional system of government is that a statute, once duly enacted, "is presumed to be constitutional. Unconstitutionality must be clearly shown, and doubts will be resolved in favor of its validity." (7 Witkin, Summary of Cal. Law (9th ed. 1988) **476 Constitutional Law, § 58, pp. 102–103 [citing, among numerous other authorities], *In re Madera Irrigation District* (1891) 92 Cal. 296, 308, 28 P. 272; *San Francisco v. Industrial Acc. Com.* (1920) 183 Cal. 273, 280, 191 P. 26; *People v. Globe Grain and Mill. Co.* (1930) 211 Cal. 121, 127, 294 P. 3.)

**[11]** Second, it is equally well established that when, as here, a public official's authority to act in a particular area derives wholly from statute, the scope of that authority is measured by the terms of the governing statute. "It is well settled in this state and elsewhere, that when a statute prescribes the particular method in which a public officer, acting under a special authority, shall perform his duties, the mode is the measure of the power." (*Cowell v. Martin* (1872) 43 Cal. 605, 613–614; see, e.g., *County of Alpine v. County of Tuolumne* (1958) 49 Cal.2d 787, 797, 322 P.2d 449; *California State Restaurant Assn. v. Whitlow* (1976) 58 Cal.App.3d 340, 346–347, 129 Cal.Rptr. 824["[a]dministrative bodies and officers have only such powers as have expressly or impliedly been conferred upon them by the Constitution or by statute"].)

The city has not identified any provision in the California Constitution or in the applicable statutes that purports to grant the county clerk or the county recorder (or any other local official) the authority to determine the constitutionality of the statutes each public official has a ministerial duty to

enforce. Instead, the city's position appears to be that a public executive official's duty ***1087** to follow the law (including the Constitution) includes the implied or inherent authority to refuse to follow an applicable statute whenever the official personally believes the statute to be unconstitutional, even though there has been no judicial determination of the statute's unconstitutionality and despite the existence of the rule that a duly enacted statute is presumed to be constitutional.

As we shall see, the California authorities that were in place prior to the adoption of article III, section 3.5, do not support the city's position.

**C**

Although in this case we need not determine the scope of article III, section 3.5, the historical background that led to the proposal and adoption of that constitutional provision in 1978 nonetheless provides a useful starting point for our analysis. As this court explained in *Reese v. Kizer* (1988) 46 Cal.3d 996, 1002, 251 Cal.Rptr. 299, 760 P.2d 495, "[a]rticle III, section 3.5, *****246** ... was placed on the ballot by a unanimous vote of the Legislature in apparent response to this court's decision in *Southern Pac. Transportation v. Public Utilities Com.* (1976) 18 Cal.3d 308, 134 Cal.Rptr. 189, 556 P.2d 289 [hereafter *Southern Pacific*], in which the majority held that the Public Utilities Commission had the power to declare a state statute unconstitutional." Accordingly, the decision in *Southern Pacific* is an appropriate place to begin.

In *Southern Pacific,* the plaintiff railroad company sought review of two decisions of the Public Utilities Commission (PUC) in which the PUC held that section 1202.3 of the Public Utilities Code, a statute enacted in 1971, was unconstitutional. Section 1202.3 was one of a number of statutes in the Public Utilities Code dealing with railroad crossings. With respect to private or farm railroad crossings, Public Utilities Code section 7537(1) granted "the owner of adjoining lands the right to *private* or *farm* crossings necessary or convenient for egress or ingress" (*Southern Pacific, supra,* 18 Cal.3d at p. 311, 134 Cal.Rptr. 189, 556 P.2d 289), (2) provided that the railroad must maintain the crossings, and (3) granted the PUC the authority to fix and assess the cost of such crossings. With respect to railroad crossings on *public* or *publicly used roads,* Public Utilities Code section 1202 gave the PUC the exclusive power "to regulate *public* or *publicly used* road or highway crossings, including locating, maintaining, protecting, and closing them" (*Southern Pacific, supra,* 18 Cal.3d at p. 312, 134 Cal.Rptr. 189, 556 P.2d 289), and further granted the PUC the authority to allocate costs among the railroad and the affected public entities responsible for maintaining the public or publicly used road, including any costs involved in closing a crossing.

****477** Public Utilities Code section 1202.3, the statute at issue in *Southern Pacific,* provided, in turn, that in any proceeding under ***1088** Public Utilities Code section 1202 "involving a *publicly used* road or highway not on a publicly maintained road system," the PUC could apportion costs to the public entity if the PUC found "(a) express dedication and acceptance of the road or (b) a judicial determination of implied dedication." (*Southern Pacific, supra,* 18 Cal.3d at p. 312, 134 Cal.Rptr. 189, 556 P.2d 289.) If neither condition was found, section 1202.3 provided that the PUC "shall order the crossing abolished by physical closing." Section 1202.3 further provided that "the railroad shall in no event be required to bear improvement costs 'in excess of what it would be required to bear in connection with the improvement of a public street or highway crossing.' " (*Southern Pacific, supra,* 18 Cal.3d at pp. 312–313, 134 Cal.Rptr. 189, 556 P.2d 289.)

In *Southern Pacific,* the PUC concluded in an administrative proceeding that Public Utilities Code section 1202.3 was unconstitutional because it unlawfully delegated the state's police power to private litigants by granting private litigants absolute discretion to require the closing of a railroad crossing merely by commencing a proceeding under Public Utilities Code section 1202. The PUC's conclusion was based in part on its determination that under section 1202.3, once the PUC found that there had been neither an express dedication and acceptance of the publicly used road, nor a judicial determination of an implied dedication of the road, the PUC had no alternative but to order the crossing closed and to require the railroad to pay for the closing. (*Southern Pacific, supra,* 18 Cal.3d at p. 313, 134 Cal.Rptr. 189, 556 P.2d 289.)

*****247** On review, this court unanimously disagreed with the PUC's constitutional determination. Observing that Public Utilities Code section 1202.3 provided, in its introductory phrase, that the statute applied "in any proceeding under Section 1202," the court in *Southern Pacific* reasoned that "the Legislature has declared that section 1202.3 is an exception to the former section and that the provisions for cost allocation and closing crossings in the latter section *are only applicable when the commission would otherwise have ordered improvement of a crossing pursuant to the former section.* The standard for compelling crossing improvement implicit in section 1202 is obviously public convenience

  

and necessity, including safety concerns [citations], and this standard must be read into section 1202.3. [¶] Thus, before the commission may close a crossing under section 1202.3, it must not only find public use and lack of requisite dedication, but also find that necessity and convenience preclude continued use of the crossing in its existing condition. Such findings—rather than mere commencement of a proceeding under section 1202—are the basis for closing a crossing under section 1202.3. [¶] The function of the private litigant within the statutory framework is merely to call the commission's attention to the need for improving or closing a crossing and perhaps to urge action on the commission." (*Southern Pacific, supra,* 18 Cal.3d at p. 314, 134 Cal.Rptr. 189, 556 P.2d 289, italics added.)

***1089** As noted, in *Southern Pacific* all of the justices of this court agreed that the PUC had erred in concluding that Public Utilities Code section 1202.3 was unconstitutional. Although the briefs filed in this court in *Southern Pacific* did not raise any question regarding the authority of the PUC to determine the constitutionality of section 1202.3, [18] and the majority in *Southern Pacific* did not address that question in the text of the opinion, Justice Mosk authored a vigorous concurring and dissenting opinion in *Southern Pacific,* arguing strongly that neither the PUC nor any other administrative agency "may declare a duly enacted statute unconstitutional," and that "it is incongruous for the will of the people of the state, reflected by their elected legislators, to be thwarted by a governmental body which exists only to implement that will." (*Southern Pacific, supra,* 18 Cal.3d at p. 315, 134 Cal.Rptr. 189, 556 P.2d 289 (conc. & dis. opn. of Mosk, J.).)

****478** Justice Mosk's concurring and dissenting opinion in *Southern Pacific* acknowledged that a prior California decision—*Walker v. Munro* (1960) 178 Cal.App.2d 67, 2 Cal.Rptr. 737 (hereafter *Walker* )—had held that an administrative agency that has been granted judicial or quasi-judicial power by the California Constitution (a type of entity commonly referred to as a "constitutional agency") [19] has the authority to consider the constitutionality of a statute in the course of its quasi-judicial proceedings. Justice Mosk suggested, however, that *Walker* had been "indirectly *****248** criticized and implicitly disapproved" (*Southern Pacific, supra,* 18 Cal.3d at p. 316, 134 Cal.Rptr. 189, 556 P.2d 289 (conc. & dis. opn. of Mosk, J.)) in *State of California v. Superior Court* (1974) 12 Cal.3d 237, 250–251, 115 Cal.Rptr. 497, 524 P.2d 1281 (hereafter *State of California v. Superior Court (Veta)* ), and he took issue with "the debatable premise that any and all 'judicial power' inherently entails the authority to declare a law unconstitutional." (*Southern Pacific, supra,* 18 Cal.3d at p. 317, 134 Cal.Rptr. 189, 556 P.2d 289.) Relying upon language in numerous decisions of the United States Supreme Court indicating that an administrative agency or executive official has no power to adjudicate constitutional issues (*id.* at p. 316, 134 Cal.Rptr. 189, 556 P.2d 289), and decisions from other jurisdictions holding "that administrative agencies lack the powers appropriated in this case" (*ibid.*), Justice Mosk concluded that the extensive powers granted by the California Constitution to the PUC did not include the power to declare a statute unconstitutional and to refuse to apply it.

***1090** The majority in *Southern Pacific* responded to Justice Mosk's concurring and dissenting opinion in a lengthy footnote. (See *Southern Pacific, supra,* 18 Cal.3d 308, 311–312, fn. 2, 134 Cal.Rptr. 189, 556 P.2d 289.) The initial portion of the footnote contains some broad language that could be read to support the conclusion that the duty of any administrative agency or public official to obey the Constitution affords such agency or official the authority to determine the constitutional validity of statutes the agency or official is charged with enforcing. The majority in *Southern Pacific,* however, ultimately rested its holding that the PUC had the authority to determine the constitutional validity of statutes on the circumstance that the California Constitution grants broad judicial or quasi-judicial power to the PUC.

The majority in *Southern Pacific* stated in this regard: "[T]he Constitution and statutes of this state grant the commission wide administrative, legislative, and judicial powers. [Citations.] The Legislature has limited the judiciary from interfering with the commission by restricting review to the Supreme Court and by additionally restricting review to determining 'whether the commission has regularly pursued its authority, *including* a determination of whether the order or decision under review violates any right of the petitioner under the Constitution of the United States or of this State.' (Italics added; [citations].) Public Utilities Code section 1732 provides corporations and individuals may not raise matters in any court not presented to the commission on petition for rehearing, reflecting, when read with the judicial review sections, legislative determination that all issues must be presented to the commission. *Under the broad powers granted it, the commission may determine the validity of statutes.*" (*Southern Pacific, supra,* 18 Cal.3d at pp. 311–312, fn. 2, 134 Cal.Rptr. 189, 556 P.2d 289, italics added.)

This review of the decision in *Southern Pacific* demonstrates that there was a significant disagreement in this court on the particular question *whether a so-called constitutional agency* (like the PUC), *that has been granted the authority to exercise quasi-judicial power by the California Constitution,* has the authority to determine that a statute the agency is called upon to apply is unconstitutional and need not be followed. We are ****479** unaware, however, of any case, either prior to or subsequent to *Southern Pacific,* that suggests that under the California Constitution *a local executive official such as a county clerk,* who is charged with the *ministerial* duty to enforce a statute, has the authority *****249** to exercise judicial power by determining whether a statute is unconstitutional.

The case of *Walker, supra,* 178 Cal.App.2d 67, 2 Cal.Rptr. 737, cited (and criticized) in Justice Mosk's concurring and dissenting opinion in *Southern Pacific,* appears to be the first case in California to address the question whether an administrative agency has the authority to determine the constitutionality of a ***1091** statute that the agency is required to enforce. In *Walker,* the plaintiffs were retail liquor dealers who had been charged in an administrative proceeding before the Department of Alcoholic Beverage Control with violating the fair trade provisions of the California Alcoholic Beverage Control Act. While the administrative proceeding was pending, the plaintiffs filed a declaratory judgment action in superior court against the administrative officials, seeking a declaration that the fair trade provisions of the Alcoholic Beverage Control Act were unconstitutional, and an order enjoining the officials from enforcing those provisions. The trial court in *Walker* granted summary judgment in favor of the defendants, relying upon the circumstance that the same constitutional issue had been raised in the pending administrative proceeding and upon the trial court's conclusion "that it is more expeditious and proper that the Department rule on the question before the court is required to rule on it." (178 Cal.App.2d at p. 70, 2 Cal.Rptr. 737.)

On appeal, the plaintiffs argued that the exhaustion of remedies doctrine upon which the trial court had relied was inapplicable, because the Department of Alcoholic Beverage Control "does not have the power ... to decide constitutional questions." (*Walker, supra,* 178 Cal.App.2d at p. 73, 2 Cal.Rptr. 737.) In rejecting this contention, the Court of Appeal in *Walker* began by referring to the applicable provision of the California Constitution that empowers the Alcoholic Beverage Control Appeals Board to review questions " 'whether the department has proceeded without or in excess of its jurisdiction, whether the department has proceeded in the manner required by law, whether the decision is supported by the findings, and whether the findings are supported by substantial evidence in light of the whole record.' (Cal. Const., art. XX, § 22.)" (178 Cal.App.2d at p. 73, 2 Cal.Rptr. 737.) The court in *Walker* then observed: "The department and the Appeals Board are thus constitutional agencies *upon which limited judicial powers have been conferred.* [Citations.]" (*Ibid.,* italics added.)

In response to the plaintiffs' claim in *Walker* that the department only could make findings of fact and that the appeals board only was empowered "to review certain questions of law, which are only procedural" (*Walker, supra,* 178 Cal.App.2d at p. 74, 2 Cal.Rptr. 737), the court in *Walker* stated: "However, there does not appear to be any basis for so limiting the grant of power to the Appeals Board. The Appeals Board may determine whether the department acted within its jurisdiction. In *United Insurance Co. v. Maloney* [ (1954) ] 127 Cal.App.2d [155,] 157 [273 P.2d 579], the court stated: 'A charge of unconstitutional action goes to the very jurisdiction of the administrative officer or body to entertain the proceeding....' [Citation.] This would also seem applicable to a charge that the statute which the agency is seeking to enforce is unconstitutional." (*Walker, supra,* 178 Cal.App.2d at p. 74, 2 Cal.Rptr. 737.)

***1092** Accordingly, in concluding that the administrative agency in that case had the authority to determine, at least in the first instance, the question whether the fair trade statutes were unconstitutional, the court in *Walker* specifically relied upon the *****250** circumstance that the Alcoholic Beverage Control Appeals Board had been granted the authority by the California Constitution to exercise limited judicial power. [20]

****480** As noted in Justice Mosk's concurring and dissenting opinion in *Southern Pacific,* this court held in *State of California v. Superior Court (Veta), supra,* 12 Cal.3d 237, 115 Cal.Rptr. 497, 524 P.2d 1281, some years after the appellate court's decision in *Walker,* that a plaintiff seeking a declaration that the California Coastal Zone Conservation Act of 1972 was unconstitutional was not required to pursue that constitutional claim before the Coastal Zone Conservation Commission prior to bringing a court action. (12 Cal.3d at pp. 250–251, 115 Cal.Rptr. 497, 524 P.2d 1281.) Although there is some language in *Veta* critical of *Walker,* the two cases nonetheless are clearly and easily distinguishable, because the Coastal Zone Conservation Commission, unlike the Alcoholic Beverage Control Appeals Board, had not been

granted any judicial power by the California Constitution. Thus, the holding in *State of California v. Superior Court (Veta)* that the commission lacked authority to pass on the constitutionality of the statute establishing its status and functions was not inconsistent with the *Walker* decision.

In light of the foregoing review of the relevant case law, we believe that after this court's decision in *Southern Pacific, supra,* 18 Cal.3d 308, 134 Cal.Rptr. 189, 556 P.2d 289 the state of the law in this area was clear: administrative agencies that had been granted judicial or quasi-judicial power by the California Constitution possessed the authority, in the exercise of their administrative functions, to determine the constitutionality of statutes, but agencies that had not been granted such power under the California Constitution lacked such authority. (See *Hand v. Board of Examiners in Veterinary Medicine* (1977) 66 Cal.App.3d 605, 617–619, 136 Cal.Rptr. 187.) Accordingly, these decisions recognize that, under ***1093** California law, the determination whether a statute is unconstitutional and need not be obeyed is an exercise of judicial power and thus is reserved to those officials or entities that have been granted such power by the California Constitution. [21]

Given the foregoing decisions and their reasoning, it appears evident that under California law as it existed prior to the adoption of article III, section 3.5 of the California Constitution, *a local executive official,* such as a county clerk or county *****251** recorder, possessed no authority to determine the constitutionality of a statute that the official had a ministerial duty to enforce. If, in the absence of a grant of judicial authority from the California Constitution, an administrative agency that was required by law to reach its decisions only after conducting court-like quasi-judicial proceedings did not generally possess the authority to pass on the constitutionality of a statute that the agency was required to enforce, it follows even more so that a local executive official who is charged simply with the ministerial duty of enforcing a statute, and who generally acts without any quasi-judicial authority or procedure whatsoever, did not possess such authority. As indicated above, we are unaware of any California case that suggests such a public official has been granted judicial or quasi-judicial power by the California Constitution. [22]

****481** **[12]** The city, in arguing that article III, section 3.5 does not apply to local officials, relies upon the statement in *Strumsky v. San Diego County Employees Ret. Assn.* (1974) 11 Cal.3d 28, 36, 112 Cal.Rptr. 805, 520 P.2d 29, that the separation of powers clause in article III "is inapplicable to the government below the state level." [23] The city might well argue that this language in *Strumsky* also renders inapposite the line of California cases (*Southern* ***1094** *Pacific, supra,* 18 Cal.3d 308, 134 Cal.Rptr. 189, 556 P.2d 289; *State of California v. Superior Court (Veta), supra,* 12 Cal.3d 237, 115 Cal.Rptr. 497, 524 P.2d 1281; and *Walker, supra,* 178 Cal.App.2d 67, 2 Cal.Rptr. 737) that we have just discussed. The city fails to recognize, however, that the decision in *Strumsky* emphatically did *not* hold that under the California Constitution local executive officials are free to exercise judicial power. On the contrary, in *Strumsky* this court expressly *overruled* a line of earlier California decisions that had held (for purposes of determining the appropriate standard of judicial review of a decision of a local administrative agency) that such an agency could exercise judicial power; the opinion in *Strumsky* concluded instead that a local administrative agency has *no* authority under the California Constitution to exercise judicial power. (*Strumsky, supra,* 11 Cal.3d at pp. 36–44, 112 Cal.Rptr. 805, 520 P.2d 29.) In light of this holding in *Strumsky,* it appears clear that a local executive official who makes decisions— *****252** without the benefit of even a quasi-judicial proceeding—has no authority to exercise judicial power, such as by determining the constitutionality of applicable statutory provisions.

Accordingly, we conclude that at the time article III, section 3.5 was adopted, it was clear under California law that a local executive official did not have the authority to determine that a statute is unconstitutional or to refuse to enforce a statute in the absence of a judicial determination that the statute is unconstitutional. [24]

The adoption of article III, section 3.5, of course, effectively overruled the majority's holding in *Southern Pacific* and largely embraced the reasoning set forth in Justice Mosk's concurring and dissenting opinion, amending the California Constitution to provide that "[a]n administrative agency, *including an administrative agency created by the Constitution or an initiative statute, has no power ... [t]o ...* refuse to enforce a statute on the basis of its being unconstitutional unless an appellate court has made a determination that such ***1095** statute is unconstitutional." ****482** (Italics added.) As we already have noted, we need not and do not decide in this case what effect the adoption of article III, section 3.5 has on the authority of local executive officials, because it is abundantly clear that this constitutional amendment did not *expand* the authority of such officials so as to permit them to refuse to enforce a statute solely on

  

the basis of their view that the statute is unconstitutional. Accordingly, we conclude that under California law a local executive official generally lacks such authority.

**D**

In support of its contrary claim that, as a general matter, California law long has recognized that an executive public official has the authority to refuse to comply with a ministerial statutory duty whenever the official personally believes the statute is unconstitutional, the city relies upon a line of California decisions that have reviewed the validity of statutes or ordinances authorizing the issuance of bonds, the letting of public contracts, or the disbursement of public funds in mandate actions filed against public officials who refused to comply with a ministerial duty. As the city accurately notes, numerous California decisions addressing these three subjects have held that "mandate is the proper remedy to compel a public officer to perform ministerial acts such as issuance of bonds [and that] the constitutionality of the law authorizing a bond issuance may be determined in a proceeding for such a writ." ***253 (*California Housing Finance Agency v. Elliott* (1976) 17 Cal.3d 575, 579–580, 131 Cal.Rptr. 361, 551 P.2d 1193 [bond]; see, e.g., *California Educational Facilities Authority v. Priest* (1974) 12 Cal.3d 593, 598, 116 Cal.Rptr. 361, 526 P.2d 513 [bond]; *Metropolitan Water District v. Marquardt* (1963) 59 Cal.2d 159, 170–171, 28 Cal.Rptr. 724, 379 P.2d 28 [public contract]; *City of Whittier v. Dixon* (1944) 24 Cal.2d 664, 666, 151 P.2d 5 [warrant]; *Golden Gate Bridge etc. Dist. v. Felt* (1931) 214 Cal. 308, 315–320, 5 P.2d 585 [bond]; *Los Angeles Co. F.C. Dist. v. Hamilton* (1917) 177 Cal. 119, 121, 169 P. 1028 [bond]; *Denman v. Broderick* (1896) 111 Cal. 96, 99, 105, 43 P. 516 [warrant].)

In each of the foregoing cases, the mandate action was instituted after a public official who was under a statutory duty to perform a ministerial act that was a necessary step in the issuance of the bond, the letting of the contract, or the disbursement of public funds (such as affixing the official's signature to the bond or contract, or issuing a warrant) refused to perform that act based upon the official's ostensible doubts as to the constitutional validity of the statute authorizing the bond, contract, or public expenditure. The city emphasizes that in none of these cases did the court criticize such a public official for declining to perform his or her ministerial act, but instead concluded that the public official's refusal to act was an appropriate means of *1096 bringing the constitutional question of the validity of the bond, contract, or expenditure of public funds before the court for resolution. The city maintains that these decisions demonstrate that the general rule in California always has been that *every* public official is free to determine the constitutional validity of the statutory provisions that he or she has a ministerial duty to enforce or execute, and free to refuse to perform the ministerial act if he or she in good faith believes the statute to be unconstitutional. The city argues that the line of decisions we have analyzed above—holding, prior to the adoption of article III, section 3.5, that only administrative agencies constitutionally authorized to exercise judicial power have the authority to determine the constitutional validity of statutes—involved *a limited exception* applicable only to administrative agencies.

We believe the city's argument misconceives the state of the law prior to the adoption of article III, section 3.5. As we have discussed above, the general rule established by California decisions at the time *Southern Pacific, supra,* 18 Cal.3d 308, 134 Cal.Rptr. 189, 556 P.2d 289, was decided was that, among administrative agencies, only one that had been granted judicial power under the California Constitution possessed the authority to determine the constitutionality of a statute it was charged with enforcing and to decline to apply the statute if the agency determined it was unconstitutional. As already **483 explained, if a nonconstitutional administrative agency that rendered its decisions after an extensive quasi-judicial procedure—in which the arguments for and against constitutionality could be fully presented and considered in a quasi-judicial fashion—lacked authority to determine constitutional issues, it clearly would be anomalous to permit an ordinary executive official (who carries out his or her official action without the benefit of any sort of quasi-judicial procedures) to determine the constitutionality of a statute and to refuse to apply it based simply upon the official's own good faith belief that the statute is unconstitutional. Thus, the general rule in California—and, as we shall discuss below, in most jurisdictions—was (and continues to be) that an executive official does not possess such authority.

It is the line of public finance cases upon which the city relies that involves the exceptional ***254 situation. As the applicable decisions make clear, the public official in each of those cases was permitted to refuse to perform a ministerial act when he or she had doubts about the validity of the underlying bond, contract, or public expenditure, both in order to ensure that a mechanism was available for obtaining a timely *judicial* determination of the validity of the bond issue, contract, or public expenditure—a determination often essential to the marketability of bonds or to the contracting parties' willingness to go forward with the contract (see,

e.g., *Golden Gate Bridge etc. Dist. v. Felt, supra,* 214 Cal. 308, 315, 5 P.2d 585), or to avoid irreparable loss of public funds [25] —and in recognition of the circumstance that, in this specific context, the public official frequently faced potential *personal* liability (as distinguished from the potential liability of a governmental entity) if the bond, contract, or public expenditure ultimately was found to be invalid. (See, e.g., *Golden Gate Bridge etc. Dist. v. Felt,* ***1097** *supra,* 214 Cal. at pp. 316–317, 5 P.2d 585; *Denman v. Broderick, supra,* 111 Cal. 96, 105, 43 P. 516.)

Although the city points to language in some of these decisions that could be read to support the city's broad position here, the *holdings* in these cases clearly are limited to a public official's ability to refuse to perform a ministerial act necessary for the execution of a bond issue or public contract, or the disbursement of public funds, where such refusal permits a judicial determination prior to the actual sale of the bonds, the carrying out of the contract, or the disbursement of public funds, and where the official's personal liability frequently is at stake. Contrary to the city's contention, the circumstance that a public official may refuse to perform a ministerial act in that context does not signify that in all other contexts every public official is free to refuse to perform a ministerial act based upon the official's view that the statute the officer is statutorily obligated to apply is unconstitutional.

The city attempts to bring the present matter within the reach of the foregoing cases by arguing that if the city officials enforced California's current marriage laws limiting marriage to a man and a woman, the officials would face possible personal liability for monetary damages under state or federal law if the marriage statutes subsequently were determined to be unconstitutional. The city's argument in this regard clearly lacks merit.

First, as a matter of state law, Government Code section 820.6 explicitly provides that "[i]f a public employee acts in good faith, without malice, and under the apparent authority of an enactment that is unconstitutional, invalid, or inapplicable, he is not liable for an injury caused thereby except to the extent that he would have been liable had the enactment been constitutional, valid and applicable." Thus, the officials clearly would not have incurred liability under California law simply for following the current marriage statutes and declining to issue marriage licenses ****484** or register marriage certificates in contravention of those statutes. Second, under federal ***1098** law, a local public official generally is immunized from liability for official acts so long as the official's conduct "does not violate *clearly established* statutory or constitutional *****255** rights of which a reasonable person would have known" (*Harlow v. Fitzgerald* (1982) 457 U.S. 800, 818, 102 S.Ct. 2727, 73 L.Ed.2d 396, italics added; see *Anderson v. Creighton* (1987) 483 U.S. 635, 639, 107 S.Ct. 3034, 97 L.Ed.2d 523), and, as we discuss below (see, *post,* 17 Cal.Rptr.3d pp. 258–260, 95 P.3d pp. 486–489), in this instance there simply is no plausible argument that the city officials would have violated "clearly established" constitutional rights by continuing to enforce California's current marriage statutes in the absence of a judicial determination that the statutes are unconstitutional. (Cf. *LSO, Ltd. v. Stroh* (9th Cir.2000) 205 F.3d 1146, 1160 [finding state officials were not entitled to qualified immunity when "no reasonable official could have believed" that application of the statute at issue was constitutional in light of prior controlling judicial decisions].) Finally, even if the city officials were to be sued in their personal capacity for actions taken pursuant to statute and in the scope of their employment, under Government Code section 825 the officials would be entitled to have their public employer provide a defense and pay any judgment entered in such an action, whether the action was based on a state law claim or a claim under the federal civil rights statutes. (See *Williams v. Horvath* (1976) 16 Cal.3d 834, 842–848, 129 Cal.Rptr. 453, 548 P.2d 1125.) Accordingly, there is no merit to the city's contention that the actions of the city officials that are challenged here can be defended as necessary to avoid the incurring of personal liability on the part of such officials.

**E**

Some academic commentators, while confirming that as a general rule executive officials must comply with duly enacted statutes even when the officials believe the provisions are unconstitutional, have suggested that there may be room to recognize an exception to this general rule in instances in which a public official's refusal to apply the statute would provide the most practical or reasonable means of enabling the question of the statute's constitutionality to be brought before a court. (See, e.g., May, *Presidential Defiance of "Unconstitutional" Laws: Reviving the Royal Prerogative* (1994) 21 Hastings Const. L.Q. 865, 994–996.) [26] As we have just seen, the line of public finance cases relied upon by the city may be viewed as an example of ***1099** just such a limited exception, and there are a number of other California decisions in which a constitutional challenge to a statute or other legislative enactment has been brought before a court for judicial resolution by virtue of a public entity's refusal

to comply with the statute, under circumstances in which the public entity had a personal stake or interest ***256 in the constitutional issue and the public entity's action was the most practicable or reasonable method of obtaining a judicial determination of the validity of the statute. (See, e.g., *County of Riverside v. Superior Court* (2003) 30 Cal.4th 278, 132 Cal.Rptr.2d 713, 66 P.3d 718 [impingement on county's home rule authority]; *Star–Kist Foods, Inc. v. County of Los Angeles* (1986) 42 Cal.3d 1, 5–10, 227 Cal.Rptr. 391, 719 P.2d 987 [impingement on county's taxing authority].)

**485 Although it may be appropriate in some circumstances for a public entity or public official to refuse or decline to enforce a statute as a means of bringing the constitutionality of the statute before a court for judicial resolution, it is nonetheless clear that such an exception does not justify the actions of the local officials at issue in the present case. Here, there existed a clear and readily available means, other than the officials' wholesale defiance of the applicable statutes, to ensure that the constitutionality of the current marriage statutes would be decided by a court. If the local officials charged with the ministerial duty of issuing marriage licenses and registering marriage certificates believed the state's current marriage statutes are unconstitutional and should be tested in court, they could have denied a same-sex couple's request for a marriage license and advised the couple to challenge the denial in superior court. *That* procedure—a lawsuit brought by a couple who has been denied a license under existing statutes—is the procedure that was utilized to challenge the constitutionality of California's antimiscegenation statute in *Perez v. Sharp* (1948) 32 Cal.2d 711, 198 P.2d 17, and the procedure apparently utilized in all of the other same-sex marriage cases that have been litigated recently in other states. (See, e.g., *Baehr v. Lewin* (1993) 74 Haw. 530, 852 P.2d 44; *Goodridge v. Department of Pub. Health* (2003) 440 Mass. 309, 798 N.E.2d 941; *Baker v. State of Vermont* (1999) 170 Vt. 194, 744 A.2d 864.) The city cannot plausibly claim that the desire to obtain a judicial ruling on the constitutional issue justified the wholesale defiance of the applicable statutes that occurred here. [27]

*1100 Accordingly, the city cannot defend the challenged actions on the ground that such actions were necessary to obtain a judicial determination of the constitutionality of California's marriage statutes.

**F**

The city also relies on the circumstance that each of the city officials in question took an oath of office to "support and defend" the state and federal Constitutions, [28] suggesting that a public official ***257 would violate his or her oath of office were the official to perform a ministerial act under a statute that the official personally believes violates the Constitution. In our view, this contention clearly lacks merit.

As Justice Mosk explained in his concurring and dissenting opinion in *Southern Pacific, supra,* 18 Cal.3d 308, 319, 134 Cal.Rptr. 189, 556 P.2d 289, a public official "faithfully upholds the Constitution by complying with the mandates of the Legislature, leaving to courts the decision whether those mandates are invalid." A public official does not honor his or her oath to defend the Constitution by taking action in contravention of the restrictions of his or her office or authority and justifying such action by reference to his or her personal constitutional views. For example, it is clear that a justice of this court or of an intermediate appellate court does not act **486 in contravention of his or her oath of office when the justice follows a controlling constitutional decision of a higher court even though the justice personally believes that the controlling decision was wrongly decided and that the Constitution actually requires the opposite result. On the contrary, the oath to support and defend the Constitution requires a public official to act within the constraints of our constitutional system, not to disregard presumptively valid statutes and take action in violation of such statutes on the basis of the official's own *1101 determination of what the Constitution means. [29] (See also *State v. State Board of Equalizers* (1922) 84 Fla. 592, 94 So. 681, 682–683 ["The contention that the oath of a public official requiring him to obey the Constitution places upon him the duty or obligation to determine whether an act is constitutional before he will obey it is ... without merit. The fallacy in it is that every act of the legislature is presumed constitutional until judicially ***258 declared otherwise, and the oath of office 'to obey the Constitution' means to obey the Constitution, not as the officer decides, but as judicially determined"].) [30]

*1102 **G**

The city further contends that a general rule requiring an executive official to comply with an existing statute unless and until the statute has been judicially determined to be unconstitutional is impractical and would lead to intolerable circumstances. The city posits a hypothetical example of a public official faced with a statute that is identical in all respects to another statute that a court already has determined

is unconstitutional, and suggests it would be absurd to require the official to apply the clearly invalid statute in that instance. For support, the city points to a passage in the majority opinion in *Southern Pacific,* which asks rhetorically: "[W]hen the United States Supreme Court, for example, ****487** repudiates the separate but equal doctrine established by the statutes of one state, should the school boards of other states continue to apply identical statutes until a court declares them invalid [?]" (*Southern Pacific, supra,* 18 Cal.3d 308, 311, fn. 2, 134 Cal.Rptr. 189, 556 P.2d 289.)

**[13]** Whatever force this argument might have in a case in which a governing decision previously has found an identical statute unconstitutional or in which the invalidity of the statute is so patent or clearly established that no reasonable official could believe the statute is constitutional,[31] the argument plainly is of no avail here. Although we have no occasion in this case to determine the constitutionality of the current California marriage statutes, we can say with confidence that the asserted invalidity of those statutes certainly is not so patent or clearly established that no reasonable official could believe that the current California marriage *****259** statutes are valid. Indeed, the city cannot point to any judicial decision that has held a statute limiting marriage to a man and a woman unconstitutional under the California or federal Constitution. Instead, the city relies on state court decisions from Massachusetts, Vermont, and Hawaii, that, in interpreting their own state constitutions, assertedly have found similar statutory restrictions to violate provisions of their state's own constitution. (See *Goodridge v. Department of Pub. Health, supra,* 440 Mass. 309, 798 N.E.2d 941; *Baker v. State of* ***1103** *Vermont, supra,* 170 Vt. 194, 744 A.2d 864; *Baehr v. Lewin, supra,* 74 Haw. 530, 852 P.2d 44.)[32] A significant number of ****488** other state and federal courts, however, have reached a contrary conclusion and have upheld the constitutional validity of such a restriction on marriage under both the federal Constitution and other state constitutions. (See, e.g., *Baker v. Nelson* (1971) 291 Minn. 310, 191 N.W.2d 185, 186–187, app. dism. for want of substantial federal question (1972) 409 U.S. 810, 93 S.Ct. 37, 34 L.Ed.2d 65 [federal Constitution];[33] ***1104** *****260** *Standhardt v. Super. Ct., supra,* 206 Ariz. 276, 77 P.3d 451, 454–465 [federal and Arizona Constitutions]; *Dean v. District of Columbia* (D.C.Ct.App.1995) 653 A.2d 307, 361–364 (opns. of Terry, J. & Steadman, J.) [federal Constitution]; *Jones v. Hallahan* (Ky.Ct.App.1973) 501 S.W.2d 588, 590 [federal Constitution]; *Singer v. Hara* (1974) 11 Wash.App. 247, 522 P.2d 1187, 1189–1197 [federal and Washington Constitutions]; *Adams v. Howerton* (C.D.Cal.1980) 486 F.Supp. 1119, 1124–1125, affd. (9th Cir.1982) 673 F.2d 1036, cert. den. (1982) 458 U.S. 1111, 102 S.Ct. 3494, 73 L.Ed.2d 1373 [federal Constitution].) Although the state court decisions from Massachusetts, Vermont, and Hawaii relied upon by the city surely would be of interest to a California court faced with the question whether the current California marriage statutes violate the California Constitution, a California court would be equally interested in the decisions of the courts that have reached a contrary conclusion (and in the reasoning of the minority opinions in the state court decisions relied upon by the city [see *Goodridge v. Department of Pub. Health, supra,* 440 Mass. 309, 798 N.E.2d 941, 974–1005 (dis. opns. of Spina, J., Sosman, J., & Cordy, J.); *Baehr v. Lewin, supra,* 74 Haw. 530, 852 P.2d 44, 70–73 (dis. opn. of Heen, J.) ]. In light of the absence of any California authority directly on point and the sharp division of judicial views expressed in the out-of-state decisions that have considered similar constitutional challenges, this plainly is not an instance in which the invalidity of the California marriage statutes is so patent or clearly established that no reasonable official could believe that the statutes are constitutional. Therefore, this case does not fall within any narrow exception that may apply to instances in which it would be absurd or unreasonable to require a public official to comply with a statute that any reasonable official would conclude is unconstitutional.

**H**

**[14]** Accordingly, we conclude that, under California law, the city officials had no authority to refuse to perform their ministerial duty in conformity with the current California marriage statutes on the basis of their view that the ***1105** statutory limitation of marriage to a couple comprised of a man and a woman is unconstitutional.

It is worth noting that the California rule generally precluding an executive official from refusing to perform a ministerial duty imposed by statute on the basis of the official's determination or opinion that the statute is unconstitutional is consistent with the ****489** general rule applied in the overwhelming *****261** majority of cases from other jurisdictions. (See generally Annot., Unconstitutionality of Statute as Defense to Mandamus Proceeding (1924) 30 A.L.R. 378, 379["[t]he weight of authority [holds] that a public officer whose duties are of a ministerial character cannot question the constitutionality of a statute as a defense to a mandamus proceeding to compel him to perform some official duty, where in the performance of such duty his personal interests or rights will not be affected, and he will

  

not incur any personal liability, or violate his oath of office"]; Annot. (1940) 129 A.L.R. 941 [supplementing 30 A.L.R. 378]; see also Note (1928) 42 Harv. L.Rev. 1071.) [34]

***262 *1106 Although there are numerous out-of-state cases that address this issue, one of the most quoted decisions is *State v. Heard, supra,* 18 So. 746, 752, where the court, after an extensive **490 review of the then existing authorities from various jurisdictions, concluded: "[E]xecutive officers of the State government have no authority to decline the performance of purely ministerial duties which are imposed upon them by a law, on the ground that it contravenes the Constitution. Laws are presumed to be, and must be treated and acted upon by subordinate executive functionaries as constitutional and legal, until their unconstitutionality or illegality has been judicially established, for, in all well regulated government, obedience to its laws by executive officers is absolutely essential, and of paramount importance. Were it not so the most inextricable confusion would inevitably result, and 'produce such collisions in the administration of public affairs as to materially impede the proper and necessary operations of the government.' 'It was surely never intended that an executive functionary should nullify a law by neglecting or refusing to execute it.' " (See also *Department of State Highways v. Baker, supra,* 69 N.D. 702, 290 N.W. 257, 259 ["There is no question as to the general rule that a subordinate ministerial officer to whom no injury can result and to whom no violation of duty can be imputed by reason of compliance with the statute may not question the constitutionality of the statute imposing such duty"]; *State v. Becker, supra,* 328 Mo. 541, 41 S.W.2d 188, 190 ["It is well settled in this state and in a great majority of our sister states that, as a general rule, a ministerial officer cannot defend his refusal to perform a duty prescribed by a statute on the ground that such statute is unconstitutional"]; *State v. Steele* *1107 *County Board of Com'rs, supra,* 181 Minn. 427, 232 N.W. 737, 738 [although "[t]he authorities are in conflict," "[t]he better doctrine, supported by the weight of authority, is that an official so charged with the performance of a ministerial duty will not be allowed to question the constitutionality of such a law.... Officials acting ministerially are not clothed with judicial authority.... Their authority is the command of the statute, and it is the limit of their power"]; *State v. State Board of Equalizers, supra,* 84 Fla. 592, 94 So. 681, 683 ["It is contended that an *individual* may refuse to obey a law that he believes to be unconstitutional, and take a chance on its fate in the courts. He does this, however, 'at his peril'; the 'peril' being to suffer the consequences, such as fine or imprisonment, or both, if the courts should hold the act to be constitutional. [¶] A *ministerial officer* refusing to enforce a law because in his opinion it is unconstitutional takes no such risk. He does nothing 'at his peril,' because he subjects himself to no penalty if his opinion as to the unconstitutionality of an act is not sustained by the courts. [¶] It is the doctrine of nullification, pure and simple, and whatever may have been said of the soundness of that doctrine when sought to be applied by states to acts of Congress, the most ardent ***263 followers of Mr. Calhoun never extended it to give to ministerial officers the right and power to nullify a legislative enactment" (italics added) ].)

***I***

In addition to the California decisions reviewed above and the weight of judicial authority from other jurisdictions, consideration of the practical consequences of a contrary rule further demonstrates the unsoundness of the city's position.

To begin with, most local executive officials have no legal training and thus lack the relevant expertise to make constitutional determinations. Although every individual (lawyer or nonlawyer) is, of course, free to form his or her own opinion of what the Constitution means and how it should be interpreted and applied, a local executive official has no authority to impose his or her personal view on others by refusing to comply with a ministerial duty imposed by statute. (See, e.g., *Southern Pacific, supra,* 18 Cal.3d 308, 321, 134 Cal.Rptr. 189, 556 P.2d 289 (conc. & dis. opn. of Mosk, J.) ["Certainly attorneys have no monopoly on wisdom, but a person trained for three or more years in a college of law and then tempered with at least a decade of experience within the judicial system is likely to be far better equipped to make difficult constitutional judgments than a lay administrator with no background in the law"].) [35]

*1108 **491 Second, if, as the city maintains, a local official were to possess the authority to act on the basis of his or her own constitutional determination, such an official generally would arrive at that determination without affording the affected individuals any due process safeguards and, in particular, without providing any opportunity for those supporting the constitutionality of the statutes to be heard. In its opposition to the initial petition filed in this case, the city urged this court not to immediately accept jurisdiction over the substantive question of the constitutionality of California's marriage laws at this time, because that question properly could be determined only after

a full presentation of evidence before a trial court. The city officials themselves, however, made their own constitutional determination without conducting any such evidentiary hearing or taking other measures designed to protect the rights of those who maintain that the statute is constitutional. Thus, despite the settled rule that a duly enacted statute is presumed to be constitutional, under the city's proposed rule a local executive official ***264 would be free to determine that a statute is unconstitutional and refuse to enforce it, without providing even the most rudimentary of due process procedures—notice and an opportunity to be heard—to anyone directly affected by the official's action.

Third, there are thousands of elected and appointed public officials in California's 58 counties charged with the ministerial duty of enforcing thousands of state statutes. If each official were empowered to decide whether or not to carry out each ministerial act based upon the official's own personal judgment of the constitutionality of an underlying statute, the enforcement of statutes would become haphazard, leading to confusion and chaos and thwarting the uniform statewide treatment that state statutes generally are intended to provide. (Cf. *Haring v. Blumenthal, supra,* 471 F.Supp. 1172, 1178–1179 ["Unless and until the Congress, or a court of competent jurisdiction ..., determines that a particular tax exemption ruling is invalid, the employees of the [Internal Revenue] Service ... are obliged to implement that ruling. Not merely the concept of a uniform tax policy but the effectiveness of the government of the United States as a functioning entity would be *1109 in jeopardy if each employee could take it upon himself to decide which particular laws, regulations, and policies are legal or illegal, and to base his official actions upon that private determination"].) Although in the past the multiplicity of public officials performing similar ministerial acts under a single statute never has posed a problem in this regard, that is undoubtedly true only because most officials never imagined they had the authority to determine the constitutionality of a statute that they have a ministerial duty to enforce. Were we to hold that such officials possess this authority, it is not difficult to anticipate that private individuals who oppose enforcement of a statute and question its constitutionality would attempt to influence ministerial officials in various locales to exercise—on behalf of such opponents—the officials' newly recognized authority. The circumstance that many local officials have no legal training would only exacerbate the problem. As a consequence, the uneven enforcement of statutory **492 mandates in different local jurisdictions likely would become a significant concern.

Fourth, the confused state of affairs arising from diverse actions by a multiplicity of local officials frequently would continue for a considerable period of time, because under the city's proposed rule a court generally could not order a public official to comply with the challenged statute until the court actually had determined that it was constitutional. In view of the many instances in which a constitutional challenge to a statute entails lengthy litigation, the lack of uniform treatment afforded to similarly situated citizens throughout the state often would be a long-term phenomenon.

These practical considerations simply confirm the soundness of the established rule that an executive official generally does not have the authority to refuse to comply with a ministerial duty imposed by statute on the basis of the official's opinion that the statute is unconstitutional. [36]

***265 V

The city further claims, however, that even if *California law* does not recognize the authority of a local official to refuse to comply with a statutorily mandated ministerial duty absent a judicial determination that the statute is unconstitutional, under the federal supremacy clause (U.S. Const., art. VI, § 2) California lacks the power to require a public official to comply with a state statute that the official believes violates the federal Constitution. *1110 Although in the present case the mayor's initial letter to the county clerk relied solely upon the asserted unconstitutionality of the California marriage statutes under the *California* Constitution, the city, in the opposition filed in this court, for the first time advanced the position that the action taken by the city officials was based, at least in part, on their belief that the California statutes violate the *federal* Constitution, and the city now rests its supremacy clause claim on this newly asserted belief. Putting aside the question of the bona fides of this belatedly proffered rationale, we conclude that, in any event, the federal supremacy clause provides no support for the city's argument.

To begin with, the principal cases upon which the city relies —*Ex Parte Young* (1908) 209 U.S. 123, 28 S.Ct. 441, 52 L.Ed. 714 and *LSO, Ltd. v. Stroh, supra,* 205 F.3d 1146—are readily distinguishable from the present case. Those cases stand only for the proposition that the circumstance that a state official is acting pursuant to the provisions of an applicable state statute does not necessarily shield the official (or the public entity on whose behalf the official acts) either from an injunction or a monetary judgment issued by a federal

court, where the federal court subsequently determines that the state statute violates the federal Constitution. [37] The city has not cited any case holding that the federal Constitution prohibits a state from defining the authority of a state's executive officials in a manner that requires such officials to comply with a clearly applicable statute unless and until such a statute is judicially determined to be unconstitutional, nor any case holding that the federal Constitution compels a state to permit every executive official, state or local, to refuse to enforce an applicable statutory provision whenever the official personally believes the statute violates the federal Constitution.

**[15]** Furthermore, numerous pronouncements by the United States Supreme Court directly refute the city's contention that the supremacy clause or any other provision of the federal Constitution embodies such a principle. To begin with, the high court's position on the proper role of federal executive ****493** officials with regard to constitutional determinations is instructive. In *Davies Warehouse Co. v. Bowles* (1944) 321 U.S. 144, 152–153, 64 S.Ct. 474, 88 L.Ed. 635, for example, in response to the plaintiff's contention that under one proposed reading of the applicable statute "the [federal Price] Administrator [an executive official] would have to decide whether the state regulation is constitutional before he should recognize it," the United States Supreme ***1111** Court stated: "We cannot give weight to this view of [the Price Administrator's] functions, which we think it unduly magnifies. *State statutes, like federal ones, are entitled to the presumption of constitutionality until their invalidity is judicially declared. Certainly* *****266** *no power to adjudicate constitutional issues is conferred on the Administrator.... We think the Administrator will not be remiss in his duties if he assumes the constitutionality of state regulatory statutes, under both state and federal constitutions, in the absence of a contrary judicial determination.*" (Italics added; see also *Weinberger v. Salfi* (1975) 422 U.S. 749, 765, 95 S.Ct. 2457, 45 L.Ed.2d 522 ["[T]he constitutionality of a statutory requirement [is] a matter which is beyond [the Secretary of Health, Education, and Welfare's] jurisdiction to determine"]; *Johnson v. Robison* (1974) 415 U.S. 361, 368, 94 S.Ct. 1160, 39 L.Ed.2d 389 ["[a]djudication of the constitutionality of congressional amendments has generally been thought beyond the jurisdiction of administrative agencies"]; *Oestereich v. Selective Service Board* (1968) 393 U.S. 233, 242, 89 S.Ct. 414, 21 L.Ed.2d 402 (conc. opn. of Harlan, J.) [same]; cf. *Thunder Basin Coal Co. v. Reich* (1994) 510 U.S. 200, 215, 114 S.Ct. 771, 127 L.Ed.2d 29.)

In light of the high court's repeated statements that federal executive officials generally lack authority to determine the constitutionality of statutes, the city's claim that the federal supremacy clause itself grants a state or local official the authority to refuse to enforce a statute that the official believes is unconstitutional is plainly untenable.

Furthermore, there are several earlier United States Supreme Court cases that even more directly refute the city's contention. *Smith v. Indiana* (1903) 191 U.S. 138, 24 S.Ct. 51, 48 L.Ed. 125 was a case, arising from the Indiana state courts, in which a county auditor had refused to grant a statutorily authorized exemption to a taxpayer because the auditor believed the exemption violated the federal Constitution. A mandate action was filed against the auditor, and the state courts permitted the auditor to raise and litigate the asserted unconstitutionality of the statute as a defense in the mandate action, ultimately determining that the exemption was constitutionally permissible and directing the auditor to grant the exemption. The auditor appealed the state court decision upholding the constitutionality of the state statute to the United States Supreme Court.

In its opinion in *Smith,* the high court observed that "there are many authorities to the effect that a ministerial officer, charged by law with the duty of enforcing a certain statute, cannot refuse to perform his plain duty thereunder upon the ground that in his opinion it is repugnant to the Constitution" (*Smith v. Indiana, supra,* 191 U.S. at p. 148, 24 S.Ct. 51), but it recognized that a state court "has the power ... to assume jurisdiction in such a case if it chooses to do so." (*Ibid.*) At the same time, however, the court in *Smith* stated explicitly that "the power of a public officer to question the constitutionality of a statute as an excuse for refusing to enforce it ... *is a purely* ***1112** *local question* " (*ibid.,* italics added)—that is, purely a question of state (not federal) law—a conclusion that directly refutes the city's claim that federal law requires a state to recognize the authority of a ministerial official to refuse to comply with a statute whenever the official believes it violates the federal Constitution. Moreover, in *Smith* itself the United States Supreme Court went on to hold that although the state court in that case had permitted the auditor to litigate the constitutionality of the state statute, the auditor did not have a sufficient personal interest in the litigation to support jurisdiction in the United States Supreme Court; thus the high court dismissed the auditor's appeal without reaching the question of the constitutionality of the underlying *****267** statute. [38] A few years later, the high ****494** court followed its decision in *Smith,* dismissing a similar appeal by a state

auditor in *Braxton County Court v. West Virginia* (1908) 208 U.S. 192, 197, 28 S.Ct. 275, 52 L.Ed. 450.

In light of the foregoing high court decisions, we conclude that the California rule set forth above does not conflict with any federal constitutional requirement.

**VI**

The city contends, however, that even if we conclude that its officials lacked the authority to refuse to enforce the marriage statutes, we still cannot issue the writ of mandate sought by petitioners without first determining whether California's current marriage statutes are constitutional, in light of the general proposition that courts will not issue a writ of mandate to require a public official to perform an unconstitutional act. As the Florida Supreme Court explained in a similar context, however, "[i]t is no answer to say that the courts will not require a ministerial officer to perform an unconstitutional act. That aspect of the case is not before us. We must first determine the power of the ministerial officer to refuse to perform a statutory duty because *in his opinion* the law is unconstitutional. When we decide that, we do not get to the question of the constitutionality of the act, and it will not be decided." (*State v. State Board of Equalizers, supra,* 84 Fla. 592, 94 So. 681, 684.) Accordingly, because we have concluded that the city officials have no authority to refuse to apply the current marriage statutes in the absence of a judicial determination that these statutes are unconstitutional, we conclude that the requested writ of mandate should issue.

***1113 VII**

**[16]** Finally, we must determine the appropriate scope of the relief to be ordered. As a general matter, the nature of the relief warranted in a mandate action is dependent upon the circumstances of the particular case, and a court is not necessarily limited by the prayer sought in the mandate petition but may grant the relief it deems appropriate. (See *Johnson v. Fontana County F.P. Dist.* (1940) 15 Cal.2d 380, 391–392, 101 P.2d 1092; *George M. v. Superior Court* (1988) 201 Cal.App.3d 755, 760, 247 Cal.Rptr. 330; *Sacramento City Police Dept. v. Superior Court* (1984) 156 Cal.App.3d 1193, 1197, fn. 5, 203 Cal.Rptr. 169.)

In the present case, we are faced with an unusual, perhaps unprecedented, set of circumstances. Here, local public officials have purported to authorize, perform, and register literally thousands of marriages in direct violation of explicit state statutes. The Attorney General, as well as a number of local taxpayers, have filed these original mandate proceedings in this court to halt the local officials' unauthorized conduct and to compel these officials to correct or undo the numerous unlawful actions they have taken in the immediate past. As explained above, we have determined that the city officials exceeded their authority in issuing marriage licenses to, solemnizing marriages of, and registering marriage certificates on behalf of, same-sex couples. Under these circumstances, we conclude *****268** that it is appropriate in this mandate proceeding not only to order the city officials to comply with the applicable statutes in the future, but also to direct the officials to take all necessary steps to remedy the continuing effect of their past unlawful actions, including correction of all relevant official records and notification of affected individuals of the invalidity of the officials' actions.

**[17]** In light of the clear terms of Family Code section 300 *defining* marriage as a "personal relationship arising out of a civil contract between a man and a woman" and the legislative history of this provision demonstrating that the purpose of this limitation was to "prohibit persons of the same sex from entering lawful marriage" (Sen. Com. on Judiciary, Analysis of Assem. Bill No. 607 (1977–1978 Reg. Sess.) as amended May 23, 1977, p. 1 [discussed, ****495** *ante,* 17 Cal.Rptr.3d p. 236, fn. 11, 95 P.3d p. 468, fn. 11] ), we believe it plainly follows that all same-sex marriages authorized, solemnized, or registered by the city officials must be considered void and of no legal effect from their inception. Although this precise issue has not previously been presented under California law, every court that has considered the question has determined that when state law limits marriage to a union between a man and a woman, a same-sex marriage performed in violation of state law is void and of no legal effect. (See, e.g., *Jones v. Hallahan, supra,* 501 S.W.2d 588, 589 [same-sex marriage "would not constitute a marriage" under Kentucky law]; *Anonymous v.* ***1114** *Anonymous* (N.Y.Sup.Ct.1971) 67 Misc.2d 982, 325 N.Y.S.2d 499, 501 [under New York law, same-sex "marriage ceremony was a nullity" and "no legal relationship could be created by it"]; *McConnell v. Nooner* (8th Cir.1976) 547 F.2d 54, 55–56 ["purported" same-sex marriage of no legal effect under Minnesota law]; *Adams v. Howerton, supra,* 486 F.Supp. 1119, 1122 [purported same-sex marriage has "no legal effect" under Colorado or federal law].) The city has not cited any case in which a same-sex marriage, performed in contravention of a state statute that bans such marriages and that has not judicially been held unconstitutional, has been given any legal effect.

The city and several amici curiae representing same-sex couples who obtained marriage licenses from city officials—and had certificates of registry of marriage registered by such officials—raise a number of objections to our determining that the same-sex marriages that have been performed in California are void and of no legal effect, but we conclude that none of these objections is meritorious.

First, the city and amici curiae contend that the Attorney General and the petitioners in *Lewis* lack standing to challenge the validity of the same-sex marriages that already have been performed, relying upon the provisions of Family Code section 2211, which sets forth the categories of individuals who may bring an action to nullify a "voidable" marriage—categories that generally are limited to one of the parties to the marriage or, where a party to the marriage is a minor or a person incapable of giving legal consent, the parent, guardian, or conservator of such party. Past California decisions, however, make clear that the procedural requirements generally applicable in an action to nullify or annul a "voidable" marriage are inapplicable when a purported marriage is void from the beginning or is a legal nullity. As this court stated in *Estate of Gregorson* (1911) 160 Cal. 21, 26, 116 P. 60: "A marriage prohibited as incestuous *or illegal* and declared to be 'void' or 'void from the beginning' is a legal nullity *and its validity may be asserted or shown in any proceeding in which the fact of marriage* ***269** *may be material.*" (Italics added.) In our view, the present mandate action, which seeks to compel public officials to correct the effects of their unauthorized official conduct in issuing marriage licenses to or registering marriage certificates of thousands of same-sex couples, is such a proceeding, because the validity or invalidity of the same-sex marriages authorized and registered by such officials is central to the scope of the remedy that may and should be ordered in this case. [39]

***1115** The city and amici curiae additionally contend that we cannot properly determine the validity or invalidity of the existing same-sex marriages in this proceeding because the parties to a marriage are indispensable parties to any legal action seeking to invalidate a marriage, and the thousands of same-sex couples whose marriages were authorized and registered by the local authorities are not formal parties to the present mandate proceeding. The city relies on cases involving actions that have been brought to annul a particular marriage on the basis of facts peculiar to that marriage, in which the courts have held the parties to the marriage to be **496** indispensable parties. (See, e.g., *McClure v. Donovan* (1949) 33 Cal.2d 717, 725, 205 P.2d 17.) In the present instance, by contrast, the question of the validity or invalidity of a same-sex marriage does not depend upon any facts that are peculiar to any individual same-sex marriage, but rather is a purely legal question applicable to all existing same-sex marriages, and rests on the circumstance that the governing state statute limits marriage to a union between a man and a woman. Under ordinary principles of stare decisis, an appellate decision holding that, under current California statutes, a same-sex marriage performed in California is void from its inception effectively would resolve that legal issue with respect to all couples who had participated in same-sex marriages, even though such couples had not been parties to the original action. Because the validity or invalidity of same-sex marriages under current California law involves only a pure question of law, couples who are not formal parties to this action are in no different position than if this question of law had been presented and resolved in an action involving some other same-sex couple rather than in an action in which the legal arguments regarding the validity of such marriages have been vigorously asserted not only by the city officials who authorized and registered such marriages but also by various amici curiae representing similarly situated same-sex couples. Requiring a separate legal proceeding to be brought to invalidate each of the thousands of same-sex marriages, or requiring each of the thousands of same-sex couples to be named and served as parties in the present action, would add nothing of substance to this proceeding.

The city and amici curiae further contend that it would violate the due process rights of the same-sex couples who obtained marriage licenses, and had their marriage certificates registered by the local officials, for this court to determine the validity of same-sex marriages without giving the couples notice and an opportunity to be heard. To begin with, there may be some question whether an individual who, ***270** through the deliberate unauthorized conduct of a public official, obtains a license, permit, or other status that clearly is not authorized by state law, possesses a constitutionally protected ***1116** property or liberty interest that gives rise to procedural due process guarantees. (Cf., e.g., *Snyder v. City of Minneapolis* (Minn.1989) 441 N.W.2d 781, 792; *Mellin v. Flood Brook Union School Dist.* (2001) 173 Vt. 202, 790 A.2d 408, 421; *Gunkel v. City of Emporia, Kan.* (10th Cir.1987) 835 F.2d 1302, 1304–1305 & fns. 7, 8.) In any event, these same-sex couples have not been denied the right to meaningfully participate in these proceedings. Although we have not permitted them to intervene formally in these actions as parties, our order denying intervention to a number of such couples explicitly was without prejudice to participation

as amicus curiae, and numerous amicus curiae briefs have been filed on behalf of such couples directly addressing the question of the validity of the existing same-sex marriages. Accordingly, the legal arguments of such couples with regard to the question of the validity of the existing same-sex marriages have been heard and fully considered. Furthermore, under the procedure we adopt below (see, *post,* 17 Cal.Rptr.3d p. 272, 95 P.3d p. 498), before the city takes corrective action with regard to the record of any particular same-sex marriage license or same-sex marriage certificate, each affected couple will receive individual notice and an opportunity to show that the holding of the present opinion is not applicable to the couple.

The city and amici curiae next maintain that even if this court properly may address the validity of the existing same-sex marriages in this proceeding, under California law such marriages cannot be held void (or voidable, for that matter), because there is no California statute that explicitly provides that a marriage between two persons of the same sex or gender is void (or voidable). As we have seen, however, Family Code section 300 explicitly *defines* marriage as "a personal relation arising out of a civil contract between a man and a woman," and in view of the language and legislative history of this provision (see, *ante,* 17 Cal.Rptr.3d p. 236, fn. 11, 95 P.3d p. 468, fn. 11), we believe that the Legislature has made clear its intent that a same-sex marriage performed in California is not a valid marriage under California law. Accordingly, we view ****497** Family Code section 300 itself as an explicit statutory provision establishing that the existing same-sex marriages at issue are void and invalid.

The city and amici curiae also rely upon Family Code section 306, which provides in part that "[n]oncompliance with this part by a nonparty to the marriage does not invalidate the marriage," maintaining that this statute demonstrates that even if the county clerk erred in issuing marriage licenses to same-sex couples, such noncompliance by the county clerk (a nonparty to the marriage) does not invalidate the marriage. In our view, section 306—which is unofficially entitled "Procedural requirements; effect of noncompliance"—has no application here. The defect at issue clearly is not simply a procedural defect in the issuance of the license or in the solemnization or registration process. Indeed, it is not simply the invalidity or unauthorized nature of the *county clerk's* action in issuing a marriage license to a same-sex ***1117** couple that renders void any marriage between a same-sex couple. What renders such a purported marriage void is the circumstance that the current California statutes reflect a clear legislative decision to "prohibit persons of the same sex from entering lawful marriage." (Sen. Com. on Judiciary, Analysis of Assem. Bill No. 607 (1977–1978 Reg. Sess.) as amended May 23, 1977, discussed, *****271** *ante,* 17 Cal.Rptr.3d at p. 236, fn. 11, 95 P.3d at p. 468, fn. 11.) It is that substantive legislative limitation on the institution of marriage, and not simply the circumstance that the actions of the county clerk or county recorder were unauthorized, that renders the existing same-sex marriages invalid and void from the beginning.

Finally, the city urges this court to postpone the determination of the validity of the same-sex marriages that already have been performed and registered until a court rules on the substantive constitutional challenges to the California marriage statutes that are now pending in superior court. From a practical perspective, we believe it would not be prudent or wise to leave the validity of these marriages in limbo for what might be a substantial period of time given the potential confusion (for third parties, such as employers, insurers, or other governmental entities, as well as for the affected couples) that such an uncertain status inevitably would entail. [40]

In any event, we believe such a delay in decision is unwarranted on more fundamental grounds. As we have explained, because Family Code section 300 clearly limits marriage in California to a marriage between a man and a woman and flatly prohibits persons of the same sex from lawfully marrying in California, the governing authorities establish that the same-sex marriages that already have been performed are void and of no legal effect *from their inception.* (See, *ante,* 17 Cal.Rptr.3d p. 267, 95 P.3d p. 493 and cases cited; see also *Estate of Gregorson, supra,* 160 Cal. 21, 26, 116 P. 60 ["A marriage prohibited as ... illegal and declared to be 'void' or 'void from the beginning' is a legal nullity...."].) In view of this well-established rule, we do not believe it would be responsible or appropriate for this court to fail at this time to inform the parties to the same-sex marriages and other persons whose legal rights and responsibilities may depend upon the validity or invalidity of these marriages that these marriages are invalid, notwithstanding the pendency of numerous lawsuits challenging the constitutionality of California's marriage statutes. Withholding or delaying a ruling on the current validity of the existing same-sex marriages might lead numerous persons to make fundamental changes in their lives or otherwise proceed on the basis of erroneous expectations, creating potentially irreparable harm.

***1118** Although the city and the amici curiae representing same-sex couples suggest that these couples would prefer to live with uncertainty rather than be told at this point that the marriages are invalid, in light of the explicit terms of Family Code section 300 and the warning included in the same-sex marriage license applications provided by the ****498** city (see, *ante,* 17 Cal.Rptr.3d p. 232, fn. 5, 95 P.3d p. 465, fn. 5) these couples clearly were on notice that the validity of their marriages was dependent upon whether a court would find that the city officials had authority to allow same-sex marriages. Now that we have confirmed that the city officials lack this authority, we do not believe that these couples have a persuasive equitable claim to have the validity of the marriages left in doubt at this point in time, creating uncertainty and potential harm to others who may need to know whether the marriages are valid or not. Had the current constitutional *****272** challenges to the California marriage statutes followed the traditional and proper course (see, *ante,* 17 Cal.Rptr.3d p. 256, 95 P.3d p. 485), no same-sex marriage would have been conducted in California prior to a judicial determination that the current California marriage statutes are unconstitutional. Accordingly, as part of the remedy for the city officials' unauthorized and unlawful actions, we believe it is appropriate to make clear that the same-sex marriages that already have purportedly come into being must be considered void from their inception. Of course, should the current California statutes limiting marriage to a man and a woman ultimately be repealed or be held unconstitutional, the affected couples then would be free to obtain lawfully authorized marriage licenses, have their marriages lawfully solemnized, and lawfully register their marriage certificates. [41]

Accordingly, to remedy the effects of the city officials' unauthorized actions, we shall direct the county clerk and the county recorder of the City and County of San Francisco to take the following corrective actions under the supervision of the California Director of Health Services, who, by statute, has general supervisory authority over the marriage license and marriage certificate process. (See, *ante,* 17 Cal.Rptr.3d pp. 237–239, 95 P.3d pp. 469–471.) The county clerk and the county recorder are directed to (1) identify all same-sex couples to whom the officials issued marriage licenses, solemnized marriage ceremonies, or registered marriage certificates, (2) notify these couples that this court has determined that same-sex marriages that have been performed in California are void from their inception and a legal nullity, and that these officials have been directed to correct their records to reflect the invalidity of these marriage licenses and marriages, (3) provide these couples an opportunity to ***1119** demonstrate that their marriages are not same-sex marriages and thus that the official records of their marriage licenses and marriages should not be revised, (4) offer to refund, upon request, all marriage-related fees paid by or on behalf of same-sex couples, and (5) make appropriate corrections to all relevant records.

## VIII

As anyone familiar with the docket of the United States Supreme Court, of this court, or of virtually any appellate court in this nation is aware, many statutes currently in force may give rise to constitutional challenges, and not infrequently the constitutional questions presented involve issues upon which reasonable persons, including reasonable jurists, may disagree. If every public official who is under a statutory duty to perform a ministerial act were free to refuse to perform that act based solely on the official's view that the underlying statute is unconstitutional, any semblance of a uniform rule of law quickly would disappear, and constant and widespread judicial intervention would be required to permit the ordinary mechanisms of government to function. This, of course, is not the system of law with which we are familiar. Under long-established *****273** principles, a statute, once enacted, is presumed to be constitutional until it has been judicially determined to be unconstitutional.

****499** An executive official, of course, is free to criticize existing statutes, to advocate their amendment or repeal, and to voice an opinion as to their constitutionality or unconstitutionality. As we have explained, however, an executive official who is charged with the ministerial duty of enforcing a statute generally has an obligation to execute that duty in the absence of a judicial determination that the statute is unconstitutional, regardless of the official's personal view of the constitutionality of the statute.

In this case, the city has suggested that a contrary rule—one under which a public official charged with a ministerial duty would be free to make up his or her own mind whether a statute is constitutional and whether it must be obeyed—is necessary to protect the rights of minorities. But history demonstrates that members of minority groups, as well as individuals who are unpopular or powerless, have the most to lose when the rule of law is abandoned—even for what appears, to the person departing from the law, to be a just end. [42] As observed at the outset of this opinion, granting every ***1120** public official the authority to disregard a

ministerial statutory duty on the basis of the official's opinion that the statute is unconstitutional would be fundamentally inconsistent with our political system's commitment to John Adams' vision of a government where official action is determined not by the opinion of an individual officeholder —but by the rule of law.

**IX**

For the reasons discussed above, a writ of mandate shall issue compelling respondents to comply with the requirements and limitations of the current marriage statutes in performing their ministerial duties under such statutes, and directing the county clerk and the county recorder of the City and County of San Francisco to take the following corrective actions under the supervision of the California Director of Health Services: (1) identify all same-sex couples to whom the officials issued marriage licenses, solemnized marriage ceremonies, or registered marriage certificates, (2) notify these couples that this court has determined that same-sex marriages that have been performed in California are void from their inception and a legal nullity, and that these officials have been directed to correct their records to reflect the invalidity of these marriage licenses and marriages, (3) provide these couples an opportunity to demonstrate that their marriages are not same-sex marriages and thus that the official records of their marriage licenses and marriages should not be revised, (4) offer to refund, upon request, all marriage related fees paid by or on behalf of same-sex *****274** couples, and (5) make appropriate corrections to all relevant records.

As the prevailing parties, petitioners shall recover their costs.

WE CONCUR: BAXTER, CHIN, BROWN and MORENO, JJ.

Concurring Opinion by MORENO, J.

I concur. The majority opinion addresses primarily the limitations on the power of local officials to disobey statutes that may be, but have not yet been judicially established to be, unconstitutional. I write separately to focus on the related but distinct question of what courts should do when confronted with such disobedience on the part of local officials. As the majority opinion suggests, a court should not invariably refuse to decide constitutional questions arising from local governments' or local officials' refusal to obey purportedly unconstitutional statutes. Indeed, California courts ***1121** under these circumstances ****500** have, on a number of occasions, decided the underlying constitutional questions. In the present case, the majority declines to decide the constitutional validity of Family Code section 300, prohibiting same-sex marriage, but instead concludes that a writ of mandate against San Francisco's (the city's) local officials is justified because they exceeded their ministerial authority. As elaborated below, I agree that under these somewhat unusual circumstances, local officials' disobedience of the statute justifies this court's issuance of a writ of mandate against those officials before the underlying constitutional question has been adjudicated.

At the outset, I review the requirements for obtaining a writ of mandate. To obtain writ relief a petitioner must show: " '(1) A clear, present and usually ministerial duty on the part of the respondent ...; and (2) a clear, present and beneficial right in the petitioner to the performance of that duty....' " (*Santa Clara County Counsel Attys. Assn. v. Woodside* (1994) 7 Cal.4th 525, 539–540, 28 Cal.Rptr.2d 617, 869 P.2d 1142.) Also required is "the lack of any plain, speedy and adequate remedy in the usual course of law...." (*Flora Crane Service, Inc. v. Ross* (1964) 61 Cal.2d 199, 203, 37 Cal.Rptr. 425, 390 P.2d 193.) Although the writ of mandate generally must issue if the above requirements are clearly met (see *May v. Board of Directors* (1949) 34 Cal.2d 125, 133–134, 208 P.2d 661), the writ of mandate is an equitable remedy that will not issue if it is contrary to "promoting the ends of justice." (*McDaniel v. City etc. of San Francisco* (1968) 259 Cal.App.2d 356, 361, 66 Cal.Rptr. 384; see also *Bartholomae Oil Corp. v. Superior Court* (1941) 18 Cal.2d 726, 730, 117 P.2d 674.)

The local officials in the present case have a clear ministerial duty to issue marriage licenses in conformance with state statute and have violated that duty. The Attorney General, and for that matter the plaintiffs in *Lewis v. Alfaro,* have a substantial right to ensure that marriage licenses conform to the statute. (See *Bd. of Soc. Welfare v. County of L.A.* (1945) 27 Cal.2d 98, 100–101, 162 P.2d 627.) But when a court is asked to grant a writ of mandate to enforce a statute over which hangs a substantial cloud of unconstitutionality, the above-stated principles dictate that a court at least has the discretion to refuse to issue the writ until the underlying constitutional question has been decided.

How should courts exercise that discretion? In California, generally speaking, courts faced with local governments' or local officials' refusal to obey assertedly unconstitutional statutes have decided the constitutional question before determining whether a writ or other requested relief should

issue. (See, e.g., *County of Riverside* ***275 *v. Superior Court* (2003) 30 Cal.4th 278, 132 Cal.Rptr.2d 713, 66 P.3d 718 [county refused to obey as unconstitutional a state statute mandating binding arbitration for local agencies that reach *1122 negotiating impasse with police and firefighters]; *Star–Kist Foods, Inc. v. County of Los Angeles* (1986) 42 Cal.3d 1, 227 Cal.Rptr. 391, 719 P.2d 987 [county refused to act in accordance with a state revenue statute it had judged, correctly, to violate the U.S. Const.]; *Zee Toys, Inc. v. County of Los Angeles* (1978) 85 Cal.App.3d 763, 777–781, 149 Cal.Rptr. 750 [same]; *Paso Robles etc. Hospital Dist. v. Negley* (1946) 29 Cal.2d 203, 173 P.2d 813 [local financial officer refused to issue bonds and defended a lawsuit in order to expeditiously settle the constitutional validity of the bond issue]; *Denman v. Broderick* (1896) 111 Cal. 96, 105, 43 P. 516 [local official refused to spend public funds required by a statute believed to be unconstitutional "special legislation"]; *City of Oakland v. Digre* (1988) 205 Cal.App.3d 99, 252 Cal.Rptr. 99 [local official refused to enforce a parcel tax believed to be unconstitutional and required the city to demonstrate its constitutionality in court]; *Bayside Timber Co. v. Board of Supervisors* (1971) 20 Cal.App.3d 1, 14–15, 97 Cal.Rptr. 431 [county board of supervisors refused to issue permission for timber operations, although such refusal was not authorized under rules promulgated pursuant to state statute].) Indeed, any time a city determines that a state law is contrary to its own constitutional prerogative of self-governance and therefore refuses to obey the law, it is making a constitutional determination. (See, e.g., *Bishop v. City of San Jose* (1969) 1 Cal.3d 56, 63–64, 81 Cal.Rptr. 465, 460 P.2d 137 [determining that state prevailing **501 wage law for public works projects was not binding on cities].)

As the majority states, "the classic understanding of the separation of powers doctrine [is] that the legislative power is the power to enact statutes, the executive power is the power to execute or enforce statutes, and the judicial power is the power to interpret statutes and to determine their constitutionality." (Maj. opn., *ante,* 17 Cal.Rptr.3d at p. 230, 95 P.3d at p. 463.) But "the separation of powers doctrine does not create an absolute or rigid division of functions." (*Ibid.*) As the above cases suggest, local officials sometimes exercise their authority to *preliminarily* determine that a statute that directly affects the local government's functioning is unconstitutional and, in some circumstances, refuse to obey that statute as a means of bringing the constitutional challenge. This preliminary determination is the exercise of an *executive* function. Local officials and agencies do not "arrogate[ ] to [the local executive] core functions of the ... judicial branch" in violation of the separation of powers (*Carmel Valley Fire Protection Dist. v. State of California* (2001) 25 Cal.4th 287, 297–298, 105 Cal.Rptr.2d 636, 20 P.3d 533), but rather raise constitutional issues for the courts to ultimately decide.

In my view, there are at least three types of situations in which a local government's disobedience of a statute would be reasonable. In these situations, courts asked to grant a writ of mandate to compel the local agency to obey the statute should therefore address the underlying constitutional issue rather than simply conclude the local governmental entity exceeded its *1123 ministerial authority. First, there are some cases in which the statute in question violates a "clearly established ... constitutional right" (*Harlow v. Fitzgerald* (1982) 457 U.S. 800, 818, 102 S.Ct. 2727, 73 L.Ed.2d 396). An executive decision not to spend resources to comply with a clearly unconstitutional statute is a reasonable exercise of the local executive power and ***276 does not usurp a core judicial function. Indeed, refusing to enforce clearly unconstitutional statutes saves the resources of both the executive and the judiciary.

A second category of "disobedience" cases involves a local official or governmental entity disobeying a statute when there is a substantial question as to its constitutionality *and* the statute governs matters integral to a locality's limited power of self-governance. In these cases, a local entity or official is directly affected by the statute and in a unique position to challenge it. As the above cases illustrate, local entities and officials have challenged statutes to determine the validity of a bond, or the payment of a government salary for a position unconstitutionally created, or an exemption to a local tax that assertedly violates the commerce clause, or a statute that intrudes on local matters of city or county employee compensation. It is noteworthy that in virtually all the above cases, the local agency's or official's refusal to obey an assertedly unconstitutional statute had the effect of preserving the status quo, pending judicial resolution of the matter, thereby minimizing interference with the judicial function.

Perhaps in some of these cases localities could have proceeded by obtaining declaratory relief as to a statute's unconstitutionality, rather than by disobeying the statute. In other cases, an actual controversy necessary for declaratory relief may have been lacking. In any case, the fact that the local government agency did not proceed by means of declaratory relief provided no insurmountable obstacle to a

court's deciding the underlying constitutional issue raised by the agency's disobedience. (See, e.g., *County of Riverside v. Superior Court, supra,* 30 Cal.4th 278, 283, 132 Cal.Rptr.2d 713, 66 P.3d 718.)[1] Of course, if a court determines that interim relief to compel a government agency to obey a statute is appropriate, it may grant such relief before the constitutional question is ultimately adjudicated.

A third possible category of cases in which city officials might legitimately disobey statutes ****502** of doubtful constitutionality are those in which the question of a statute's constitutionality is substantial, and irreparable harm may result to individuals to which the local government agency has some protective ***1124** obligation—be they employees, or students of a public college, or patrons of a public library, or patients in a public hospital, or in some cases simply residents of the city. Again, a court asked to grant a writ of mandate could conclude that a delay in granting the writ pending resolution of the underlying constitutional question is justified. To issue a writ enforcing a statute that may be unconstitutional, and that will work irreparable harm, would not "promote[ ] the ends of justice" (*McDaniel v. City etc. of San Francisco, supra,* 259 Cal.App.2d at pp. 360–361, 66 Cal.Rptr. 384), and a court has the discretion to delay such issuance until the underlying constitutional question is resolved.

The present case is quite different from the above situations. First, as the majority demonstrates, the unconstitutionality of Family Code section 300 is not clearly established by either state or federal constitutional precedent, and certainly not from the language of the constitutional provisions themselves. Nor does this case *****277** pertain to a statute that interferes with a city's or county's limited power of self-governance that these entities are in a unique position to challenge. Rather, local officials in this case perform a ministerial function pursuant to the state marriage law. Unlike the cases cited above, in which the constitutionality of a statute is likely to go unchallenged if a local governmental entity does not do so, Family Code section 300 limits individual rights, and those individuals subject to that limitation are in the best position to challenge it.

Nor does the present case fit the third category of cases, in which a city refuses to enforce a law so as to protect its citizens from irreparable harm. The only harm caused here is a delay in the ability of same-sex couples to get married while the constitutional issue is being adjudicated. But that delay will occur whether or not we grant a writ of mandate against the city in this case. Put another way, local officials have no real power to marry same-sex couples, given the statutory prohibition against doing so. What *was* within their power, prior to our issuance of a stay, was to issue licenses of indeterminate legal status. The exercise of the court's mandate power to preclude local officials from continuing this course of action, and voiding the licenses already issued, brings no irreparable harm to the individuals who have received or might receive such licenses.

In sum, the city advances no plausible reason why it had to disobey the statute in question. Even so, it might have been appropriate to have delayed the issuance of a writ of mandate against it until the underlying constitutional question had been adjudicated if, for example, the city had issued a single "test case" same-sex marriage license. But it went far beyond a test case. It issued thousands of these marriage licenses. As such, the city went well beyond making a preliminary determination of the statute's unconstitutionality or performing an act that would bring the constitutional issue to the ***1125** courts. Rather, city officials drastically and repeatedly altered the status quo based on their constitutional determination, issuing a multitude of licenses that purported to have an independent legal effect, contrary to their ministerial duty and statutory obligation and prior to any judicial determination of the statute's unconstitutionality. By such dramatic overreaching, these officials trespassed on a core judicial function of deciding the constitutionality of statutes and endowed the issue of their authority to disobey the statute with a life of its own, independent of the underlying constitutional issue. I therefore agree with the majority that a writ of mandate is rightly issued against the city and its officials in this case.

I reiterate what is clear in the majority opinion. Our holding in this case in no way expresses or implies a view on the underlying issue of the constitutionality of a statute prohibiting same-sex marriage. That issue will be addressed in the context of litigation in which the issue is properly raised. (See *Goodridge v. Department of Pub. Health* (2003) 440 Mass. 309, 798 N.E.2d 941.)

****503** Concurring and Dissenting Opinion by KENNARD, J.

I concur in the judgment, except insofar as it declares void some 4,000 marriages performed in reliance on the gender-neutral marriage licenses[1] issued in the City *****278** and County of San Francisco. Although I agree with the

majority that San Francisco public officials exceeded their authority when they issued those licenses, and that the licenses themselves are therefore invalid, I would refrain from determining here, in a proceeding from which the persons whose marriages are at issue have been excluded, the validity of the marriages solemnized under those licenses. That determination should be made after the constitutionality of California laws restricting marriage to opposite-sex couples has been authoritatively resolved through judicial proceedings now pending in the courts of California.

**I**

Like the majority, I conclude that officials in the City and County of San Francisco exceeded their authority when they issued gender-neutral marriage licenses to same-sex couples, and I agree with the majority that those officials may not justify their actions on the ground that state laws restricting marriage to opposite-sex couples violate the state or the federal Constitution. The cases discussed by the majority demonstrate, in my view, that a public official may refuse to enforce a statute on constitutional grounds only in these situations: ***1126** 1) when the statute's unconstitutionality is obvious beyond dispute in light of unambiguous constitutional language or controlling judicial decisions; (2) when refraining from enforcement is necessary to preserve the status quo and to prevent irreparable harm pending judicial determination of a legitimate and substantial constitutional question about the statute's validity; (3) when enforcing the statute could put the public official at risk for substantial personal liability; or (4) when refraining from enforcement is the only practical means to obtain a judicial determination of the constitutional question. (See Field, The Effect of an Unconstitutional Statute (1935, reprint ed.1971) p. 119 et seq.; Note, *Right of Ministerial Officer to Raise Defense of Unconstitutionality in Mandamus Proceeding* (1931) 15 Minn. L.Rev. 340; Rapacz, *Protection of Officers Who Act Under Unconstitutional Statutes* (1927) 11 Minn. L.Rev. 585; Note, *Who Can Set Up Unconstitutionality—Whether Public Official Has Sufficient Interest* (1920) 34 Harv. L.Rev. 86.) Because none of these situations is present here, as I explain below, the public officials acted wrongly in refusing to enforce the opposite-sex restriction in California's marriage laws.

**A. Indisputably Unconstitutional Law**

In restricting marriages to couples consisting of one woman and one man, California's marriage laws are not plainly or obviously unconstitutional under either the state or the federal Constitution. Neither Constitution expressly prohibits limiting marriage to opposite-sex couples, and neither Constitution expressly grants any person a right to marry someone of the same sex. Nor does any judicial decision establish beyond reasonable dispute that restricting marriage to heterosexual couples violates any provision of the California Constitution or the United States Constitution.

Indeed, there is a decision of the United States Supreme Court, binding on all other courts and public officials, that a state law restricting marriage to opposite-sex couples does *not* violate the federal Constitution's guarantees of equal protection and due process of law. After the Minnesota Supreme Court held that Minnesota laws preventing marriages between persons of *****279** the same sex did not violate the equal protection or due process clauses of the United States Constitution (*Baker v. Nelson* (1971) 291 Minn. 310, 191 N.W.2d 185), the decision was appealed to the United States Supreme Court, as federal law then permitted (see 28 U.S.C. former ****504** § 1257(2), 62 Stat. 929 as amended by 84 Stat. 590). The high court later dismissed that appeal "for want of substantial federal question." (*Baker v. Nelson* (1972) 409 U.S. 810, 93 S.Ct. 37, 34 L.Ed.2d 65.)

As the United States Supreme Court has explained, a dismissal on the ground that an appeal presents no substantial federal question is a decision on ***1127** the merits of the case, establishing that the lower court's decision on the issues of federal law was correct. (*Mandel v. Bradley* (1977) 432 U.S. 173, 176, 97 S.Ct. 2238, 53 L.Ed.2d 199; *Hicks v. Miranda* (1975) 422 U.S. 332, 344, 95 S.Ct. 2281, 45 L.Ed.2d 223.) Summary decisions of this kind "prevent lower courts from coming to opposite conclusions on the precise issues presented and necessarily decided by those actions." (*Mandel v. Bradley, supra,* at p. 176, 97 S.Ct. 2238.) Thus, the high court's summary decision in *Baker v. Nelson, supra,* 409 U.S. 810, 93 S.Ct. 37, 34 L.Ed.2d 65, prevents lower courts and public officials from coming to the conclusion that a state law barring marriage between persons of the same sex violates the equal protection or due process guarantees of the United States Constitution.

The binding force of a summary decision on the merits continues until the high court instructs otherwise. (*Hicks v. Miranda, supra,* 422 U.S. at p. 344, 95 S.Ct. 2281.) That court may release lower courts from the binding effect of one

of its decisions on the merits either by expressly overruling that decision or through " 'doctrinal developments' " that are necessarily incompatible with that decision. (*Id.* at p. 344, 95 S.Ct. 2281.) The United States Supreme Court has not expressly overruled *Baker v. Nelson, supra,* 409 U.S. 810, 93 S.Ct. 37, 34 L.Ed.2d 65, nor do any of its later decisions contain doctrinal developments that are necessarily incompatible with that decision.

The San Francisco public officials have argued that the United States Supreme Court's decision in *Lawrence v. Texas* (2003) 539 U.S. 558, 123 S.Ct. 2472, 156 L.Ed.2d 508, holding unconstitutional a state law "making it a crime for two persons of the same sex to engage in certain intimate sexual conduct" (*id.* at p. 562, 123 S.Ct. 2472), amounts to a doctrinal development that releases courts and public officials from any obligation to obey the high court's decision in *Baker v. Nelson, supra,* 409 U.S. 810, 93 S.Ct. 37, 34 L.Ed.2d 65. Although *Lawrence* represents a significant shift in the high court's view of constitutional protections for same-sex relationships, the majority in *Lawrence* carefully pointed out that "there is no longstanding history in this country of laws directed at homosexual conduct as a distinct matter" (*Lawrence v. Texas, supra,* at p. 568, 123 S.Ct. 2472) and that the case "d[id] not involve whether the government must give formal recognition to any relationship that homosexual persons seek to enter" (*id.* at p. 578, 123 S.Ct. 2472). Because there is a long history in this country of defining marriage as a relation between one man and one woman, and because marriage laws do involve formal government recognition of relationships, the high court's decision in *Lawrence* did not undermine the authority of *Baker v. Nelson* to such a degree that a lower federal or state court, much less a public official, could disregard it. Until the United States Supreme Court says otherwise, which it has not yet done, *Baker v. Nelson* defines federal constitutional law on the ***280** question whether a state may deny same-sex couples the right to marry.

***1128** Because neither the federal nor the California Constitution contains any provision directly and expressly guaranteeing a right to marry another person of the same sex, and because no court has ever decided that either Constitution confers that right, this is not a situation in which a public official refused to enforce a law that was obviously and indisputably unconstitutional.

**B. Preserving the Status Quo to Prevent Serious Harm**

Nor was this a situation in which a public official, by temporarily refraining from enforcing a state law, merely preserved the status quo to prevent potentially irreparable harm pending judicial determination of a legitimate and substantial constitutional question about the law's validity. By issuing licenses authorizing same-sex marriages, the San Francisco public officials did not preserve ****505** a status quo, but instead they altered the status quo in that California law has always prohibited same-sex marriage.

In 1977, the Legislature amended Family Code section 300 to specify that marriage is a relation "between a man and a woman." (See maj. opn., *ante,* 17 Cal.Rptr.3d at p. 236, fn. 11, 95 P.3d at p. 468, fn. 11.) At the March 2000 election, the voters approved Proposition 22, which enacted Family Code section 308.5 declaring that "[o]nly marriage between a man and a woman is valid or recognized in California." [2] But those statutory measures did not change existing law. Since the earliest days of statehood, California has recognized only opposite-sex marriages. (See, e.g., *Mott v. Mott* (1890) 82 Cal. 413, 416, 22 P. 1142 [quoting legal dictionary's definition of marriage as a contract " 'by which a man and woman reciprocally engage to live with each other during their joint lives, and to discharge toward each other the duties imposed by law on the relation of husband and wife' "].) In issuing gender-neutral marriage licenses, therefore, San Francisco public officials could not have intended merely a temporary or interim preservation of an existing state of affairs pending a judicial determination of a newly enacted law's constitutionality. Instead, as their public statements indicated, they issued those licenses to effect a fundamental and permanent change in traditional marriage eligibility requirements, based on their own views about constitutional questions. In so doing, they exceeded their authority.

**C. Public Officials' Personal Liability**

This was not a situation in which public officials had reason to fear they might be held personally liable in damages for enforcing a constitutionally ***1129** invalid state law. In a federal civil rights action brought under 42 United States Code section 1983, a public official may not be held personally liable for enforcing a state law that violates a federal constitutional right unless the "contours of the right [are] sufficiently clear that a reasonable official would understand that what he is doing violates that right." (*Anderson v. Creighton* (1987) 483 U.S. 635, 640, 107 S.Ct. 3034, 97 L.Ed.2d 523; accord, *Saucier v. Katz* (2001) 533 U.S. 194, 202, 121 S.Ct. 2151, 150 L.Ed.2d 272; *Wilson*

*v. Layne* (1999) 526 U.S. 603, 614–615, 119 S.Ct. 1692, 143 L.Ed.2d 818.) Because the United ***281** States Supreme Court has determined that a state law prohibiting same-sex marriage does not violate the federal Constitution (*Baker v. Nelson, supra,* 409 U.S. 810, 93 S.Ct. 37, 34 L.Ed.2d 65), no reasonable public official could conclude that denying marriage licenses to same-sex couples would violate a right that was clearly established under the federal Constitution. Accordingly, federal civil rights law could not impose personal liability on local officials in California for enforcing California's same-sex marriage prohibition. "[A]bsent contrary direction, state officials and those with whom they deal are entitled to rely on a presumptively valid state statute, enacted in good faith and by no means plainly unlawful." (*Lemon v. Kurtzman* (1973) 411 U.S. 192, 208–209, 93 S.Ct. 1463, 36 L.Ed.2d 151 (plur. opn. of Burger, C. J.).)

Nor was there any reasonable basis for local officials to anticipate personal liability under the California Constitution or California civil rights laws for denying marriage licenses to same-sex couples. Government Code section 820.6 provides immunity for public employees acting in good faith, without malice, under a statute that proves to be unconstitutional. Because same-sex marriage has never been legally authorized in California, the California Constitution does not expressly grant a right to same-sex marriage, and no judicial decision by any California court has ever suggested, much less held, that state laws limiting marriage to opposite-sex couples violate the California Constitution, Government Code section 820.6 would immunize any public official from personal liability for enforcing the same-sex marriage prohibition should that prohibition, at some **506 later time, be held to violate the California Constitution.

**D. Necessity of Nonenforcement to Obtain Judicial Resolution**

Finally, this is not a situation in which a public official's nonenforcement of a law was the only practical way to obtain a judicial determination of that law's constitutionality. Just as the constitutionality of California's prohibition against interracial marriage was properly challenged by a mixed-race couple who were denied a marriage license (*Perez v. Sharp* (1948) 32 Cal.2d 711, 198 P.2d 17), the constitutionality of California's prohibition against same-sex marriage could have been readily challenged at any time through a lawsuit brought by a same-sex couple who had been denied a marriage *1130 license. Indeed, challenges of this sort are now pending in the superior court. (See maj. opn., *ante,* 17 Cal.Rptr.3d at p. 270, 95 P.3d at p. 495.)

**E. Policy Grounds for General Rule Prohibiting Nonenforcement on Constitutional Grounds**

As the majority points out (maj. opn., *ante,* 17 Cal.Rptr.3d at pp. 229–230, 264, 95 P.3d at pp. 462–463, 491), confusion and chaos would ensue if local public officials in each of California's 58 counties could separately and independently decide not to enforce long-established laws with which they disagreed, based on idiosyncratic readings of broadly worded constitutional provisions. To ensure uniformity and consistency in the statewide application and enforcement of duly enacted and presumptively valid statutes, the authority of public officials to decline enforcement of state laws, in the absence of a judicial determination of invalidity, based on the officials' own constitutional determinations, is and must be carefully and narrowly limited. I agree with the majority that San Francisco public officials exceeded those limits when they declined to enforce state marriage laws by issuing gender-neutral marriage licenses to same-sex couples.

**II** ***282**

Although I agree with the majority that San Francisco officials exceeded their authority when they issued gender-neutral marriage licenses to same-sex couples, I do not agree with all the reasoning that the majority offers in support of that conclusion. In particular, I do not agree that a "line of decisions" had established, before the 1978 enactment of section 3.5 of article III of the California Constitution, that "only administrative agencies constitutionally authorized to exercise judicial power have the authority to determine the constitutional validity of statutes." (Maj. opn., *ante,* 17 Cal.Rptr.3d at p. 253, 95 P.3d at p. 482.)

The majority does not identify any pre–1978 decision holding that a nonconstitutional administrative agency, during quasi-judicial administrative proceedings, lacked authority to determine a statute's constitutionality. The majority asserts that this court so held in *State of California v. Superior Court (Veta)* (1974) 12 Cal.3d 237, 115 Cal.Rptr. 497, 524 P.2d 1281. (Maj. opn., *ante,* 17 Cal.Rptr.3d at p. 250, 95 P.3d at p. 480.) But this court there decided only that the doctrine of exhaustion of administrative remedies did not apply to a constitutional challenge to the statute from which the administrative agency derived its authority. (*State*

*of California v. Superior Court (Veta), supra,* at p. 251, 115 Cal.Rptr. 497, 524 P.2d 1281.) In concluding that a litigant was not *required* during quasi-judicial administrative proceedings to make a constitutional challenge to the statute that created the agency, this court explained that "[i]t would be heroic indeed to compel a party to appear before an administrative body to challenge its very existence and to expect a dispassionate hearing before its ***1131** preponderantly lay membership on the constitutionality of the statute establishing its status and functions." (*Ibid.*) This court did not state, or even imply, that an administrative agency *lacked authority* to resolve constitutional issues that a litigant might present.

I also see no need for, and do not join, the majority's observations on topics far removed from the issue presented here, such as the powers of the President of the United States ****507** (maj. opn., *ante,* 17 Cal.Rptr.3d at p. 255, fn. 26, 95 P.3d at p. 484, fn. 26) and the existence of certain legal defenses to war crimes charges (*id.* at p. 258, fn. 30, 95 P.3d at p. 486, fn. 30). These issues are not before this court.

**III**

Because I agree with the majority that San Francisco's public officials exceeded their authority when they issued gender-neutral marriage licenses to same-sex couples, I concur in the judgment insofar as it requires those officials to comply with state marriage laws, to identify the same-sex couples to whom gender-neutral marriage licenses were issued, to notify those couples that their marriage licenses are invalid, to offer refunds of marriage license fees collected, and to make appropriate corrections to all relevant records. But I would not require notification that the marriages themselves "are void from their inception and a legal nullity." (Maj. opn., *ante,* 17 Cal.Rptr.3d at p. 273, 95 P.3d at p. 499.)

Although a marriage license is a requirement for a valid marriage (Fam.Code, §§ 300, 350), some defects in a marriage license do not invalidate the marriage. (See *id.,* § 306; see also, e.g., *Argonaut Ins. Co. v. Industrial Acc. Com.* (1962) 204 Cal.App.2d 805, 809, 23 Cal.Rptr. 1 [applicant's use of false names on license application did not invalidate marriage].) Whether the issuance of a gender-neutral *****283** license to a same-sex couple, in violation of state laws restricting marriage to opposite-sex couples, is a defect that precludes any possibility of a valid marriage may well depend upon resolution of the constitutional validity of that statutory restriction. If the restriction is constitutional, then a marriage between persons of the same sex would be a legal impossibility, and no marriage would ever have existed. But if the restriction violates a fundamental constitutional right, the situation could be quite different. A court might then be required to determine the validity of same-sex marriages that had been performed *before* the laws prohibiting those marriages had been invalidated on constitutional grounds.

When a court has declared a law unconstitutional, questions about the effect of that determination on prior actions, events, and transactions "are among the most difficult of those which have engaged the attention of courts, state and federal, and it is manifest from numerous decisions that an ***1132** all-inclusive statement of a principle of absolute retroactive invalidity cannot be justified." (*Chicot County Dist. v. Baxter State Bank* (1940) 308 U.S. 371, 374, 60 S.Ct. 317, 84 L.Ed. 329; accord, *Lemon v. Kurtzman, supra,* 411 U.S. at p. 198, 93 S.Ct. 1463.) This court has acknowledged that, in appropriate circumstances, an unconstitutional statute may be judicially reformed to retroactively extend its benefits to a class that the statute expressly but improperly excluded. (*Kopp v. Fair Pol. Practices Com.* (1995) 11 Cal.4th 607, 624–625, 47 Cal.Rptr.2d 108, 905 P.2d 1248 (lead opn. of Lucas, C.J.), 685, 47 Cal.Rptr.2d 108, 905 P.2d 1248 (conc. & dis. opn. of Baxter, J.) [joining in pt. III of lead opn.].) Thus, it is possible, though by no means certain, that if the state marriage laws prohibiting same-sex marriage were held to violate the state Constitution, same-sex marriages performed before that determination could then be recognized as valid.

Although the United States Supreme Court has determined that there is no right to same-sex marriage under the federal Constitution (*Baker v. Nelson, supra,* 409 U.S. 810, 93 S.Ct. 37, 34 L.Ed.2d 65), courts in other states construing their own state Constitutions in recent years have reached differing conclusions on this question. (Compare *Goodridge v. Dept. of Public Health* (2003) 440 Mass. 309, 798 N.E.2d 941 [denying marriage licenses to same-sex couples violates Massachusetts Constitution] with *Standhardt v. Sup.Ct.* (Ariz.Ct.App.2003) 206 Ariz. 276, 77 P.3d 451 [no right to same-sex marriage under Arizona Constitution].) Recognizing the difficulty and seriousness of the constitutional question, which is now presented in pending superior court actions, this court has declined to address it in this case. *Until that constitutional issue has been finally resolved under the California Constitution,* it is premature and unwise to assert, as the majority essentially does, that the thousands of same-sex weddings performed in ****508**

San Francisco were empty and meaningless ceremonies in the eyes of the law.

For many, marriage is the most significant and most highly treasured experience in a lifetime. Individuals in loving same-sex relationships have waited years, sometimes several decades, for a chance to wed, yearning to obtain the public validation that only marriage can give. In recognition of that, this court should proceed most cautiously in resolving the ultimate question of the validity of the same-sex marriages performed in San Francisco, even though those marriages were performed under licenses issued by San Francisco public officials without proper authority and in violation of state law. Because the licenses were issued without proper authorization, ***284** and in the absence of a judicial determination that the state laws prohibiting same-sex marriage are unconstitutional, employers and other third parties would be under no legal obligation to recognize the validity of any of the same-sex marriages at issue here. Should the pending lawsuits ultimately be resolved by a determination that the opposite-sex marriage restriction is *1133 constitutionally invalid—an issue on which I express no opinion—it would then be the appropriate time to address the validity of previously solemnized same-sex marriages.

Concurring and Dissenting Opinion by WERDEGAR, J.

I agree with the majority that San Francisco officials violated the Family Code by licensing marriages between persons of the same sex. Accordingly, I concur in the decision to order those officials to comply with the existing marriage statutes unless and until they are determined to be unconstitutional. Because constitutional challenges are pending in the lower courts, to order city officials not to license additional same-sex marriages in the meantime is an appropriate way to preserve the status quo pending the outcome of that litigation. That, however, is the extent of my agreement with the majority.

**I.**

I do not join in the majority's decision to address the validity of the marriages already performed and to declare them void. My concern here is not for the future of same-sex marriage. That question is not before us and, like the majority, I intimate no view on it. My concern, rather, is for basic fairness in judicial process. The superior court is presently considering whether the state statutes that limit marriage to "a man and a woman" (e.g., Fam.Code, § 300) violate the state and federal Constitutions. The same-sex couples challenging those statutes claim the state has, without sufficient justification, denied the fundamental right to marry (e.g., *Zablocki v. Redhail* (1978) 434 U.S. 374, 383, 98 S.Ct. 673, 54 L.Ed.2d 618; *Loving v. Virginia* (1967) 388 U.S. 1, 12, 87 S.Ct. 1817, 18 L.Ed.2d 1010; *Perez v. Sharp* (1948) 32 Cal.2d 711, 714–715, 198 P.2d 17) to a class of persons defined by gender or sexual orientation. Should the relevant statutes be held unconstitutional, the relief to which the purportedly married couples would be entitled would normally include recognition of their marriages. By analogy, interracial marriages that were void under antimiscegeny statutes at the time they were solemnized were nevertheless recognized as valid after the high court rejected those laws in *Loving v. Virginia.* (E.g., *Dick v. Reaves* (Okla.1967) 434 P.2d 295, 298.) By postponing a ruling on this issue, we could preserve the status quo pending the outcome of the constitutional litigation. Instead, by declaring the marriages "void and of no legal effect from their inception" (maj. opn., *ante,* 17 Cal.Rptr.3d at p. 268, 95 P.3d at p. 494), the majority permanently deprives future courts of the ability to award full relief in the event the existing statutes are held unconstitutional. This premature decision can in no sense be thought to represent fair judicial process.

The majority asserts that "it would not be prudent or wise to leave the validity of these marriages in limbo for what might be a substantial period of *1134 time given the potential confusion (for third parties, such as employers, insurers, or other governmental entities, as well as for the affected couples) that such an uncertain status inevitably would entail." (Maj. opn., *ante,* 17 Cal.Rptr.3d at p. 271, 95 P.3d at p. 497.) Nowhere in the opinion, **509 however, does the majority note that any same-sex couple has filed a lawsuit seeking the legal ***285** benefits of their purported marriage. Nor is the absence of such lawsuits surprising, since any reasonable court would stay such actions pending the outcome of the ongoing constitutional litigation. [1]

The majority's decision to declare the existing marriages void is unfair for the additional reason that the affected couples have not been joined as parties or given notice and an opportunity to appear. On March 12, 2004, we denied all petitions to intervene filed by affected couples. That ruling made sense at the time it was announced because our prior order of March 11, 2004, which specified the issues to be briefed and argued, did not identify the validity of the existing marriages as an issue. Only on April 14, 2004, *after* having denied the petitions to intervene, did the court

identify and solicit briefing on the issue of the marriages' validity. To declare marriages void after denying requests by the purported spouses to appear in court as parties and be heard on the matter is hard to justify, to say the least. [2]

The majority counters that "the legal arguments of such couples with regard to the question of the validity of the existing same-sex marriages have been heard and fully considered." (Maj. opn., *ante,* 17 Cal.Rptr.3d at p. 270, 95 P.3d at p. 496.) But this is a claim a court may not in good conscience make unless it has given, to the persons whose rights it is purporting to adjudicate, notice and the opportunity to appear. This is the irreducible minimum of due process, even in cases involving numerous parties. (See *Mullane v. Central Hanover Tr. Co.* (1950) 339 U.S. 306, 314–315, 70 S.Ct. 652, 94 L.Ed. 865.) Amicus curiae briefs, which any member of the public may ask to file and which the court has no obligation to read, cannot seriously be thought to satisfy these requirements. The majority writes that "requiring each of the thousands of same-sex couples to be named and served as parties in the present action, would add nothing of substance to this proceeding." (Maj. opn., *ante,* 17 Cal.Rptr.3d at p. 269, 95 P.3d at p. 495.) Of ***1135** course, the same argument can be made in many class actions with respect to the absent members of the class, but due process still gives each class member the right to notice and the opportunity to appear. (*Mullane v. Central Hanover Tr. Co., supra,* 339 U.S. at pp. 314–315, 70 S.Ct. 652.) Here, notice has been given to none of the 4,000 affected couples; and even the 11 same-sex couples who affirmatively sought to intervene were denied the opportunity to appear. (Maj. opn., *ante,* 17 Cal.Rptr.3d at p. 270, 95 P.3d at p. 496.) What the majority has done, in effect, is to give petitioners the benefit of an action against a defendant class of same-sex couples free of the burden of procedural due process. If the majority truly desired to hear the views of the same-sex couples *****286** whose rights it is adjudicating, it would not proceed in absentia.

Aware of this problem, the majority offers a specious imitation of due process by ordering the city to notify the same-sex couples that this court has decided their marriages are void, and to "provide these couples an opportunity to demonstrate that their marriages are not same-sex marriages" before canceling their marriage records. (Maj. opn., *ante,* 17 Cal.Rptr.3d at p. 273, 274, 95 P.3d at pp. 499, 500; see also *id.,* at p. 270, 95 P.3d at p. 497.) This procedure may prevent the city from mistakenly deleting the records of heterosexual marriages, but it cannot benefit any same-sex couple. Notice after the ****510** fact that one's rights have been adjudicated is not due process.

The majority attempts to justify the procedural shortcuts it is taking by invoking the rule that "[a] marriage prohibited as ... illegal and declared to be 'void' or 'void from the beginning' is a legal nullity and its validity may be asserted or shown in any proceeding in which the fact of marriage may be material." (*Estate of Gregorson* (1911) 160 Cal. 21, 26, 116 P. 60, quoted in maj. opn., *ante,* 17 Cal.Rptr.3d at p. 269, 95 P.3d at p. 495.) But that rule, until today, has permitted persons other than spouses to challenge the validity of a marriage *only as and when necessary to resolve another issue in the case,* for example, the legitimacy of an heir's claim to property or an assertion of marital privilege. In essence, the *Gregorson* rule simply recognizes that a litigant whose claim or defense depends on the validity or invalidity of a marriage may introduce evidence to prove the point. [3] We have never held that this type of collateral attack on a marriage has any binding effect on *nonparties* to the ***1136** action. A court's refusal in the course of a criminal trial to recognize a claim of marital privilege, for example, does not compel the State Office of Vital Records to destroy a record of the marriage. The majority asserts that the question of the existing marriages' validity or invalidity is material because it is "*central to the scope of the remedy that may and should be ordered in this case.*" (Maj. opn., *ante,* 17 Cal.Rptr.3d at p. 269, 95 P.3d at p. 495, italics added.) But this is just another way of saying the question is material because the Attorney General has asked us to decide it. With this reasoning, the majority assumes the conclusion and converts the *Gregorson* rule into a pretext for denying fundamental fairness.

**II.**

I also do not join in the majority's unnecessary, wide-ranging comments on the respective powers of the judicial and executive branches of government.

The ostensible occasion for the majority's comments—a threat to the rule of law (maj. opn., *****287** *ante,* 17 Cal.Rptr.3d at p. 273, 95 P.3d at p. 499)—seems an extravagant characterization of recent events. On March 11, 2004, when we assumed jurisdiction and issued an interim order directing San Francisco officials to cease licensing same-sex marriages, those officials immediately stopped. Apparently the only reason they had not stopped earlier is that the lower courts had denied similar applications for interim relief. While city officials evidently understood their

oaths of office as commanding obedience to the Constitution rather than to the marriage statutes they believed to be unconstitutional, those officials never so much as hinted that they would not respect the authority of the courts to decide the matter. Indeed, not only did our interim order meet with immediate, unreserved compliance by city officials, but the same order apparently sufficed to recall to duty any other public officials who might privately have been thinking to follow San Francisco's lead. In the meantime, not one of California's 58 counties or over 400 municipalities has licensed a same-sex marriage.

Under these circumstances, I see no justification for asserting a broad claim of power over the executive branch. Make no mistake, the majority does assert such a claim by holding that executive officers must follow statutory rather than constitutional law until a court gives them permission in advance to do otherwise. For the judiciary to assert such power over the executive branch is fundamentally misguided. As the high court ****511** has explained, " [i]n the performance of assigned constitutional duties *each branch of the Government must initially interpret the Constitution,* and the interpretation of its powers by any branch is due great respect from the others." (*United States v. Nixon* (1974) 418 U.S. 683, 703, 94 S.Ct. 3090, 41 L.Ed.2d 1039, italics added.) To recognize that an executive officer has the practical freedom to act based on an interpretation of the Constitution that may ultimately prove to be wrong ***1137** does not mean the rule of law has collapsed. So long as the courts remain open to hear legal challenges to executive conduct, so long as the courts have power to enjoin such conduct pending final determination of its legality, and so long as the other branches acknowledge the courts' role as " 'ultimate interpreter of the Constitution' " (*id.,* at p. 704, 94 S.Ct. 3090, quoting *Baker v. Carr* (1962) 369 U.S. 186, 211, 82 S.Ct. 691, 7 L.Ed.2d 663) in matters properly within their jurisdiction, no genuine threat to the rule of law exists. San Francisco's compliance with our interim order eloquently demonstrates this.

Furthermore, a rule requiring an executive officer to seek a court's permission before declining to comply with an apparently unconstitutional statute is fundamentally at odds with the separation of powers and, in many cases, unenforceable. The executive branch is necessarily active, managing events as they occur. The judicial branch is necessarily reactive, waiting until invited to serve as neutral referee. The executive branch does not await the courts' pleasure. A rule to the contrary, though perhaps enforceable against local officials in some cases, will be impossible to enforce against executive officers who exercise a greater share of the state's power, such as a Governor or an Attorney General. By happy tradition in this country, executive officers have generally acquiesced in the judicial branch's traditional claim of final authority to resolve constitutional disputes. (*Marbury v. Madison* (1803) 1 Cranch 137, 5 U.S. 137, 176, 2 L.Ed. 60; see also *United States v. Nixon, supra,* 418 U.S. 683, 703, 94 S.Ct. 3090, 41 L.Ed.2d 1039.) But a court can never afford to forget that the judiciary "may truly be said to have neither Force nor *****288** Will, but merely judgment; and must ultimately depend upon the aid of the executive arm even for the efficacy of its judgments." (Hamilton, The Federalist No. 78 (Willis ed.1982) p. 394.) Accordingly, we are ill advised to announce categorical rules that will not stand the test of harder cases.

The majority acknowledges that "legislators and executive officials may take into account constitutional considerations in making discretionary decisions within their authorized sphere of action—such as whether to enact or veto proposed legislation or exercise prosecutorial discretion." (Maj. opn., *ante,* 17 Cal.Rptr.3d at p. 230, 95 P.3d at p. 463.) But the majority views executive officers exercising "ministerial" functions as statutory automatons, denied even the scope to obey their oaths of office to follow the Constitution. (*Ibid.*) Contrary to the majority, I do not find the purported distinction between discretionary and ministerial functions helpful in this context. Were not state officials performing ministerial functions when, strictly enforcing state segregation laws in the years following *Brown v. Board of Education* (1954) 347 U.S. 483, 74 S.Ct. 686, 98 L.Ed. 873, they refused to admit African–American pupils to all-White schools until the courts had applied *Brown's* decision about a Kansas school system to each state's law? We formerly believed that school officials' oaths of office to obey the Constitution had sufficient gravity in such cases to permit them to obey the higher law, even *before* the courts had ***1138** spoken state by state. (*Southern Pac. Transportation Co. v. Public Utilities Com.* (1976) 18 Cal.3d 308, 311, fn. 2 [3d par.], 134 Cal.Rptr. 189, 556 P.2d 289.) So, too, did the United States Supreme Court. (*Cooper v. Aaron* (1958) 358 U.S. 1, 18–20, 78 S.Ct. 1401, 3 L.Ed.2d 5.) Today, in contrast, the majority equivocates on this point (see maj. opn., *ante,* 17 Cal.Rptr.3d at pp. 258–259, 95 P.3d 486–487) and writes that "a public official 'faithfully upholds the Constitution by complying with the mandates of the Legislature, leaving to courts the decision whether those mandates are invalid' " (*id.,* at p. 257, 95 P.3d at p. 485, quoting *Southern Pac. Transportation Co. v. Public Utilities Com., supra,* at p. 319,

134 Cal.Rptr. 189, 556 P.2d 289 (conc. & dis. opn. of Mosk, J.)). But ****512** as history demonstrates, however convenient the majority's view may be in dealing with subordinate officers within a governmental hierarchy, that view is not entirely correct.

The majority's strong view of judicial power over the executive branch leads it to suggest, albeit without actually so holding, that a state may properly condition on advance judicial approval its executive officers' duty to obey even the *federal* Constitution. The majority writes, for example, that "[t]he city has not cited any case holding that the federal Constitution prohibits a state from defining the authority of a state's executive officials in a manner that requires such officials to comply with a clearly applicable statute unless and until such a statute is judicially determined to be unconstitutional" (maj. opn., *ante,* 17 Cal.Rptr.3d at p. 265, 95 P.3d at p. 492), and that " 'the power of a public officer to question the constitutionality of a statute as an excuse for refusing to enforce it ... *is a purely local question*' [citation]—that is, purely a question of state (not federal) law" (*id.,* at p. 266, 95 P.3d at pp. 493–494, quoting *Smith v. Indiana* (1903) 191 U.S. 138, 148, 24 S.Ct. 51, 48 L.Ed. 125, italics in maj. opn.). [4]

*****289** Given that respondent city officials have complied with our interim order to cease issuing same-sex marriage licenses, and that the constitutionality of the existing marriage statutes is presently under review, I consider the majority's determination to speculate about the limits of a state official's duty to obey ***1139** the federal Constitution unnecessary and regrettable. A court should not trifle with the doctrine invoked by recalcitrant state officials, in the years following *Brown v. Board of Education, supra,* 347 U.S. 483, 74 S.Ct. 686, 98 L.Ed. 873, to rationalize their delay in complying with the Fourteenth Amendment. The high court definitively repudiated this erroneous doctrine in *Cooper v. Aaron, supra,* 358 U.S. 1, 18, 78 S.Ct. 1401, 3 L.Ed.2d 5: "No state legislator or executive or judicial officer can war against the Constitution without violating his undertaking to support it." The United States Constitution, itself, immediately commands the unqualified obedience of state officials in article VI, section 3, which declares that "all executive and judicial officers, both of the United States *and of the several states,* shall be bound by oath or affirmation, to support this Constitution...." (Italics added; see also *Cooper v. Aaron, supra,* 358 U.S. at pp. 19–20, 78 S.Ct. 1401.)

We, as a court, should not claim more power than we need to do our job effectively. In particular, strong claims of judicial power over the executive branch are best left unmade and, if they must be made, are best reserved for cases presenting a real threat to the separation of powers—a threat that provides manifest necessity for the claim, a genuine test of the claim's validity, and a suitable incentive for caution in its articulation. None of these conditions, all of which are necessary to ensure sound decisions in hard cases, is present here.

**III.**

In conclusion, I agree with the majority's decision to order city officials not to license additional same-sex marriages pending resolution of the constitutional challenges to the existing marriage statutes. To say more at this time is neither necessary nor wise.

**All Citations**

33 Cal.4th 1055, 95 P.3d 459, 17 Cal.Rptr.3d 225, 04 Cal. Daily Op. Serv. 7342, 2004 Daily Journal D.A.R. 9916

Footnotes

1 The phrase "a government of laws, and not of men" was authored by John Adams (Adams, Novanglus Papers, No. 7 (1774), reprinted in 4 Works of John Adams (Charles Francis Adams ed. 1851) p. 106), and was included as part of the separation of powers provision of the initial Massachusetts Constitution adopted in 1780. (Mass. Const.(1780) Part The First, art. XXX.) The separation of powers provision of that state's Constitution remains unchanged to this day, and reads in full: "In the government of this commonwealth, the legislative department shall never exercise the executive and judicial powers or either of them; the executive shall never exercise the legislative and judicial powers, or either of them; the judicial shall never exercise the legislative and executive powers, or either of them: *to the end it may be a government of laws and not of men.*" (Italics added.)

2 Petitioner in the *Lockyer* matter is Bill Lockyer, the Attorney General of California. The petition in *Lockyer* names as respondents the City and County of San Francisco, Gavin Newsom in his official capacity as Mayor of the City and County of San Francisco, Mabel S. Teng in her official capacity as Assessor–Recorder of the City and County of San Francisco, and Nancy Alfaro in her official capacity as the County Clerk of the City and County of San Francisco.

Petitioners in the *Lewis* matter are Barbara Lewis, Charles McIlhenny, and Edward Mei, San Francisco residents and taxpayers. The petition in *Lewis* names as respondent Nancy Alfaro in her official capacity as the County Clerk of the City and County of San Francisco.

For convenience, in this opinion we generally shall refer to the Attorney General and petitioners in *Lewis* collectively as "petitioners" and to respondents in both *Lockyer* and *Lewis* collectively as "the city" or "the city officials."

3 The letter from Mayor Newsom identified Alfaro as the San Francisco County Clerk. In its answer to the petition for writ of mandate in *Lockyer,* filed in this court on March 18, 2004, however, the city alleges "that Daryl M. Burton is the San Francisco County Clerk, and that Nancy Alfaro is the Director of the County Clerk's Office, to whom all of the responsibilities and privileges of County Clerk have been delegated." The answer further alleges that "as Burton's delegate, Nancy Alfaro is the designated 'commissioner of civil marriages' for San Francisco." Alfaro has filed a declaration stating that she is the Director of the County Clerk's Office for the City and County of San Francisco and that "[i]n that capacity I perform all the duties, and hold all the responsibilities of, the County Clerk. These duties include the issuance of all marriage licenses." Petitioners do not contend that Alfaro is not the official authorized to perform the duties assigned by the applicable statutes to the county clerk, and thus we shall consider Alfaro the county clerk for purposes of this proceeding.

4 The letter read in full: "Upon taking the Oath of Office, becoming the Mayor of the City and County of San Francisco, I swore to uphold the Constitution of the State of California. Article I, Section 7, subdivision (a) of the California Constitution provides that '[a] person may not be ... denied equal protection of the laws.' The California courts have interpreted the equal protection clause of the California Constitution to apply to lesbians and gay men and have suggested that laws that treat homosexuals differently from heterosexuals are suspect. The California courts have also stated that discrimination against gay men and lesbians is invidious. The California courts have held that gender discrimination is suspect and invidious as well. The Supreme Courts in other states have held that equal protection provisions in their state constitutions prohibit discrimination against gay men and lesbians with respect to the rights and obligations flowing from marriage. It is my belief that these decisions are persuasive and that the California Constitution similarly prohibits such discrimination.

> "Pursuant to my sworn duty to uphold the California Constitution, including specifically its equal protection clause, I request that you determine what changes should be made to the forms and documents used to apply for and issue marriage licenses in order to provide marriage licenses on a non-discriminatory basis, without regard to gender or sexual orientation."

5 The warning reads in full: "Please read this carefully prior to completing the application: [¶] By entering into marriage you may lose some or all of the rights, protections, and benefits you enjoy as a domestic partner, including, but not limited to those rights, protections, and benefits afforded by State and local government, and by your employer. If you are currently in a domestic partnership, you are urged to seek legal advice regarding the potential loss of your rights, protections, and benefits before entering into marriage. [¶] Marriage of gay and lesbian couples may not be recognized as valid by any jurisdiction other than San Francisco, and may not be recognized as valid by any employer. If you are a same-gender couple, you are encouraged to seek legal advice regarding the effect of entering into marriage."

6 On February 17, 2004, the superior court, in addition to declining to grant the request for an immediate stay, issued an alternative writ in *Proposition 22 Legal Defense,* directing the city to cease and desist issuing marriage licenses to same-sex couples or performing marriage ceremonies for such couples, or show cause why the city has not done so, and set a hearing on the show cause order for March 29, 2004. On February 19, 2004, the city filed a cross-complaint for declaratory relief against the State of California in *Proposition 22 Legal Defense,* seeking a declaration that the California statutes that deny the issuance of marriage licenses to same-sex couples are unconstitutional.

7 The petition in *Lewis*—filed by parties who maintain that the existing California marriage statutes are constitutional—similarly took the position that "[t]he constitutionality of the marriage laws is an issue best left to full development in the lower courts."

8 Family Code section 425 provides: "If no record of the solemnization of a marriage previously contracted is known to exist, the parties may purchase a License and Certificate of Declaration of Marriage from the county clerk in the parties' county of residence." Family Code section 350 provides that "[b]efore ... declaring a marriage pursuant to Section 425, the parties shall first obtain a marriage license from a county clerk." As the Court of Appeal explained in *Estate of DePasse, supra,* 97 Cal.App.4th 92, 104, 118 Cal.Rptr.2d 143, "[t]he purpose of the [section 425] procedure is to create a record of an

otherwise unrecorded marriage, thus focusing on the registration requirement, as opposed to the licensing requirement." The section 425 procedure has no bearing on the issues presented by this case.

9 Part 4 of division 3 of the Family Code (§§ 500–536) governs confidential marriages. With respect to the issue presented in this case, the provisions governing confidential marriages parallel the provisions governing ordinary marriages. (Compare, e.g., Fam.Code, § 505 [specifying form of confidential marriage license] with Fam.Code, § 355 [specifying form of ordinary marriage license].)

10 With respect to section 301—which, as noted above, provides that "an unmarried male of the age of 18 years or older, and an unmarried female of the age of 18 years or older, ... are capable of consenting to and consummating marriage"—the opposition filed in this court maintains that "the statute is silent as to whom an unmarried male and an unmarried female may marry, and thus is irrelevant." Petitioners maintain, by contrast, that section 301 clearly contemplates that a marriage will be consummated between an unmarried male and unmarried female.

With regard to section 308.5—which provides that "[o]nly marriage between a man and woman is valid or recognized in California"—the opposition maintains that, in light of the provision's history, "[t]his statute is irrelevant to the case at hand because it addresses only out-of-state marriages." Petitioners assert, by contrast, that by specifying that only marriage between a man and woman is "valid" or "recognized" in California, section 308.5 addresses both in-state and out-of-state marriages.

11 The language in Family Code section 300 specifying that marriage is a relation "between a man and a woman" was adopted by the Legislature in 1977, when the provision was set forth in former section 4100 of the Civil Code. (Stats.1977, ch. 339, § 1, p. 1295, introduced as Assem. Bill 607 (1977–1978 Reg. Sess.).) The legislative history of the measure makes its objective clear. (See Sen. Com. on Judiciary, Analysis of Assem. Bill No. 607 (1977–1978 Reg. Sess.) as amended May 23, 1977, p. 1 ["The purpose of the bill is to prohibit persons of the same sex from entering lawful marriage"].) The provisions of Civil Code former section 4100 were moved to Family Code section 300 when the Family Code was enacted in 1992. (Stats.1992, ch. 162, § 10, p. 474.)

12 Family Code section 350 provides: "*Before entering a marriage,* or declaring a marriage pursuant to Section 425, *the parties shall first obtain a marriage license from a county clerk.*" (Italics added.)

Section 351 provides: "The marriage license shall show all of the following: [¶] (a) The identity of the parties to the marriage. [¶] (b) The parties' real and full names, and places of residence. [¶] (c) The parties' ages."
Section 354 provides: "(a) Each applicant for a marriage license may be required to present authentic identification as to name. [¶] (b) *For the purpose of ascertaining the facts mentioned or required in this part, if the clerk deems it necessary, the clerk may examine the applicants for a marriage license on oath at the time of the application.* The clerk shall reduce the examination to writing and the applicants shall sign it. [¶] (c) *If necessary, the clerk may request additional documentary proof as to the accuracy of the facts stated.* [¶] (d) Applicants for a marriage license shall not be required to state, for any purpose, their race or color." (Italics added.)
Section 355 provides: "(a) *The forms for the application for a marriage license and the marriage license shall be prescribed by the State Department of Health Services, and shall be adapted to set forth the facts required in this part.* [¶] (b) The form for the application for a marriage license shall include an affidavit on the back, which the applicants shall sign, affirming that they have received the brochure provided for in Section 358.[¶] (c) *The affidavit required by subdivision (b) shall state:*

AFFIDAVIT

I acknowledge that I have received the brochure titled _____

*Signature of Bride* Date

_____ _____

*Signature of Groom* Date

[End of section 355.]" (Italics added.)
Section 359 provides: "(a) *Applicants for a marriage license shall obtain from the county clerk issuing the license, a certificate of registry of marriage.* [¶] (b) *The contents of the certificate of registry are as provided in Division 9 (commencing with Section 10000) of the Health and Safety Code.* [¶] (c) The certificate of registry shall be filled out by the applicants, *in the presence of the county clerk issuing the marriage license,* and shall be presented to the person solemnizing the marriage. [¶] (d) The person solemnizing the marriage shall complete the registry and shall cause to be entered on the certificate of registry the signature and address of one witness to the marriage ceremony. [¶] (e) The certificate of registry shall be returned by the person solemnizing the marriage *to the county recorder of the county in which the license was issued* within 30 days after the ceremony. [¶] (f) As used in this

  

division, 'returned' means presented to the appropriate person in person, or postmarked, before the expiration of the specified time period." (Italics added.)

13 Family Code section 421 provides in relevant part: "Before solemnizing a marriage, the person solemnizing the marriage shall require the presentation of the marriage license...."

Section 422 provides in relevant part: "The person solemnizing a marriage shall make, sign, and endorse upon or attach to the marriage license a statement, *in the form prescribed by the State Department of Health Services,* showing all of the following: [¶] (a) The fact, date (month, day, year), and place (city and county) of solemnization. [¶] (b) The names and places of residence of one or more witnesses to the ceremony. [¶] (c) The official position of the person solemnizing the marriage...." (Italics added.)

Section 423 provides: "The person solemnizing the marriage shall return the marriage license, endorsed as required in Section 422, *to the county recorder of the county in which the license was issued* within 30 days after the ceremony." (Italics added.)

14 The Health and Safety Code contains a number of additional provisions that demonstrate the state's overriding interest in the uniform application of the state's marriage laws. (See, e.g., Health & Saf.Code, §§ 102205, 102215.)

15 In the mayor's February 10 letter to the county clerk, the mayor simply "request[ed]" the clerk to determine what changes should be made to the forms and documents used to apply for and issue marriage licenses. In the opposition and supplemental opposition filed in this court, however, the city states that the mayor "directed the County Clerk's Office to arrange for the issuance of marriage licenses to same-sex couples" and that "Alfaro was not the decisionmaker with respect to San Francisco's issuance of marriage licenses to same-sex couples. She and the other employees within the County Clerk's Office issued marriage licenses to such couples because Mayor Newsom told them to do so."

16 As indicated, the issue presented in this case is purely whether a local official may refuse to apply a statute solely on the basis of the official's view that the statute is unconstitutional. There is no claim here that the officials acted as they did because of questions regarding the proper interpretation of the applicable statutes or because of doubts as to which of two or more competing statutory provisions to apply. (Cf. *Burlington Northern & Santa Fe Ry. Co. v. Public Utilities Commission* (2003) 112 Cal.App.4th 881, 887–889, 5 Cal.Rptr.3d 503.) Here, the officials acknowledge that the current California statutes limit marriage to a union between a man and a woman, and concede that they refused to apply the relevant statutory provisions solely because of a belief that this statutory requirement is unconstitutional.

17 In *Billig, supra,* 223 Cal.App.3d 962, 273 Cal.Rptr. 91, the plaintiffs had submitted a referendum petition to the city clerk, but the clerk refused to process the petition or submit it to the city council because the petition did not include the full text of the challenged ordinance, as required by section 4052 of the Elections Code. The plaintiffs then sought a writ of mandate in superior court against the clerk, claiming that this official's authority was limited to determining whether there were sufficient signatures on the petition and did not extend to rejecting a petition for noncompliance with section 4052. The trial court ruled against the plaintiffs and the Court of Appeal affirmed.

The appellate court explained in *Billig* that the city clerk's duty "is limited to the ministerial function of ascertaining whether the *procedural* requirements for submitting a petition have been met" (*Billig, supra,* 223 Cal.App.3d at pp. 968–969, 273 Cal.Rptr. 91), and found that Elections Code section 4052 "involves purely procedural requirements for submitting a referendum petition. Therefore a city clerk who refuses to accept a petition for noncompliance with the statute is only performing a ministerial function involving no exercise of discretion." (*Billig,* at p. 969, 273 Cal.Rptr. 91.) Stating that the city clerk lacked discretion *not* to enforce the statutory provision, the Court of Appeal discussed article III, section 3.5 and observed: "Administrative agencies, *including public officials in charge of such agencies,* are expressly forbidden from declaring statutes unenforceable, unless an appellate court has determined that a particular statute is unconstitutional. (Cal. Const., art. III, § 3.5.) [Elections Code] [s]ection 4052 has not been declared unconstitutional by an appellate court in this state. Consequently, *the offices of city clerks throughout the state* are mandated by the [C]onstitution to implement and enforce the statute's procedural requirements. In the instant case, respondent had the clear and present ministerial duty to refuse to process appellants' petition because it did not comply with the procedural requirements of section 4052." (*Billig, supra,* 223 Cal.App.3d at p. 969, 273 Cal.Rptr. 91, italics added.)

Although the italicized language in *Billig* supports petitioners' position with regard to the scope of article III, section 3.5, there is no indication that any party in *Billig* raised the argument that article III, section 3.5 applies only to *state* agencies and not to *local* agencies or officials, and thus the court in *Billig* had no occasion to resolve that issue. Moreover, in any event the discussion of article III, section 3.5 in *Billig* clearly was dictum, because an analysis and resolution of the scope of that constitutional provision not only was unnecessary to the decision in *Billig,* but arguably was entirely irrelevant. The plaintiffs in *Billig* had *not* asked the city clerk to refrain from applying Elections Code section 4052 on the ground that the statute was unconstitutional, and the city clerk's decision not to accept the petition did *not* involve

consideration of whether he had the authority to determine the provision's constitutionality; moreover, the plaintiffs did not raise any constitutional challenge to section 4052 in the trial court or on appeal. Instead, the plaintiffs in *Billig* simply argued that the applicable provisions of section 4052 did not authorize *a city clerk* (as opposed to a court) to reject a petition for noncompliance with that statute, and that only a court was authorized to disqualify a petition for nonconformance with the requirements of section 4052.

Because the provisions of article III, section 3.5 did not bear on the question before the court in *Billig,* we believe it would be inappropriate to accord much significance to the cited language in that decision.

18 Indeed, in the petition filed in this court, the petitioner in *Southern Pacific* expressly stated that it did "not question the authority of the Commission, which has quasi judicial powers and is a court of special jurisdiction, to declare and hold a statute to be unconstitutional."

19 See, e.g., *Brice v. Dept. of Alcoholic Bev. Control* (1957) 153 Cal.App.2d 315, 320, 314 P.2d 807 ("[The Department of Alcoholic Beverage Control] is a constitutional agency that has succeeded to some of the powers of the State Board of Equalization in alcoholic beverage control matters. Being an agency upon which the Constitution has conferred limited judicial powers, its decisions on factual matters must be affirmed if there is substantial evidence to support them").

20 The significance attached by the court in *Walker* to the California Constitution's grant of judicial power to the Alcoholic Beverage Control Appeals Board is confirmed by the distinction the *Walker* decision drew between the case before it and a then recent decision of the California Supreme Court that was heavily relied upon by the plaintiffs. The court in *Walker* explained: "*County of Alpine v. County of Tuolumne* (1958) 49 Cal.2d 787, 322 P.2d 449, referred to extensively by plaintiffs, is not in point. There the county of Alpine brought an action to determine its boundaries with defendant counties. Judgment of dismissal was reversed. Defendants asserted that the county of Alpine had not exhausted an administrative remedy before the State Lands Commission. But the court held that the agency [the State Lands Commission] was empowered only to 'survey and mark' boundaries.... [*I* ]*t was without jurisdiction to make judicial determinations* of boundaries and therefore the county of Alpine could properly maintain its action." (*Walker, supra,* 178 Cal.App.2d at p. 73, 2 Cal.Rptr. 737, italics added.)

21 In this regard it is worth noting that article III, section 3 of the California Constitution explicitly provides: "The powers of State government are legislative, executive, and judicial. Persons charged with the exercise of one power may not exercise either of the others *except as permitted by this Constitution.*" (Italics added.)

22 The city, in a footnote contained in its reply brief to several amicus curiae briefs, maintains that the actions of its officials did not constitute the exercise of judicial powers, citing a brief passage in this court's decision in *Lusardi Constr. Co. v. Aubry* (1992) 1 Cal.4th 976, 993, 4 Cal.Rptr.2d 837, 824 P.2d 643 (*Lusardi* ) (the Director of the Department of Industrial Relations' "determination that a project is a public work ... cannot be accurately characterized as 'judicial,' because it does not encompass the conduct of a hearing or a binding order for any type of relief"). In *Lusardi,* however, the director, unlike the city officials here, acted to enforce a statutory provision; he did not defy or disregard a statutory provision on the basis of his own determination that the statute was unconstitutional. *Lusardi* clearly provides no support for the city's position.

23 The statement in numerous California decisions that the separation of powers provision of article III is inapplicable to government below the state level means simply that, in establishing a governmental structure for the purpose of managing municipal affairs, the Legislature (through statutes) or local entities (through charter provisions and the like) may combine executive, legislative, and judicial functions in a manner different from the structure that the California Constitution prescribes for state government. (See, e.g., *Wulzen v. Board of Supervisors* (1894) 101 Cal. 15, 25–26, 35 P. 353; *People v. Provines* (1868) 34 Cal. 520, 532–540.) As explained hereafter, the statement does *not* mean that a local executive official has the inherent authority to exercise judicial power.

24 In a somewhat related context, this court held in *Farley v. Healey* (1967) 67 Cal.2d 325, 62 Cal.Rptr. 26, 431 P.2d 650 that an acting registrar of voters, who refused to determine whether sufficient signatures had been submitted to qualify a local initiative measure for the ballot because of his conclusion that the content of the initiative was not a proper subject for a local initiative, "exceeded his authority in undertaking to determine whether the proposed initiative was within the power of the electorate to adopt." (67 Cal.2d at p. 327, 62 Cal.Rptr. 26, 431 P.2d 650.) We explained that under the applicable charter provision, the registrar's "duty is limited to the ministerial function of ascertaining whether the procedural requirements for submitting an initiative measure have been met. *It is not his function to determine whether a proposed initiative will be valid if enacted or whether a proposed declaration of policy is one to which the initiative may apply. These questions may involve difficult legal issues that only a court can determine.* Given compliance with the formal requirements for submitting an initiative, the registrar must place it on the ballot unless he is directed to do otherwise by a court on a compelling showing that a proper case has been established for interfering with the initiative power." (*Ibid.,* italics added.)

25 The public finance cases upon which the city relies generally preceded the adoption of California's validation statutes, which currently permit a public agency to file an in rem action in order to obtain a judicial determination of the validity of bonds, warrants, contracts, obligations, or similar evidences of indebtedness. (See Code Civ. Proc., § 860 et seq. [initially adopted in 1961 (Stats.1961, ch. 1479, § 1, p. 3331) ].) The current statutes provide that such actions "shall be given preference over all other civil actions ... to the end that such actions shall be speedily heard and determined." (Code Civ. Proc., § 867.)

26 A number of law review articles suggest that the federal Constitution should be interpreted as permitting the President of the United States to refuse to enforce a statute that the President believes is unconstitutional. (See, e.g., Easterbrook, *Presidential Review* (1990) 40 Case W. Res. L.Rev. 905.) Other scholars, however, have made a strong argument that the history of the proceedings of the constitutional convention that drafted the federal Constitution, and in particular the Founders' explicit rejection of a proposal for an absolute presidential veto, refutes such an interpretation. (See, e.g., May, *Presidential Defiance of 'Unconstitutional Laws: Reviving the Royal Prerogative, supra,* 21 Hastings Const. L.Q. 865, 872–895.) To date, no court has accepted the contention that the President possesses such authority. (See, e.g., *Ameron, Inc. v. U.S. Army Corps of Eng'rs* (3d Cir.1986) 787 F.2d 875, 889 & fn. 11 ["This claim of right for the President to *declare* statutes unconstitutional and to declare his refusal to execute them, as distinguished from his undisputed right to veto, criticize, or even refuse to defend in court, statutes which he regards as unconstitutional, is dubious at best"].)

27 As noted above, after several mandate actions were filed against the city in superior court challenging the actions of the city officials, the city filed a cross-complaint in one of the actions, seeking a declaratory judgment that the marriage statutes are unconstitutional insofar as they limit marriage to a union between a man and a woman. (See, *ante,* 17 Cal.Rptr.3d p. 233, fn. 6, 95 P.3d p. 466, fn. 6.) We have no occasion in this case to determine whether the city properly could maintain a declaratory judgment action in this setting, but we note that in another context the Legislature specifically has authorized a public official who questions the constitutionality or validity of an enactment to bring a declaratory judgment action rather than act in contravention of the statute. (See Rev. & Tax.Code, § 538; see also *City of Cotati v. Cashman* (2002) 29 Cal.4th 69, 79–80, 124 Cal.Rptr.2d 519, 52 P.3d 695.)

28 Article XX, section 3 of the California Constitution provides in relevant part: "Members of the Legislature, and all public officers and employees, executive, legislative, and judicial, except such inferior officers and employees as may be by law exempted, shall, before they enter upon the duties of their respective offices, take and subscribe the following oath or affirmation: [¶] 'I, _____, do solemnly swear (or affirm) that I will support and defend the Constitution of the United States and the Constitution of the State of California against all enemies, foreign and domestic; that I will bear true faith and allegiance to the Constitution of the United States and the Constitution of the State of California; that I take this obligation freely, without any mental reservation or purpose of evasion; and that I will well and faithfully discharge the duties upon which I am about to enter.' "

29 The brief footnote discussion in *Board of Education v. Allen* (1968) 392 U.S. 236, 241, footnote 5, 88 S.Ct. 1923, 20 L.Ed.2d 1060, relied upon by the city, does not conflict with this conclusion. In *Allen,* officials of a local public school district brought a court action challenging the validity, under the establishment clause of the First Amendment, of a state statute that required the school district to loan books free of charge to all students in the district, including students attending private religious schools. In the footnote in question, the court in *Allen* noted that no one had questioned the standing of the local district and its officials "to press their claim in this Court," and then stated that "[b]elieving [the statute in question] to be unconstitutional, [the officials] are in the position of having to choose between violating their oath [to support the United States Constitution] and taking a step—refusal to comply with [the applicable statute]—that would likely bring their expulsion from office and also a reduction in state funding for their school districts. There can be no doubt that appellants thus have a 'personal stake in the outcome' of this litigation." (*Allen,* 392 U.S. at p. 241, fn. 5, 88 S.Ct. 1923, quoting *Baker v. Carr* (1962) 369 U.S. 186, 204, 82 S.Ct. 691.) The footnote's reference to the officials' oath to support the Constitution indicates no more than that the public officials' belief that the statute was unconstitutional afforded them standing *to bring a court action* to challenge the statute. The footnote in *Allen* does not hold that the federal Constitution, or a public official's oath to support the federal Constitution, authorizes a state official to undertake official action forbidden by a state statute based solely on the official's belief that the statute is unconstitutional, and, as discussed below (*post,* 17 Cal.Rptr.3d pp. 265–267, 95 P.3d pp. 492–494), numerous federal authorities refute that proposition.

30 The city also obliquely suggests that the general rule requiring a public official to perform a ministerial duty prescribed by statute, despite the official's personal view that the statute is unconstitutional, is contrary to the teaching of the Nuremberg trials, which rejected the "I was just following orders" defense. In response to a similar claim, the federal district court in *Haring v. Blumenthal* (D.D.C.1979) 471 F.Supp. 1172, 1178, footnote 15, cogently observed: "Plaintiff's comparison of his situation with that of the Nuremberg defendants is grossly simplistic. The Nuremberg defendants could have escaped

  

liability by failing to seek and retain positions which exposed them to the execution of objectionable activity; and, should plaintiff feel sufficiently strongly about the matter, he may do likewise. Beyond that, plaintiff's analogy demonstrates primarily that debates and dialogues on public issues have become so debased in recent years that such terms as genocide, war crime, crimes against humanity, and the like are bandied about with considerable abandon in connection with almost every conceivable controversial issue of public policy. There is not the slightest similarity between the crimes committed under the aegis of a violent dictatorship and the implementation of laws adopted under a system of government which offers free elections, freedom of expression, and an independent judiciary as safeguards against excesses and as a guarantee of the ultimate rule of a sovereign citizenry." We agree.

31 See, for example, *Schmid v. Lovette* (1984) 154 Cal.App.3d 466, 474, 201 Cal.Rptr. 424 (holding that article III, section 3.5 of the California Constitution did not require public community college officials to continue to apply a statute requiring public employees to sign an anti-Communist-Party loyalty oath when comparable statutes had been held unconstitutional by both federal and state supreme court decisions) and *LSO, Ltd. v. Stroh, supra,* 205 F.3d 1146, 1160 (holding that no reasonable official could have believed that a statute prohibiting exhibition of nonobscene erotic art on any premises holding a liquor license could constitutionally be applied in light of a then recent United States Supreme Court decision).

32 Of the three decisions cited by the city, the Massachusetts decision in *Goodridge v. Department of Pub. Health, supra,* 440 Mass. 309, 798 N.E.2d 941, appears to be the only one squarely to hold that a state constitution precludes the state from withholding the status of marriage from same-sex couples.

In *Baker v. State of Vermont, supra,* 170 Vt. 194, 744 A.2d 864, the court summarized its conclusion under the "common benefits" clause of the Vermont Constitution, as follows: "The State is constitutionally required to extend to same-sex couples the common benefits and protections that flow from marriage under Vermont law. Whether this ultimately takes the form of inclusion within the marriage laws themselves or a parallel 'domestic partnership' system or some equivalent statutory alternative rests with the Legislature." (744 A.2d at p. 867; see also *id.* at pp. 886–887.) The Vermont Legislature subsequently enacted a civil union statute. (Vt. Stat. Ann., tit. 15, §§ 1201–1207 (supp.2001).)

In *Baehr v. Lewin, supra,* 74 Haw. 530, 852 P.2d 44, the Hawaii Supreme Court held that the trial court in that case had erred in granting judgment on the pleadings against three same-sex couples who had sued for declaratory and injunctive relief after being denied marriage licenses, concluding that the plaintiffs were entitled to go forward with their action and that, under the equal protection clause of the Hawaii Constitution, the state would have to demonstrate a compelling interest to justify the statutory classification. (852 P.2d at p. 68.) Following the decision in *Baehr,* the voters in Hawaii amended the Hawaii Constitution to limit marriage to unions between a man and a woman, and, in light of that amendment, the Hawaii Supreme Court thereafter ordered entry of judgment in favor of the defendants in the *Baehr* litigation. (See *Baehr v. Miike* (1999) 92 Hawai'i 634, 994 P.2d 566 [full order reported at 1999 Haw.Lexis 391].)

In addition to relying upon *Goodridge, Baker,* and *Baehr,* the city points to a passage in the dissenting opinion of Justice Scalia in *Lawrence v. Texas* (2003) 539 U.S. 558, 123 S.Ct. 2472, 156 L.Ed.2d 508, in which he expressed the view that the reasoning of the majority opinion in *Lawrence*—holding a Texas sodomy statute unconstitutional—would lead to the conclusion that a statute precluding same-sex marriages also would be unconstitutional. (*Lawrence v. Texas, supra,* 539 U.S. at pp. 604–605, 123 S.Ct. 2472 (dis. opn. by Scalia, J.)) The majority opinion in *Lawrence,* however, expressly stated that "[t]he present case ... does not involve whether the government must give formal recognition to any relationship that homosexual persons seek to enter." (*Lawrence, supra,* 539 U.S. at p. 578, 123 S.Ct. 2472). In light of this very specific disclaimer in the majority opinion in *Lawrence,* we conclude that the city cannot plausibly claim that the *Lawrence* decision clearly establishes that a state statute limiting marriage to a man and a woman is unconstitutional under the federal Constitution. (See also *Standhardt v.Super. Ct.* (Ariz.Ct.App.2003) 206 Ariz. 276, 77 P.3d 451, 454–460, 464–465 [post-*Lawrence* case rejecting claim that *Lawrence* indicates the federal Constitution guarantees the right to same-sex marriage].)

33 Petitioners in *Lewis* maintain that because the United States Supreme Court summarily dismissed the appeal in *Baker v. Nelson* for want of a substantial federal question and because such a summary dismissal is treated as a decision on the merits (see *Mandel v. Bradley* (1977) 432 U.S. 173, 176, 97 S.Ct. 2238, 53 L.Ed.2d 199; *Hicks v. Miranda* (1975) 422 U.S. 332, 344, 95 S.Ct. 2281, 45 L.Ed.2d 223), the summary dismissal in *Baker v. Nelson* definitively establishes that, under current federal law, a statute limiting marriage to a man and a woman does not violate the federal Constitution. The city, on the other hand, cites a number of decisions stating that when there have been subsequent doctrinal developments in the United States Supreme Court that undermine the holding in a summary dismissal, the lower courts are not bound to follow the summary dismissal as controlling authority (see, e.g., *Tenafly Eruv Ass'n v. Borough of Tenafly* (3d Cir.2002) 309 F.3d 144, 173, fn. 33; *Lecates v. Justice of the Peace Court No. 4 of Delaware* (3d Cir.1980) 637 F.2d 898, 904), and the city argues that there have been such doctrinal developments in subsequent high court decisions that undermine

the holding in *Baker v. Nelson.* We find no need to resolve this dispute here, because whatever the current effect of the summary dismissal in *Baker v. Nelson,* the case before us clearly does not present an instance in which the invalidity of the current California marriage statutes is so patent or clearly established that no reasonable official could believe that the statutes are constitutional.

34 Our review of the decisions of our sister states and the District of Columbia reflects that of the 33 jurisdictions in which decisions have been found addressing this subject, 26 appear to have recognized and endorsed the proposition that, as a general rule, an executive official who is charged with a ministerial duty to enforce a statute has no authority to refuse to apply the statute, in the absence of a judicial determination that the statute is unconstitutional, on the ground that the official believes the statute is unconstitutional, although many of the jurisdictions, like California, also recognize an exception for bond or other public finance cases, in which an official is permitted to refuse to apply a statute as a means of obtaining a timely judicial determination of the legality of the bond or public expenditure. (See *Denver Urban Renewal Authority v. Byrne* (Colo.1980) 618 P.2d 1374, 1379–1380 [foll. *Ames v. People* (1899) 26 Colo. 83, 56 P. 656, 658]; *Levitt v. Attorney General* (1930) 111 Conn. 634, 151 A. 171, 176; *Panitz v. District of Columbia* (D.C.Cir.1940) 112 F.2d 39, 41–42 [applying District of Columbia law]; *Fuchs v. Robbins* (Fla.2002) 818 So.2d 460, 463–464 [foll. *State v. State Board of Equalizers, supra,* 84 Fla. 592, 94 So. 681, 682–684]; *Taylor v. State* (1931) 174 Ga. 52, 162 S.E. 504, 508–509; *Howell v. Board of Comm'rs* (1898) 6 Idaho 154, 53 P. 542, 543; *People ex rel. Atty. Gen. v. Salomon* (1870) 54 Ill. 39, 44–46; *Bd. of Sup'rs of Linn Cty. v. Dept. of Revenue* (Iowa 1978) 263 N.W.2d 227, 232–234 [foll. *Charles Hewitt & Sons Co. v. Keller* (1937) 223 Iowa 1372, 275 N.W. 94, 95–97]; *Tincher v. Commonwealth* (1925) 208 Ky. 661, 271 S.W. 1066, 1068; *Dore v. Tugwell* (1955) 228 La. 807, 84 So.2d 199, 201–202 [foll. *State v. Heard* (La.1895) 18 So. 746, 749–752]; *Smyth v. Titcomb* (1850) 31 Me. 272, 285; *Maryland Classified Emp. Ass'n v. Anderson* (1977) 281 Md. 496, 380 A.2d 1032, 1035–1037; *Assessors of Haverhill v. New England Tel. & Tel. Co.* (1955) 332 Mass. 357, 124 N.E.2d 917, 920–921; *State v. Steele County Bd. of Com'rs* (1930) 181 Minn. 427, 232 N.W. 737, 738–739; *St. Louis County v. Litzinger* (Mo.1963) 372 S.W.2d 880, 881–882 [foll. *State v. Becker* (1931) 328 Mo. 541, 41 S.W.2d 188, 190–191]; *State v. McFarlan* (1927) 78 Mont. 156, 252 P. 805, 808; *State v. Sedillo* (1929) 34 N.M. 1, 275 P. 765, 765–767; *Attorney General v. Taubenheimer* (1917) 178 A.D. 321, 321, 164 N.Y.S. 904, 904; *Dept. of State Highways v. Baker* (1940) 69 N.D. 702, 290 N.W. 257, 260–262; *State v. Griffith* (1940) 136 Ohio St. 334, 25 N.E.2d 847, 848–849; *State ex rel. Cruce v. Cease* (1911) 28 Okla. 271, 114 P. 251, 252–253; *Commonwealth v. Mathues* (1904) 210 Pa. 372, 59 A. 961, 964–969; *State v. Burley* (1908) 80 S.C. 127, 61 S.E. 255, 257; *Thoreson v. State Board of Examiners* (1899) 19 Utah 18, 57 P. 175, 177–179; *City of Montpelier v. Gates* (1934) 106 Vt. 116, 170 A. 473, 476–477; *Capito v. Topping* (1909) 65 W.Va. 587, 64 S.E. 845, 846; *Riverton Valley D. Dist. v. Board of County Com'rs* (1937) 52 Wyo. 336, 74 P.2d 871, 873.)

Of the seven states that may be viewed as adopting the minority position, most have addressed the issue only in the context of actions either relating to matters affecting the expenditure of public funds or where the rights or interests of the public officer or public entity were directly at stake. (See *State v. Steinwedel* (1932) 203 Ind. 457, 180 N.E. 865, 866–868 [public expenditure]; *Toombs v. Sharkey* (1925) 140 Miss. 676, 106 So. 273, 277 [public expenditure]; *Van Horn v. State* (1895) 46 Neb. 62, 64 N.W. 365, 371–372 [county reorganization]; *State v. Slusher* (1926) 119 Or. 141, 248 P. 358, 359–360 [tax collection]; *Holman v. Pabst* (Tex.Civ.App.1930) 27 S.W.2d 340, 342–343 [local election procedure]; *Hindman v. Boyd* (1906) 42 Wash. 17, 84 P. 609, 612 [local election procedure]; *State v. Tappan* (1872) 29 Wis. 664, 9 Am. Rep. 622, 635 [tax collection].)

A number of the out-of-state cases discuss a separate line of cases that address the issue whether a public official or public entity has "standing" to bring a court action—for example, a declaratory judgment action—challenging the constitutionality of a statute the official or entity is obligated to comply with or enforce. (See, e.g., *Fuchs v. Robbins, supra,* 818 So.2d 460, 463–464; *Bd. of Sup'rs of Linn Cty. v. Dept. of Revenue, supra,* 263 N.W.2d 227, 233–234; see also *City of Kenosha v. State* (1967) 35 Wis.2d 317, 151 N.W.2d 36, 42–43.) Although the standing issue involves some of the same considerations that are applicable to the issue we face here, from a separation of powers perspective, conduct by an executive official that simply asks a court to determine the constitutionality of a statute would appear to raise much less concern than an executive official's unilateral refusal to enforce a statute based on the official's opinion that the statute is unconstitutional.

35 Several amici curiae point out that nonattorney public officials are able to seek legal advice from a county counsel or city attorney (see Gov.Code, §§ 27640, 41801) and assert that such nonattorney officials presumably will do so before disobeying a statute on the ground it is unconstitutional. County counsel and city attorneys, however, also are executive officers who, like a nonattorney public official, have not been granted judicial power and thus also lack the authority to determine that a statute is unconstitutional and that it should not be followed. A nonattorney public official generally will be in no position to critically evaluate legal advice obtained from such counsel regarding the question of a statute's

constitutionality. Outside the very narrow category of instances in which legal counsel can advise that the invalidity of the statute is so patent or clearly established that *any* reasonable public official would conclude that the statute in question is unconstitutional (see, *ante,* 17 Cal.Rptr.3d pp. 258–260, 95 P.3d pp. 486–488), whenever a nonattorney official defies a statutory mandate on the basis of a county counsel's or city attorney's legal advice, the official's refusal to apply the statute actually will rest upon legal counsel's judgment on a debatable constitutional question, rather than upon the judgment of the official on whom the statute imposes a ministerial duty. Furthermore, a nonattorney official is under no obligation to act in accordance with a legal opinion (often given confidentially) provided by a county counsel or city attorney.

36 Despite the suggestion in Justice Werdegar's concurring and dissenting opinion (*post,* 17 Cal.Rptr.3d at pp. 286–289, 95 P.3d at pp. 509–513), this established rule does not represent any sort of broad claim of *judicial* power over the *executive* branch, but on the contrary reflects the general duty of an *executive* official, in carrying out a ministerial function authorized by statute, not to assume the authority to supersede or contravene the directions of the *legislative* branch or to exercise the traditional function of the *judicial* branch.

37 As explained above (*ante,* 17 Cal.Rptr.3d pp. 254–255, 95 P.3d pp. 483–484), under the circumstances in this case there is no plausible basis for suggesting that the city officials would have subjected themselves to personal liability had they acted in conformity with the terms of the current California marriage statutes.

38 The court in *Smith* explained in this regard: “It is evident that the auditor had no personal interest in the litigation. He had certain duties as a public officer to perform. The performance of those duties was of no personal benefit to him. Their non-performance was equally so.... He was testing the constitutionality of the law purely in the interest of third persons, viz., the taxpayers....” (*Smith v. Indiana, supra,* 191 U.S. at pp. 148–149, 24 S.Ct. 51.)

39 Contrary to the assertion of Justice Werdegar's concurring and dissenting opinion (*post,* 17 Cal.Rptr.3d at p. 286, 95 P.3d at p. 509), the validity or invalidity of the existing same-sex marriages is material to this case not simply because the Attorney General has requested this court to decide that issue, but because resolution of the issue is necessary in determining the scope of the remedy that properly should be ordered in this mandate action to correct, and undo the potentially disruptive consequences of, the unauthorized actions of the city officials.

40 Whether or not any same-sex couple “has filed a lawsuit seeking the legal benefits of their purported marriage” (conc. & dis. opn. of Werdegar, J., *post,* 17 Cal.Rptr.3d at p. 284, 95 P.3d at p. 508), there can be no question that the legal status of such couples has and will continue to generate numerous questions for such couples and third parties that must be resolved on an ongoing basis.

41 Contrary to the contention of Justice Werdegar's concurring and dissenting opinion (*post,* 17 Cal.Rptr.3d at p. 284, 95 P.3d at p. 508), should the existing marriage statutes ultimately be held unconstitutional, we do not believe that the principle of “basic fairness” or a claim for “full relief” justifies placing the same-sex couples who took advantage of the unauthorized actions of San Francisco officials in a different or better position than other same-sex couples who were denied marriage licenses in other counties throughout the state by public officials who properly fulfilled their duties in compliance with the governing state statutes.

42 The pronouncement of Sir Thomas More in the well-known passage from Robert Bolt's A Man For All Seasons comes to mind:

> “Roper: So now you'd give the Devil benefit of law!
>
> “More: Yes. What would you do? Cut a great road through the law to get to the Devil?
>
> “Roper: I'd cut down every law in England to do that!
>
> “More: Oh? And when the last law was down, and the Devil turned round on you—where would you hide, Roper, the laws all being flat? This country's planted thick with laws from coast to coast—man's laws, not God's—and if you cut them down—and you're just the man to do it—d'you really think you could stand upright in the winds that would blow then? Yes, I'd give the Devil benefit of law, for my own safety's sake.” (Bolt, A Man for All Seasons (1962) p. 66.)

1 The above dictum does not apply when the Legislature has required that a governmental entity challenge an assertedly unconstitutional statute by means of declaratory relief. (See, e.g., Rev. & Tax.Code, § 538 [county assessor to challenge constitutionality of state revenue statute by requesting declaratory relief under Code Civ. Proc., § 1060].)

1 As the majority explains, the license application was altered “by eliminating the terms ‘bride,’ ‘groom,’ and ‘unmarried man and unmarried woman,’ and by replacing them with the terms ‘first applicant,’ ‘second applicant,’ and ‘unmarried individuals.’ ” (Maj. opn., *ante,* 17 Cal.Rptr.3d at p. 232, 95 P.3d at p. 465.)

2 Although California law has expressly restricted matrimony to heterosexual couples, it has also extended most of the financial and other benefits of marriage to same-sex couples through domestic partner legislation. (See, e.g., Fam.Code, § 297 et seq., Stats.2003, ch. 421, operative Jan. 1, 2005.)

  

1 The majority does note that "officials of the federal Social Security Administration had raised questions regarding that agency's processing of name-change applications resulting from California marriages" (maj. opn., *ante,* 17 Cal.Rptr.3d at p. 233, 95 P.3d at p. 465), but this is unlikely to be a serious problem because San Francisco used a nonstandard, easily recognizable form for licensing same-sex marriages (*id.,* at pp. 232– 233, 239–240, 95 P.3d at pp. 464–465, 470–472).

2 Compare Code of Civil Procedure section 389, subdivision (a): "A person who is subject to service of process and whose joinder will not deprive the court of jurisdiction over the subject matter of the action shall be joined as a party in the action if ... (2) he claims an interest relating to the subject of the action and is so situated that the disposition of the action in his absence may (i) as a practical matter impair or impede his ability to protect that interest...."

3 For example, *Estate of Elliott* (1913) 165 Cal. 339, 343, 132 P. 439 (decedent's daughter may challenge purported marriage of decedent to person seeking appointment as administrator); *Estate of Stark* (1941) 48 Cal.App.2d 209, 215–216, 119 P.2d 961 (heirs may challenge marriage of decedent's parents to show that other purported heirs were illegitimate and, thus, lack standing to contest the will); *People v. Little* (1940) 41 Cal.App.2d 797, 800–801, 107 P.2d 634 (the People in a criminal case may challenge defendant's marriage to an alleged coconspirator in order to avoid the rule that spouses cannot commit the crime of conspiracy); *People v. MacDonald* (1938) 24 Cal.App.2d 702, 704–705, 76 P.2d 121 (the People in a criminal case may challenge defendant's marriage to a witness in order to defeat a claim of spousal privilege); *People v. Glab* (1936) 13 Cal.App.2d 528, 535, 57 P.2d 588 (same).

4 In *Smith v. Indiana, supra,* 191 U.S. 138, 24 S.Ct. 51, 48 L.Ed. 125, the high court held only that it would not necessarily recognize a state official's *standing* to challenge a state law on federal grounds. (See *id.,* at pp. 148–150, 24 S.Ct. 51.) Even on this narrow point, *Smith* has not been consistently followed. (See *Board of Education v. Allen* (1968) 392 U.S. 236, 241, fn. 5, 88 S.Ct. 1923, 20 L.Ed.2d 1060 [local school officials permitted to challenge under the federal Constitution a state statute requiring them to purchase and loan textbooks to parochial school pupils]; *Coleman v. Miller* (1939) 307 U.S. 433, 438 & fn. 3, 59 S.Ct. 972, 83 L.Ed. 1385 [state legislators permitted to challenge under the federal Constitution state's procedures for recording votes on constitutional amendments]; cf. *id.,* at p. 466, 59 S.Ct. 972 (separate opn. of Frankfurter, J., citing *Smith* ); *Akron Board of Ed. v. State Board of Ed. of Ohio* (6th Cir.1974) 490 F.2d 1285, 1290–1291, cert. den. *sub nom. State Board of Education of Ohio v. Akron Board of Education* (1974) 417 U.S. 932, 94 S.Ct. 2644, 41 L.Ed.2d 236 [local school officials permitted to challenge under the federal Constitution state officials' decision to transfer White students from desegregated schools to all-White schools]; cf. *Akron Board of Ed. v. State Board of Ed. of Ohio, supra,* 490 F.2d at p. 1296 (conc. & dis. opn. of Pratt, J., citing *Smith* ).)

51 Cal.2d 331, 333 P.2d 1

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT, Appellant,
v.
SOUTHERN CALIFORNIA EDISON COMPANY (a Corporation), Respondent.

L. A. No. 24935.
Supreme Court of California
Dec. 19, 1958.

**HEADNOTES**

(1)
Streets § 44--Franchises.
In the absence of a provision to the contrary, a public utility accepts franchise rights in public streets subject to an implied obligation to relocate its facilities therein at its own expense when necessary to make way for proper governmental use of the streets.

See **Cal.Jur.2d,** Highways and Streets, §§ 204, 205.

(2)
Streets § 44--Franchises.
The laying of sewers is a governmental as distinct from a proprietary function under the rule that a public utility accepts franchise rights in public streets subject to an implied obligation to relocate its facilities therein at its own expense when necessary to make way for proper governmental use; in this respect no distinction is made between sanitary sewers and storm drains or sewers.

(3)
Streets § 44--Franchises.
The obligation of a public utility accepting franchise rights in public streets to relocate its facilities to ***332** make way for the construction of storm drains by a county flood control district is not affected by the fact that the principal purpose of the drains may be to drain the entire area served and not merely the streets thereof, since it would be impossible to provide drainage for the public streets without also draining the surrounding land, and the right of abutting owners to discharge surface waters onto the public streets is recognized as a customary use of streets.

(4)
Streets § 44--Franchises.
The fact that a comprehensive flood control system requires construction of trunk drains that primarily service areas other than the streets under or across which they are located does not affect the character of the public use or limit the public's rights in the public streets, and hence does not affect a public utility's franchise obligations to relocate its facilities to make way for the construction of storm drains by a county flood control district.

(5)
Streets § 44--Franchises.
A utility's franchise obligations in public streets rest on the paramount right of the people as a whole to use the public streets wherever located, and the fact that a franchise is granted by one political subdivision as an agent of the state does not defeat the right of another such agent acting in its governmental capacity to invoke the public right for the public benefit.

(6)
Waters § 593(1)--Flood Control Districts--Powers.
Under a statute expressly authorizing a county flood control district to "construct, maintain and operate" storm drains, the district in doing so is exercising the police power of the state.

See **Cal.Jur.,** Waters, § 901; **Am.Jur.,** Waters, § 98.

(7)
Streets § 44--Franchises.
Where a public utility accepted its franchise rights in public streets subject to implied obligations to relocate its facilities at its own expense when necessary to make way for proper governmental uses of the streets, there was no need for the state expressly to authorize a county flood control district to impose such obligations, since the utility had already assumed them.

(8)
Streets § 44--Franchises.
A statutory amendment providing that nothing in the statute shall be deemed to authorize a county flood control district to take, damage or destroy any property or to require the

removal, relocation or alteration of any facility or structure unless just compensation therefor be first made "in the manner and to the extent required by the Constitution of the United States and the Constitution of California," cannot reasonably be interpreted to mean that compensation is to be made in the manner and to the extent that would be required if the constitutional provisions required compensation; it clearly provides for compensation only as "required" by those ***333** provisions, and constitutes legislative recognition that the district is not obligated to pay for utility relocations unless constitutional provisions so require.

(9)
Streets § 44--Franchises.
A franchise exercised by a county flood control district in the public streets in its governmental capacity is not subordinate to a prior franchise granted a public utility.

(10)
Streets § 44--Franchises.
Though the express terms of a statute define the obligation of a public utility to relocate its facilities at its own expense, this does not, by application of the maxim *expressio unius exclusio alterius est,* exclude other similar obligations; the rule of strict construction of public grants in the public interest compels such conclusion where the provisions relied on as excluding any implied obligations may reasonably be interpreted as no more than partial expressions of common-law rights and obligations inserted out of an abundance of caution or by way of example only, and where, had the statute referred only to removal, it might cast doubt on the right to relocate instead when relocation would be sufficient to subserve the public interest; the enumeration of what were considered to be the most important of the utilities' obligations cannot reasonably be interpreted as an express direction of the Legislature passing the utilities' other obligations over to the taxpayers.

**SUMMARY**

APPEAL from a judgment of the Superior Court of Los Angeles County. Arnold Praeger, Judge. Reversed with directions.

Action for declaratory relief against public utilities maintaining facilities that must be relocated in the public streets to make way for construction of storm drains by plaintiff district, in which one defendant utility cross-complained to recover costs of certain relocations. Judgment for such defendant, after a severance was granted as to it, reversed with directions.

COUNSEL
Harold W. Kennedy, County Counsel, and Edward H. Gaylord, Deputy County Counsel, for Appellant.
Gibson, Dunn & Crutcher, Norman S. Sterry, Ira C. Powers and Martin E. Whelan, Jr., for Respondent.

TRAYNOR, J.

Plaintiff, Los Angeles County Flood Control District, appeals from a judgment entered in favor of defendant, Southern California Edison Company, in an action brought for declaratory relief against numerous public utilities ***334** maintaining facilities that must be relocated in the public streets to make way for the construction of storm drains by the district. Edison cross-complained to recover the costs of certain relocations and for declaratory relief with respect to others not included in the complaint. A severance was granted as to Edison, and the only parties to the trial and this appeal are Edison and the district.

The relocations involved are all located within various cities in the county of Los Angeles other than the city of Los Angeles. No question is presented as to the cost of relocating facilities in the unincorporated area of the county or within the city of Los Angeles. In the cities that are involved, Edison operates under various types of franchises; franchises granted pursuant to article XI, section 19 of the California Constitution as it existed before 1911, franchises granted by charter cities, franchises granted by both charter and non-charter cities pursuant to the Franchise Act of 1937 (now Pub. Util. Code, §§ 6201-6302), and other franchises not granted under the 1937 Act but which Edison contends have the same legal effect for the purposes of this action.

The district is engaged in a comprehensive flood control program involving among other things the construction of storm drains throughout its territory. It is conceded that Edison may properly be required to relocate its facilities in the public streets to make way for the construction of the drains. The sole issue is whether Edison or the district must bear the cost of such relocations.

() In *Southern Calif. Gas Co. v. Los Angeles,* 50 Cal.2d 713, 716 [329 P.2d 289], we stated that "In the absence of a provision to the contrary it has generally been held that a public utility accepts franchise rights in public streets subject to an implied obligation to relocate its facilities

  

therein at its own expense when necessary to make way for a proper governmental use of the streets. [Citations.] () The laying of sewers is a governmental as distinct from a proprietary function under the foregoing rule. [Citations.]" In this respect no distinction has been made between sanitary sewers and storm drains or sewers. (*New Orleans Gaslight Co. v. Drainage Com.,* 197 U.S. 453, 461-462 [25 S.Ct. 471, 49 L.Ed. 831]; *B. & Q. Ry. Co. v. Illinois* ex rel. *Grimwood,* 200 U.S. 561, 591 [26 S.Ct. 341, 50 L.Ed. 596]; see also *Matter of L. & W. Orphan Home,* 92 N.Y. 116, 119; *City of Cincinnati v. Penny,* 21 Ohio St. 499, 508 [8 Am.Rep. 73]; *Stoudinger v. City of Newark,* 28 N.J.Eq. 446, 448; *Cummins v. City of* ***335** *Seymour,* 79 Ind. 491 [41 Am.Rep. 618, 625]; *Scranton-Pascagoula Realty Co. v. City of Pascagoula,* 157 Miss. 498 [128 So. 73, 74]; *Kiley v. Bond,* 114 Mich. 447 [72 N.W. 253, 254].)

() Edison contends, however, that the use of public streets for storm drains can only be considered a primary use of the streets when the principal purpose of the drains is to drain the streets themselves. When, as in this case, the principal use of the drains will be to drain the entire areas served and drainage of the streets will be only incidental thereto, Edison contends that use for drainage is on a parity with its own use, and that therefore the district must pay for relocating Edison's preexisting facilities. We find no basis in the cases for the distinction Edison seeks to draw based on what may be the primary purpose of any particular drain. Thus in the New Orleans Gas Company case, the defendant's purpose was to provide drainage for the entire city and not merely the streets thereof. It would be manifestly impossible to provide drainage for the public streets without also draining the surrounding land, and the right of abutting owners to discharge surface waters onto the public streets is recognized as a customary use of the streets. (*Portman v. Clementina Co.,* 147 Cal.App.2d 651, 659-660 [305 P.2d 963]; see also *Kramer v. City of Los Angeles,* 147 Cal. 668, 674- 676 [82 P. 334].) () Moreover, the fact that a comprehensive flood control system requires construction of trunk drains that primarily service areas other than the streets under or across which they are located does not affect the character of the public use or limit the public's right in the public streets. Thus, in the Los Angeles Gas Company case, although the city's sewer served incidentally at most the county street under which it passed, we held that the company's franchise obligations were not affected. () "Such obligations rest on the paramount right of the people as a whole to use the public streets wherever located, and the fact that a franchise is granted by one political subdivision as an agent of the state [citations], does not defeat the right of another such agent acting in its governmental capacity to invoke the public right for the public benefit. [Citations.]" (*Southern Calif. Gas Co. v. Los Angeles,* 50 Cal.2d 713, 717 [329 P.2d 289].)

Edison contends that any obligation to relocate its facilities at its own expense rests in the police power of the state and that the state has not delegated its police power in this respect to the district. It invokes the rule that grants of ***336** power to municipal corporations are to be strictly construed and any doubts resolved against the existence of the power claimed. (See *Harden v. Superior Court,* 44 Cal.2d 630, 641 [284 P.2d 9], and cases cited.) () Section 2 of the Los Angeles County Flood Control Act expressly authorizes the district to "construct, maintain and operate," the drains here involved. (West's, Wat. Code-Appendix, § 28.2, 1 Deering's Wat. Code, Act 4463, § 2.) In doing so it is exercising the police power of the state. (*House v. Los Angeles County Flood Control Dist.,* 25 Cal.2d 384, 392 [153 P.2d 950]; *O'Hara v. Los Angeles County Flood etc. Dist.,* 19 Cal.2d 61, 64 [119 P.2d 23].) () By insisting that Edison is obligated to relocate its facilities at its own expense, the district is not seeking to exercise an implied authority to impose additional burdens upon Edison, but is relying on the claimed existence of obligations that arose when Edison accepted its various franchises. (See *City of San Antonio v. San Antonio St. Ry. Co.,* 15 Tex. Civ. App. 1 [39 S.W. 136, 139]; *New Orleans Gaslight Co. v. Drainage Commission of New Orleans,* 111 La. 838 [35 So. 929, 933], aff'd, 197 U.S. 453 [25 S.Ct. 471, 49 L.Ed. 831].) If, as the district contends, Edison accepted its franchise rights in public streets subject to implied obligations to relocate its facilities at its own expense when necessary to make way for proper governmental uses of the street, there was no need expressly to authorize the district to impose such obligations, for Edison had already assumed them.

() Edison contends, however, that the 1953 amendment to section 16 of the Los Angeles County Flood Control Act provides for the payment of its relocation costs by the district. The amendment, which follows the act's enumeration of the powers of the board of supervisors of the district, states, "provided, however, that nothing in this act contained shall be deemed to authorize said district in exercising any of its powers to take, damage or destroy any property or to require the removal, relocation, alteration or destruction of any bridge, railroad, wire line, pipeline, facility or other structure unless just compensation therefor be first made, in the manner and to the extent required by the Constitution of the United States and the Constitution of California." (Stats. 1953, ch.

1139, p. 2635, § 1.) This provision cannot reasonably be interpreted, as Edison contends, to mean that compensation is to be made in the manner and to the extent that would be required if the constitutional provisions required compensation. ***337** It clearly provides for compensation only as "required" by those provisions. Had the Legislature intended that the district should go beyond constitutional requirements in making compensation it is reasonable to assume that it would have adopted language similar to that found in many other flood control acts adopted before, after, and contemporaneously with the 1953 amendment. For example the Marin County Flood Control and Water Conservation District Act provides that the district shall "in addition to the damage for the taking, injury, or destruction of property, also pay the cost of removal, reconstruction or relocation of any structure, railways, mains, pipes, conduits, wires, cable, poles, of any public utility which is required to be moved to a new location. ..." (Stats. 1953, ch. 666, p. 1915, 1919; West, Water Code-Appendix, § 68-5 (13); 1 Deering's Wat. Code, Act 4599, subd. 13.) It is true that if the amendment does no more than require compliance with the state and federal Constitutions, its enactment was unnecessary, and given the Legislature's awareness of the problem as evidenced by provisions of other flood control acts enacted at the same session, it is at least dubious that by expressly reaffirming the district's constitutional obligations, it was intended by implication to negative others that might also exist. Had the Legislature in 1953 clearly not wanted the district to pay relocation expenses, it could have expressed this intent also more clearly than by merely reaffirming the district's constitutional obligations. Nevertheless, the fact remains that the plain language of the 1953 amendment provides for payment only to the "extent required" by the constitutional provisions, and if it is anything more than an admonition to obey the constitutions, it constitutes legislative recognition that the district is not obligated to pay for utility relocations unless constitutional provisions so require.

() Edison contends that section 15 of the act grants the district a franchise to use the public streets and that therefore its rights therein are no greater than those of any other franchise holder and, accordingly, that the later user must bear the costs of relocating the earlier user's facilities. Essentially the same contention was answered adversely to Edison's position in the Southern California Gas Company case where we held that a franchise exercised by a city in its governmental capacity is not subordinate to a prior franchise granted to a public utility. (*Southern Calif. Gas Co. v. Los Angeles, supra,* 50 Cal.2d 713, 718-719.) ***338**

() Edison contends that the express terms of the Franchise Act of 1937 [*] define its obligation to relocate its facilities at its own expense and that as to franchises granted pursuant to that act any other similar obligations are excluded by clear implication. We rejected a similar contention based on the maxim *expressio unius exclusio alterius est* in the Southern California Gas Company case, and although there are some differences between the franchise provisions involved, the rule of strict construction of public grants in the public interest (*Knoxville Water Co. v. Knoxville,* 200 U.S. 22, 33-34 [26 S.Ct. 224, 50 L.Ed. 353]; *City of Sacramento v. Pacific Gas & Electric Co.,* 173 Cal. 787, 791 [161 P. 978]; *County of Los Angeles v. Southern Calif. Tel. Co.,* 32 Cal.2d 378, 384 [196 P.2d 773]; Civ. Code, § 1069) compels the same conclusion here. As in that case most of the provisions relied on as excluding any implied obligations may reasonably be interpreted as no more than partial expressions of common-law rights and obligations inserted out of an abundance of caution or by way of example only. It is true that section 6297 of the Public Utilities Code may go beyond a restatement of the common-law rule by requiring the utility to remove rather than merely relocate its facilities to make way for public travel, but if it does so, a point we need not decide, it supplies an additional reason why the maxim *expressio unius* does not apply. Had the statute referred only to removal it might cast doubt on the right to relocate instead when relocation would be sufficient to subserve the public interest. There was thus a special reason for mentioning relocation for the specified purposes in section 6297, and it may not therefore be inferred that relocation was included to exclude by implication obligations to relocate for other purposes. (*City of Lexington v. Commercial Bank,* 130 Mo.App. 687 [108 S.W. 1095, 1096].) In short, here as in the Los Angeles Gas Company case, the enumeration of ***339** what were considered to be the most important of the utilities' obligations cannot reasonably be interpreted as an "express direction of the Legislature" passing the utilities' other common-law obligations over to the taxpayer. (*Transit Commission v. Long Island R. Co.,* 253 N.Y. 345 [171 N.E. 565, 568]; *New York City Tunnel Authority v. Consolidated Edison Co.,* 295 N.Y. 467 [68 N.E.2d 445, 448- 449]; *St. Helena v. San Francisco etc. Ry.,* 24 Cal.App. 71, 78 [140 P. 600, 605]; *County Court v. White,* 79 W.Va. 475 [91 S.E. 350, 352, L.R.A. 1917D 660]; *Peoples Gas Light & Coke Co. v. City of Chicago,* 413 Ill. 457 [109 N.E.2d 777, 787]; *Nicholas Di Menna & Sons v. City of New York,* 114 N.Y.S.2d 347, 350.)

No contention is made that the provisions of any of the franchises granted to Edison other than pursuant to the 1937 Act are more favorable to its position than those considered above, and accordingly it is unnecessary to consider such other franchises separately.

The judgment is reversed with directions to the trial court to enter judgment for the district declaring its rights in accord with the views herein expressed.

Gibson, C. J., Shenk, J., and Spence, J., concurred.

McComb, J., dissented.

CARTER, J.
I dissent.

The majority opinion in the case at bar is another link in the chain of confusion which exists in the opinions of this court which involves the exercise of the police power and the exercise of the power of eminent domain. I pointed out in my concurring opinion in *Southern Calif. Gas Co. v. City of Los Angeles,* 50 Cal.2d 713 [329 P.2d 289], that cases in which the right of eminent domain was involved are cited as authority in cases involving the exercise of the police power and police power cases are cited in support of cases involving the eminent domain power.

I am unable to understand on just what theory the majority relies in the case under consideration. It appears that it *must* be the police power given to the flood control district by the majority of this court which is the basis for its holding that the Edison Company must relocate its facilities at its own expense.

It has *long* been a rule of law in this state that political subdivisions such as drainage districts, irrigation districts, ***340** and the like, are entities of limited powers-those which have been expressly granted them by the Legislature. (*Stimson v. Alessandro Irr. Dist.,* 135 Cal. 389, 392, 393 [67 P. 496, 1034]; *City of Madera v. Black,* 181 Cal. 306, 310-312 [184 P. 397]; *Leeman v. Perris Irrigation Dist.,* 140 Cal. 540, 543 [74 P. 24]; *Bottoms v. Madera Irr. Dist.,* 74 Cal.App. 681, 694, 695 [242 P. 100]; *Harden v. Superior Court,* 44 Cal.2d 630, 642 [284 P.2d 9].) The only qualification to this rule is that certain powers strictly necessary to carry out those expressly granted by the Legislature are implied.

The Los Angeles County Flood Control District was created by the Legislature in 1915 (Stats. 1915, ch. 755, p. 1052-1512, §§ 1-23 inclusive). The act is now found in Deering's Water Code as Act 4463, sections 1-23 inclusive, pages 325-354.

Section 2 sets forth the objectives of the act as providing for the control and conservation of the flood, storm and other waste waters of the district "and to conserve such waters for beneficial and useful purposes by spreading, storing, retaining or causing to percolate into the soil within said district, or to save or conserve in any manner, all or any of such waters, and to protect from damage from such flood or storm waters, the harbors, waterways, public highways and property of said district." The same section then provides: "Said Los Angeles County Flood Control District is hereby declared to be a body corporate and politic, *and as such shall have power*: ...

"1. To have perpetual succession.

"2. To sue and be sued ...

"3. To adopt a seal ...

"4. To take by grant, purchase, gift, devise or lease ... real or personal property of every kind within or without the district necessary to the full exercise of its power.

"5. To acquire or contract to acquire lands, rights of way, easements, privileges and property of every kind, and construct, maintain and operate any and all works or improvements ...

"6. *To have and exercise the right of eminent domain, and in the manner provided by law for the condemnation of private property for public use, to take any property necessary to carry out any of the objects or purposes of this act,* whether such property be already devoted to the same use by any district or other public corporation or agency or otherwise, and may condemn any existing works or improvements in said district now used to control flood or storm ***341** waters, or to conserve such flood or storm waters or to protect any property in said district from damage from such flood or storm waters." (Emphasis added.)

Subsection 7 provides for the incurment of debt and the issuance of bonds; subsection 7a provides for the borrowing of federal funds; subsection 7b provides for the sale of bonds to the county; subsection 8 provides for the collection of taxes; subsection 9 provides for the making of contracts;

  

subsection 10 provides for the granting of easements; subsection 11 provides for the disposal of rubbish; subsection 12 provides for the payment of bond premiums; subsection 13 provides for the disposal of property. The subsections to section 2 as just set forth provide *all* the powers granted to the district by the Legislature. *It is apparent that the district is not granted the right to exercise the state's police power.*

Article I, section 14, of the California Constitution provides, in part, that "Private property shall not be taken or damaged for public use without just compensation having first been made to, or paid into court for, the owner. ..." This refers to the right of eminent domain.

In 1953, section 16 of Act 4463 was amended to provide for certain powers in the board of supervisors in the exercise of the district's right of eminent domain. The amendment provides, in part, as follows: "[*P*]*rovided, however, that nothing in this act contained shall be deemed to authorize said district in exercising any of its powers to take, damage or destroy any property or to require the removal, relocation, alteration or destruction of any bridge, railroad, wireline, pipeline, facility or other structure unless just compensation therefor be first made, in the manner and to the extent required by the Constitution of the United States and the Constitution of California."* (Emphasis added.)

In my opinion, the Legislature of this state could not have more clearly expressed its meaning: That the relocation of any facility was an exercise by the district of its power of eminent domain and that compensation should be made therefor as provided in the California Constitution, article I, section 14.

The reasoning found in the majority opinion on the meaning and effect of the 1953 amendment heretofore set forth, while extremely ambiguous and a masterpiece of confusion, *apparently* means that since the Constitution of California does not spell out in words of one syllable that relocations of various types of facilities are to be compensated in money, the ***342** Legislature did not really mean what it said-that it intended just compensation to be made for such relocations. It is first argued in the majority opinion that if the amendment only required the district to abide by its constitutional obligations, the amendment was unnecessary; and then that it was "dubious" that the Legislature intended by implication to negative "others" (*probably* constitutional obligations) that "might also exist." Then the following unclear language appears: "Had the Legislature in 1953 clearly not wanted the district to pay relocation expenses, it could have expressed this intent also more clearly than by merely reaffirming the district's constitutional obligations. Nevertheless, the fact remains that the plain language of the 1953 amendment provides for payment only to the 'extent required' by the constitutional provisions, and if it is anything more than an admonition to obey the constitutions, it constitutes legislative recognition that the district is not obligated to pay for utility relocations unless constitutional provisions so require." *When the Legislature clearly states that compensation is to be made for relocations how is it possible for the majority to assume that the Legislature clearly did not want the district to pay for such relocations?* The entire section (16) deals with the district's right of eminent domain and the supervisors' duties and powers in connection therewith. The Constitutions provide that private property shall not be taken or damaged without just compensation being made therefor. There is no reason whatsoever for the nebulous reasoning and negative thinking set forth in the majority opinion.

*If* we assume that the theory on which the conclusion reached by the majority is that the district is exercising the police power of the state, a complete answer is that the district has no police power. In the majority opinion is the following statement: "Section 2 of the Los Angeles County Flood Control Act expressly authorizes the district to 'construct, maintain, and operate,' the drains here involved (West's, Water Code-Appendix, § 28-2.) In doing so it is exercising the police power of the state. (*House v. Los Angeles County Flood Control Dist.,* 25 Cal.2d 384, 392 [153 P.2d 950]; *O'Hara v. Los Angeles County Flood etc. Dist.,* 19 Cal.2d 61, 64 [119 P.2d 23].)" In constructing, maintaining and operating the drains here involved the district was exercising a power expressly granted to it by the Legislature of this state. It is true that the grant of the power was given by the state as an exercise of the *state's* police power but that is ***343** not to say that in the delegation of the powers *specifically* enumerated in the act creating the district the Legislature also granted to the district the state's police power in other respects. In the House case this court reversed a judgment of dismissal entered after the trial court had sustained a demurrer to the plaintiff's complaint for damages to her property occasioned by the district's negligence in planning, construction and maintenance of certain flood control channel work. We noted that the plaintiff "rests her right of recovery upon article I, section 14, of the state Constitution, which provides that private property shall not be taken or damaged for public use without just compensation to the owner. *The trial court erred in failing to sustain the constitutional basis of the plaintiff's claim under the distinguishable concept of her pleading."*

  

(*House v. Los Angeles County Flood Control Dist.,* 25 Cal.2d 384, 386 [153 P.2d 950]; emphasis added.) While the court spoke of the police power the case was not decided upon the theory that the flood control district was exercising the police power of the state. It was said: "While the police power is very broad in concept, it is not without restriction in relation to the taking or damaging of property. When it passes beyond proper bounds in its invasion of property rights, it in effect comes within the purview of the law of eminent domain and its exercise requires compensation. [Citations.] In fact, on the point of a governmental agency's liability for damages arising in connection with its undertaking construction work, the prevailing opinion in the Archer case [*Archer v. City of Los Angeles,* 19 Cal.2d 19 [119 P.2d 1]] *supra,* does not purport to dispute the settled principle that public necessity limits the right to exact uncompensated submission from the property owner if his property be either damaged, taken or destroyed. Rather it is expressly stated there in the prevailing opinion (19 Cal.2d 23-24): 'The state or its subdivisions may take or damage private property without compensation if such action is *essential* to safeguard public health, safety or morals. [Citing authorities.] *In certain circumstances, however, the taking or damaging of private property for such a purpose is not prompted by so great a necessity as to be justified without proper compensation to the owner.* [Citing authorities.]' (Italics added.) Thus there is recognized the incontestable proposition that the exercise of the police power, though an essential attribute of sovereignty for the public welfare and arbitrary in its nature, cannot extend beyond the necessities of the case and be made a ***344** cloak to destroy constitutional rights as to the inviolateness of private property." (Pp. 388, 389.) The House case, with its reliance upon the Archer case, demonstrates again the confusion which exists in the cases. The House case involved an action against the *flood control district.* The Archer case involved an action against the city of Los Angeles. Article XI, section 11, of the California Constitution provides that "Any *county, city, town, or township* may make and enforce within its limits all such local, police, sanitary, and other regulations as are not in conflict with general laws." This is known as the constitutional police power provision. It does not provide that any flood control, or sanitary, or mosquito abatement district may exercise the police power of the state. *O'Hara v. Los Angeles County Flood etc. Dist.,* 19 Cal.2d 61 [119 P.2d 23], also relied upon by the majority for its statement that the district was exercising the "police power" of the state was decided upon the theory that a lower riparian owner has no redress for injury to his land caused by improvements in the stream when there has been no diversion of water out of its natural channel. The following statement is found in the majority opinion in the O'Hara case: "Compensation for private property taken or damaged for a public use must be made under article I, section 14, only when the taking or damaging of property is not so essential to the public health, safety, and morals as to be justified under the 'police power,' and the injury is one which would give rise to a cause of action on the part of the owner if it were inflicted by a private person. (*Archer v. City of Los Angeles, ante,* p. 19 [119 P.2d 1], this day decided.)" Again, it will be noted, that while the *flood control district* was involved, the Archer case, which involved the *city,* was cited as authority. While the city of Los Angeles may, by constitutional authority, exercise both the police power and the power of eminent domain, a flood control district has *only the authority and powers specifically delegated to it by the Legislature.* In this particular instance the flood control district of Los Angeles County may exercise *only* the power of eminent domain and, by reason of the 1953 amendment to the act as heretofore set forth, the required relocation of certain enumerated facilities by the district is considered by the Legislature to be an exercise of its power of eminent domain and the owner of the facility must be compensated for such relocation. It is only where the state, *or one of its political subdivisions having the right to exercise the police power,* is involved that the so-called "twilight zone" ***345** comes into play and the heretofore quoted language from the Archer case is pertinent. In the case at bar, as in the House and O'Hara cases, a political subdivision, the Los Angeles Flood Control District, is involved and it is emphatically pointed out that the Los Angeles Flood Control District has no right to exercise the police power of the state inasmuch as the Legislature has not seen fit to so authorize it in the act which created it and the amendments thereto.

The 1953 amendment to the act was not an "unnecessary" legislative act as intimated in the majority opinion. The purpose thereof was to make certain that a required relocation of certain facilities by the district was part of its eminent domain power. While the language therein specifically requiring compensation to be paid therefor might be considered unnecessary in view of the constitutional requirement that just compensation be paid for the taking of private property, under the reasoning of the majority it was obviously necessary-even if, under the holding here, quite futile.

I recently prepared a concurring opinion upholding the right of the city of Los Angeles to require a utility company to relocate its facilities without compensation to make way for

a sewer line which the city was installing in a public street or road (*Southern Calif. Gas Co. v. City of Los Angeles,* 50 Cal.2d 713 [329 P.2d 289]). In said opinion I stated that under the authorities the city was performing a governmental function and was exercising the police power granted to it by the Constitution of this state. It should be perfectly clear from that opinion that the rule announced in the majority opinion there cannot be relied upon in support of the position of the plaintiff here, as neither the Constitution nor the statutes of this state purport to give the plaintiff any of the power exercised by the city in that case.

In my opinion the judgment of the trial court in favor of defendant and cross-complainant, Southern California Edison Company, should be affirmed.

SCHAUER, J.,
Dissenting.

I am in accord with the principles of law discussed by Mr. Justice Carter and concur in his conclusion that the judgment of the trial court in favor of Southern California Edison Company should be affirmed.

Respondent's petition for a rehearing was denied January 14, 1959. Carter, J., Schauer, J., and McComb, J., were of the opinion that the petition should be granted. ***346**

Footnotes

* "The grantee of a franchise under this chapter shall construct, install, and maintain all pipes, conduits, poles, wires, and appurtenances in accordance and in conformity with all of the ordinances and rules adopted by the legislative body of the municipality in the exercise of its police powers and not in conflict with the paramount authority of the State, and, as to state highways, subject to the laws relating to the location and maintenance of such facilities therein." (Pub. Util. Code, § 6294.)
"The grantee shall remove or relocate without expense to the municipality any facilities installed, used, and maintained under the franchise if and when made necessary by any lawful change of grade, alignment, or width of any public street, way, alley, or place, including the constructure of any subway or viaduct, by the municipality." (Pub. Util. Code, § 6297.)

197 Cal.App.2d 722, 17 Cal.Rptr. 464

ROY EDWIN RAMSEIER, Plaintiff and Appellant,
v.
OAKLEY SANITARY DISTRICT,
Defendant and Respondent.

Civ. No. 19545.
District Court of Appeal, First District, Division 3, California.
Dec. 7, 1961.

## HEADNOTES

(1a, 1b)
Reformation of Instruments § 50--Evidence.
A contract between plaintiff engineer and defendant sanitary district for engineering services was properly reformed by the trial court so as to state that payment for the preliminary report submitted by plaintiff should not exceed $1,500 where the evidence showed that, at a discussion of the first draft of the contract, the parties orally agreed on a maximum cost of $1,500 for the preliminary report, that plaintiff was fully aware of the oral understanding, knew that it was not included in the final agreement and had reason to suspect that failure to include it was due to mistake, and that the reasonable value of plaintiff's services in preparation of the preliminary report was $1,500.

(2)
Reformation of Instruments § 6--Limitation on Court's Power.
In reforming a contract, a court does not write a new agreement for the parties, but enforces the actual agreement which, through fraud, mutual mistake or mistake of one party, has not been stated in the written expression of the contract.

See **Cal.Jur.2d,** Reformation of Instruments, §§ 2, 3; **Am.Jur.,** Reformation of Instruments, § 39.

(3)
Reformation of Instruments § 48--Evidence--Degree of Proof.
Whether evidence is clear and convincing enough to warrant reformation of an instrument is for the trial court to determine.

(4)
Reformation of Instruments § 48--Evidence--Degree of Proof.
The mere fact that plaintiff contradicted portions of defendant's clear evidence did not bar reformation of a contract between the parties where defendant's evidence would have been clear and convincing if uncontradicted.

(5)
Reformation of Instruments § 28--Defenses--Reading of Instrument.
Failure of defendant sanitary district's board of directors to read the final version of a contract between the district and plaintiff for engineering services and to detect therein the absence of a limitation on the amount to be paid plaintiff for his preliminary report did not bar reformation of the contract where defendant's mistake in not including a provision in the final contract relating to the limitation was known to or suspected by plaintiff. ***723**

## SUMMARY

APPEAL from a judgment of the Superior Court of Contra Costa County. Harold Underwood, Judge. * Affirmed.

Action to recover value of engineering services rendered, wherein defendant cross-complained for reformation of the contract. Judgment reforming contract, affirmed.

COUNSEL
Spurgeon Avakian, Jerry Phelan and Avakian & Johnston for Plaintiff and Appellant.
Carlson, Collins, Gordon & Bold, Steven H. Welch, Jr., John A. Nejedly, District Attorney, and Charles L. Hemmings, Deputy District Attorney, for Defendant and Respondent.

DRAPER, P. J.

Plaintiff brought this action to recover $18,174 for engineering services rendered to defendant sanitary district under a written contract. The trial court ordered the contract reformed as prayed by the district's cross-complaint. As reformed, the contract entitled plaintiff to but $1,500. He appeals.

In the fall of 1955, the district board considered expansion and improvement of its storm and sanitary sewer system, and determined to seek engineering advice. At the board's

  

request, plaintiff attended its meeting of December 2, 1955, and submitted a proposed form of contract between the district and himself. This contract provided that plaintiff would prepare a preliminary report and, if it were approved by the board, would draw final plans and specifications, supervise the taking of bids and furnish general direction of the construction work. He was to receive 2 per cent of the estimated total cost on submission of the complete preliminary report, but with the proviso that this payment would not exceed $1,500. Upon delivery of final plans and specifications, he was to be paid "a sum sufficient to make the payments," including that just described, "equal to ... (4 1/2%) of the contract cost as estimated ...." Upon completion of the construction work, he was to be paid a sum sufficient to make his total fee 6 per cent of the total cost of the work completed.

The witnesses are in agreement that the board objected to only two substantive provisions of the contract proposed by plaintiff at the December meeting. These were (1) that all ***724** plans and specifications would remain the property of plaintiff engineer and (2) that the district would pay, over and above the agreed fee, for surveying work required for the project. As to the latter feature, plaintiff told the board that he thought surveying costs would be small, because of the availability of existing surveys. However, he felt that if he were to assume the risk of providing necessary surveys, his total fee should be increased to 7 1/2 per cent of the project cost. This was agreed to, and plaintiff consented that the two provisions excepted to by the board members could be eliminated.

The board then asked its attorney to compare the agreement with one previously entered into by another political entity and to conform the final agreement thereto. Defendant's witnesses testified that such alteration was to be as to form only, and not as to substance. Plaintiff testified to the contrary, asserting that an agreement new in substance as well as form was to be drawn.

Defendant's attorney then prepared an agreement, deleting the two provisions excepted to by the board and providing for a total fee of 7 1/2 per cent to plaintiff if the work were completed. This draft is quite different in form from that submitted by plaintiff in December, but is the same in substance, except for the changes just mentioned and except for the paragraph specifying the proportions of plaintiff's fee to be paid at each of the three stages of the work. Defendant's attorney stated that he left this provision blank in the draft, forwarded it to plaintiff, and that plaintiff filled in the blanks and the attorney copied these insertions in the final agreement form. Plaintiff, on the contrary, testified that the attorney forwarded to him a completed form which he signed and presented to the board for execution.

In any event, the agreement was signed by plaintiff, who attended a meeting of the board on February 3, 1956, at which time the district also executed the agreement. It provides for payment of plaintiff's fee (7 1/2%) as follows: "(a) upon the completion of the preliminary report, twenty-five percent (25%) of the total fee to be based upon a reasonable estimate of the cost of the work"; (b) upon completion of final plans and specifications, (50%) of the total fee; (c) upon final completion of construction, "the remaining balance of said total fee."

The preliminary report indicated total cost in excess of $900,000. The trial court found that the recommendations of this report "were not reasonably necessary or advisable considering ***725** the circumstances of the defendant." The district has proceeded no further, and it is conceded that plaintiff is now entitled only to the fee to be paid upon completion of the preliminary report.

() The trial court found that at the December discussion of the first draft the parties had orally agreed upon a maximum cost of $1,500 for the preliminary report, that plaintiff was fully aware of the oral understanding, knew that it was not included in the final agreement, and had reason to suspect that failure to include it was due to mistake. It further found that the reasonable value of plaintiff's services in preparation of the preliminary report was $1,500. Reformation of the agreement of February 3, so as to state that payment for the preliminary report should not exceed $1,500, was ordered. Defendant having paid the $1,500, judgment was ordered in its favor.

"When, through ... a mistake of one party, which the other at the time knew or suspected, a written contract does not truly express the intention of the parties, it may be revised, on the application of a party aggrieved, so as to express that intention ..." (Civ. Code, § 3399).

() In reforming a contract the courts, of course, do not write a new agreement for the parties. Rather, they enforce the actual agreement, which through fraud, mutual mistake, or mistake of the type described in the above-quoted portion of the code section, has not been stated in the written expression of the

  

contract. (*Lemoge Electric v. County of San Mateo,* 46 Cal.2d 659 [297 P.2d 638]; *Bailard v. Marden,* 36 Cal.2d 703 [227 P.2d 10].) () It does not follow, however, as plaintiff seems to argue, that all elements of the agreement should have been reached simultaneously. It is apparent that the trial court found the parties to have agreed upon the $1,500 limitation at the December meeting. There is no dispute that they agreed upon the total fee of 7 1/2 per cent at the same time. While the dates and proportions of payments of the fee were left for determination after that meeting, agreement thereon was in fact reached. The board members clearly were not concerned with the proportions of the total fee to be included in the second and third payments. Those payments were not to be made unless construction was actually undertaken, and must be within the total fee of 7 1/2 per cent. Thus the district implicitly accepted the written contract figures for those two payments, and they have never been disputed. It follows that all terms of the contract were agreed ***726** upon by the time of execution of the agreement. The evidence is readily susceptible of the view, obviously taken by the trial court, that the payment to be made upon submission of the preliminary report would not exceed $1,500 and that this agreement was not intended to be altered by the deferment of agreement upon the other terms.

It should be noted that limitation of the first payment is not inconsistent with increase of the total fee. The written agreement clearly provides that "the remaining balance" of the total fee of 7 1/2 per cent, after the first two payments have been made, is to be due upon completion of construction. There is nothing improbable in the conclusion that plaintiff was willing to accept a limited initial payment and look to the prospect of completion for his major compensation. The evidence thus supports the finding that the parties, at the two board meetings, reached a full and definite agreement which is expressed in the written contract as reformed by the judgment. The fact situation here is closely analogous to one in which a like judgment was upheld (*Eagle Indem. Co. v. Industrial Acc. Com.,* 92 Cal.App.2d 222 [206 P.2d 877]).

() Although the evidence to warrant reformation must be "clear and convincing" (*Moore v. Vandermast, Inc.,* 19 Cal.2d 94, 98 [119 P.2d 129]), it has been held that the question whether the evidence meets this test is for the trial court to determine (*California Packing Corp. v. Larsen,* 187 Cal. 610, 613 [203 P. 102]; *Wilson v. Sanchez,* 116 Cal.App.2d 670, 672 [254 P.2d 594]). Here the only possible element of uncertainty is to be found in a degree of contradiction in a portion of the testimony of but one member of defendant's board. This conflict was for resolution by the trial court (*O'Banion v. Borba,* 32 Cal.2d 145, 152-153 [195 P.2d 10]; *Rice v. California Lutheran Hospital,* 27 Cal.2d 296, 301 [163 P.2d 860]). It found for defendant. () The mere fact that plaintiff contradicted portions of defendant's clear evidence obviously does not bar findings in defendant's favor where defendant's evidence would meet the test if uncontradicted. (*Ward v. Waterman,* 85 Cal. 488, 504 [24 P. 930].)

() Finally, plaintiff contends that the failure of the members of defendant's board to read the final agreement in full, and to detect the absence of the $1,500 limitation, constitutes negligence which bars reformation. Some broad language lends apparent support to this view (*Roller v. California Pacific Title Ins. Co.,* 92 Cal.App.2d 149, 153-155 [206 P.2d 694] and cases there cited). But where one party's mistake is ***727** known to or suspected by the other, as the court found to be the case here, negligence in failing to read the instrument does not bar reformation (*Baines v. Zuieback,* 84 Cal.App.2d 483, 491 [191 P.2d 67]; and see Rest., Contracts, § 508).

Judgment affirmed.

Salsman, J., and Devine, J., concurred.

Footnotes

* Assigned by Chairman of Judicial Council.

213 Cal.App.4th 1310
Court of Appeal, Second
District, Division 3, California.

Lee SCHMEER et al., Plaintiffs and Appellants,
v.
COUNTY OF LOS ANGELES et
al., Defendants and Respondents.

B240592
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Filed February 21, 2013
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As Modified March 11, 2013
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Review Denied May 15, 2013 *

**Synopsis**
**Background:** Petitioners filed combined petition for writ of mandate and complaint challenging county ordinance prohibiting retail stores from providing plastic carryout bags and requiring stores to charge customers 10 cents for each paper carryout bag provided. The Superior Court, Los Angeles County, No. BC470705, James C. Chalfant, J., denied relief, and petitioners appealed.

**[Holding:]** The Court of Appeal, Croskey, Acting P.J. held that paper bag carryout charge was not a "tax" which required voter approval.

Affirmed.

West Headnotes (10)

**[1] Constitutional Law**
Amendments in general

The court construes provisions added to the state Constitution by a voter initiative by applying the same principles governing the construction of a statute.

**[2] Constitutional Law**
Intent in general

When construing provisions added to the state Constitution by a voter initiative, the court's task is to ascertain the intent of the electorate so as to effectuate the purpose of the law.

1 Cases that cite this headnote

**[3] Constitutional Law**
Intent in general

When construing provisions added to the state Constitution by a voter initiative, the court first examines the language of the initiative, as the best indicator of the voters' intent.

4 Cases that cite this headnote

**[4] Constitutional Law**
Plain, ordinary, or common meaning

When construing provisions added to the state Constitution by a voter initiative, the court gives the words of the initiative their ordinary and usual meaning and construes them in the context of the entire scheme of law of which the initiative is a part, so that the whole may be harmonized and given effect.

**[5] Constitutional Law**
Existence of ambiguity

**Constitutional Law**
Extrinsic aids to construction in general

If the language of a provisions added to the state Constitution by a voter initiative is unambiguous and a literal construction would not result in absurd consequences, the court presumes that the voters intended the meaning on the face of the initiative and the plain meaning governs; if the language is ambiguous, the court may consider the analyses and arguments contained in the official ballot pamphlet as extrinsic evidence of the voters' intent and understanding of the initiative.

6 Cases that cite this headnote

**[6] Appeal and Error**

  

Statutory or legislative law

The construction of statute or an initiative, including the resolution of any ambiguity, is a question of law reviewed de novo.

3 Cases that cite this headnote

**[7] Taxation**

Distinguishing "tax" and "license" or "fee"

Charge of $0.10 imposed by county ordinance on retail establishments for each carryout paper bag provided was not a "tax" within meaning of state constitution provision prohibiting any new general or special tax imposed by local government without prior approval by the voters; charge was not remitted to the county, but rather was payable to and retained by the retail store providing the bag, and the store was required to use the funds for specified purposes. Cal. Const. art. 13 C, § 1.

8 Cases that cite this headnote

**[8] Taxation**

Nature of taxes

The term "tax" in ordinary usage refers to a compulsory payment made to the government or remitted to the government.

4 Cases that cite this headnote

**[9] Taxation**

Nature of taxes

Taxes ordinarily are imposed to raise revenue for the government, although taxes may be imposed for nonrevenue purposes as well.

7 Cases that cite this headnote

**[10] Municipal Corporations**

Submission to voters, and levy, assessment, and collection

Language "any levy, charge, or exaction of any kind imposed by a local government" in state constitution provision defining a "tax," for purposes of prohibition against new taxes without prior voter approval, is limited to charges payable to, or for the benefit of, a local government. Cal. Const. art. 13 C, § 1.

*See* 9 Witkin, Summary of Cal. Law (10th ed. 2005) Taxation, § 136.

12 Cases that cite this headnote

****353** APPEAL from a judgment of the Superior Court of Los Angeles County,James C. Chalfant, Judge. Affirmed. (Los Angeles County Super. Ct. No. BC470705)

**Attorneys and Law Firms**

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Colantuono & Levin, Michael G. Colantuono, Los Angeles, and Jon R. di Cristina for League of California Cities and California State Association of Counties as Amici Curiae on behalf of Defendants and Respondents.

Frank G. Wells Environmental Law Clinic, Sean B. Hecht and Xiao Y. Zhang for Surfrider Foundation, Heal the Bay, The 5 Gyres Institute, Environment California Research and Policy Center, and Seventh Generation Advisors as Amici Curiae on behalf of Defendants and Respondents.

**Opinion**

CROSKEY, Acting P.J.

***1313** A Los Angeles County ordinance prohibits retail stores from providing plastic carryout bags and requires stores to charge customers 10 cents for each paper carryout bag provided. Lee Schmeer and others (Petitioners) filed a combined petition for writ of mandate and complaint challenging the ordinance. Petitioners contend the ordinance violates article XIII C of the California Constitution, as amended by Proposition 26, because the 10–cent charge is a tax and was not approved by county voters. We conclude that the paper carryout bag charge is not a tax for purposes of article XIII C because the charge is payable to and retained

by ***1314** the retail store and is not remitted to the county. We therefore will affirm the judgment in favor of the county and other respondents.

## *FACTUAL AND PROCEDURAL BACKGROUND*

1. *Factual Background*

The Los Angeles County Board of Supervisors enacted ordinance No. 2010–0059 on November 23, 2010. The ordinance prohibits retail stores within unincorporated areas of Los Angeles County from providing plastic carryout bags to customers. The ordinance states that retail stores may provide, for the purpose of carrying goods away from the store, only recyclable paper carryout bags or reusable carryout bags meeting certain requirements (including plastic bags satisfying those requirements). The ordinance also states that retail stores must provide reusable bags to customers, either for sale or free of charge, and encourages retail stores to educate their employees to promote reusable bags and post signs encouraging customers to use reusable bags.

The ordinance further states that retail stores must charge the customer 10 cents for each recyclable paper carryout bag provided and must indicate on the receipt the number of recyclable paper carryout bags provided and the total amount charged for the bags. It states that customers participating in the California Supplemental Food Program for Women, Infants, and Children (Health & Saf.Code, § 123275) or the Supplemental Food Program (Welf. & Inst.Code, § 15500 et seq.) are exempt from the charge and must be provided free of charge either reusable bags or recyclable paper carryout bags. The ordinance states that the money received for recyclable paper bags must be retained by the store and used only for (1) the costs of compliance with the ordinance; ****355** (2) the actual costs of providing recyclable paper bags; or (3) the costs of educational materials or other costs of promoting the use of reusable bags, if any.

The ordinance includes a severability provision stating: "If any section, subsection, sentence, clause, or phrase of this ordinance is for any reason held to be invalid by a decision of any court of competent jurisdiction, that decision will not affect the validity of the remaining portions of the ordinance. The Board of Supervisors hereby declares that it would have passed this ordinance and each and every section, subsection, sentence, clause, or phrase not declared invalid or unconstitutional without regard to whether any portion of this ordinance would be subsequently declared invalid."

The ordinance became effective on July 1, 2011. The ordinance was not submitted to the county electorate for its approval.

***1315** 2. *Trial Court Proceedings*

Lee Schmeer, Salim Bana, Jeff Wheeler, Chris Wheeler and Hilex Poly Co. LLC (Hilex) filed a combined petition for writ of mandate and complaint in October 2011 against the County of Los Angeles and three county officials. Petitioners allege that the individual petitioners are California taxpayers who have been required to pay the paper carryout bag charge and that Hilex is a manufacturer of plastic bags prohibited by the ordinance.

Petitioners allege that the paper carryout bag charge required under the ordinance is a "tax" as defined in article XIII C of the California Constitution, as amended by Proposition 26. They allege that the charge was imposed by the county in violation of section 2 of article XIII C, which prohibits any new general or special tax imposed by local government without prior approval by the voters. Petitioners allege counts for (1) a writ of mandate to prevent the county from implementing and enforcing the ordinance and (2) a judicial declaration that the paper carryout bag charge violates article XIII C.

The trial court conducted a hearing on the merits of the petition for writ of mandate in March 2012. The court adopted its written tentative decision denying the petition as its final ruling. The court concluded that the paper carryout bag charge is not a general or special tax because the money is retained by the retail stores and is not remitted to the county. The court also concluded that even if the charge fell within the general definition of a tax under Proposition 26, the charge would satisfy an exception to that definition for "[a] charge imposed for a specific benefit conferred or privilege granted directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of conferring the benefit or granting the privilege" (Cal. Const., art. XIII C, § 1(e)(1)). The court stated that the county, through retail stores, conferred the benefit of a paper carryout bag only on customers paying the charge, satisfying the first prong of the exception. The court stated that Petitioners waived the argument that the charge did not satisfy the second prong of the exception by failing to assert that argument in their opening brief on the petition. The court stated further that, in any event, substantial evidence shows that the money received by the stores for recyclable paper bags will be used for the purposes required under the ordinance. The court

  

therefore concluded that Petitioners were not entitled to a writ of mandate.

Petitioners' counsel acknowledged that the trial court's ruling on the petition for writ of mandate effectively adjudicated the count for declaratory relief as well. The court entered a judgment in April 2012 denying Petitioners any relief on their ****356** combined petition for writ of mandate and complaint. Petitioners timely appealed the judgment.

***1316** ***CONTENTIONS***

Petitioners contend (1) the paper carryout bag charge is a special tax imposed by the county without the voters' prior approval and therefore violates article XIII C of the California Constitution; (2) the charge does not satisfy the exception for a charge imposed for a specific benefit conferred or privilege granted, or any other exception under article XIII C; and (3) the challenged provisions of the ordinance are not severable, so the entire ordinance must be invalidated, including the ban on single–use plastic bags.

***DISCUSSION***

1. *Standard of Review*

The trial court's ruling turned on its construction of article XIII C of the California Constitution, as amended by Proposition 26, and its determination that the amount charged did not exceed the reasonable costs. We review the ruling de novo to the extent that the court decided questions of law concerning the construction of constitutional provisions and not turning on any disputed facts. (*Professional Engineers in California Government v. Kempton* (2007) 40 Cal.4th 1016, 1032, 56 Cal.Rptr.3d 814, 155 P.3d 226 (*Professional Engineers* ).) We review the court's factual findings under the substantial evidence standard. (*Ibid.*)

2. *Construction of a Voter Initiative*

**[1]** **[2]** **[3]** **[4]** We construe provisions added to the state Constitution by a voter initiative by applying the same principles governing the construction of a statute. (*Professional Engineers, supra,* 40 Cal.4th at p. 1037, 56 Cal.Rptr.3d 814, 155 P.3d 226.) Our task is to ascertain the intent of the electorate so as to effectuate the purpose of the law. (*Robert L. v. Superior Court* (2003) 30 Cal.4th 894, 901, 135 Cal.Rptr.2d 30, 69 P.3d 951.) We first examine the language of the initiative as the best indicator of the voters' intent. (*Kwikset Corp. v. Superior Court* (2011) 51 Cal.4th 310, 321, 120 Cal.Rptr.3d 741, 246 P.3d 877.) We give the words of the initiative their ordinary and usual meaning and construe them in the context of the entire scheme of law of which the initiative is a part, so that the whole may be harmonized and given effect. (*Professional Engineers, supra,* at p. 1037, 56 Cal.Rptr.3d 814, 155 P.3d 226; *State Farm Mutual Automobile Ins. Co. v. Garamendi* (2004) 32 Cal.4th 1029, 1043, 12 Cal.Rptr.3d 343, 88 P.3d 71.)

**[5]** If the language is unambiguous and a literal construction would not result in absurd consequences, we presume that the voters intended the meaning on the face of the initiative and the plain meaning governs. (*Professional Engineers, supra,* 40 Cal.4th at p. 1037, 56 Cal.Rptr.3d 814, 155 P.3d 226; ***1317** *Coalition of Concerned Communities, Inc. v. City of Los Angeles* (2004) 34 Cal.4th 733, 737, 21 Cal.Rptr.3d 676, 101 P.3d 563.) If the language is ambiguous, we may consider the analyses and arguments contained in the official ballot pamphlet as extrinsic evidence of the voters' intent and understanding of the initiative. (*Professional Engineers, supra,* at p. 1037, 56 Cal.Rptr.3d 814, 155 P.3d 226.)

**[6]** The construction of statute or an initiative, including the resolution of any ambiguity, is a question of law that we review de novo. (*Bruns v. E–Commerce Exchange, Inc.* (2011) 51 Cal.4th 717, 724, 122 Cal.Rptr.3d 331, 248 P.3d 1185.)

3. *Historical Foundations of Proposition 26*

a. *Proposition 13*

California voters adopted Proposition 13 in June 1978, adding ****357** article XIII A to the California Constitution. Proposition 13 "impos[ed] important limitations upon the assessment and taxing powers of state and local governments." (*Amador Valley Joint Union High Sch. Dist. v. State Bd. of Equalization* (1978) 22 Cal.3d 208, 218, 149 Cal.Rptr. 239, 583 P.2d 1281 (*Amador Valley* ).) Proposition 13 generally (1) limited the rate of any ad valorem tax on real property to 1 percent; (2) limited increases in the assessed value of real property to 2 percent annually absent a change in ownership; (3) required that " 'any changes in State taxes enacted for the purpose of increasing revenues collected pursuant thereto whether by increased rates or changes in methods of computation' " must be approved by two-thirds of the Legislature; and (4) required that special taxes imposed by cities, counties and special districts must be approved by a two-thirds vote of the electors. (*Amador Valley, supra,* at p.

220, 149 Cal.Rptr. 239, 583 P.2d 1281, quoting former art. XIII A, § 3 as added by Prop. 13.)

The California Supreme Court in *Amador Valley, supra,* 22 Cal.3d at page 231, 149 Cal.Rptr. 239, 583 P.2d 1281 , stated that the various elements of Proposition 13 formed "an interlocking 'package' " with the purpose of providing effective real property tax relief. *Amador Valley* rejected several constitutional challenges to the initiative. Local governments, however, soon found ways to generate additional revenue without a two-thirds vote of the electors despite Proposition 13. Some of those efforts were approved by the courts.

The California Supreme Court in *Los Angeles County Transportation Com. v. Richmond* (1982) 31 Cal.3d 197, 208, 182 Cal.Rptr. 324, 643 P.2d 941 (*Richmond* ), held that a sales tax imposed by the Los Angeles County Transportation Commission and approved by a majority, but less than two-thirds, of county voters was validly adopted. The state Legislature, before the ***1318** passage of Proposition 13, had authorized the local commission to adopt a sales tax to fund public transit projects. Writing for a plurality of three justices, Justice Mosk stated that the term "special districts" in section 4 of article XIII A of the California Constitution was ambiguous. (*Richmond, supra,* at p. 201, 182 Cal.Rptr. 324, 643 P.2d 941 (plur. opn. of Mosk, J.).) Justice Mosk stated that the requirement of a two-thirds vote imposed by the state's voters on local voters was "fundamentally undemocratic" and that the language of section 4 therefore must be strictly construed in favor of allowing local voters to approve special taxes by a majority vote rather than a two-thirds vote. (*Richmond, supra,* at p. 205, 182 Cal.Rptr. 324, 643 P.2d 941 (plur. opn. of Mosk, J.).) Noting that section 4 expressly prohibited cities, counties and special districts from imposing ad valorem taxes on real property or transaction or sales taxes on the sale of real property even with a two-thirds vote, and citing language in the ballot pamphlet, the plurality held that "special districts" under section 4 must be limited to special districts authorized to levy taxes on real property. (*Richmond, supra,* at p. 205, 182 Cal.Rptr. 324, 643 P.2d 941 (plur. opn. of Mosk, J.).) Two justices concurred in the judgment and also concluded that the term "special districts" was limited to special districts authorized to levy taxes on real property. (*Richmond, supra,* at p. 209, 182 Cal.Rptr. 324, 643 P.2d 941 (conc. opn. of Kaus, J.).)

Justice Richardson stated in a dissent that the sales tax imposed by the local commission served as a convenient substitute for an increase in real property taxes. (*Richmond, supra,* 31 Cal.3d at pp. 212–213, 182 Cal.Rptr. 324, 643 P.2d 941 (dis. opn. of Richardson, J.).) The dissent stated that under the holding by the majority, the creation of districts without real property ****358** taxing authority provided a means by which local government could readily avoid the restrictions of Proposition 13. (*Id.* at p. 213, 182 Cal.Rptr. 324, 643 P.2d 941.) The dissent concluded that just as the county would be prohibited from imposing the new tax without a two-thirds vote of its voters, the local commission as the county's surrogate should be prohibited from imposing the new tax without the required voter approval. (*Id.* at p. 215, 182 Cal.Rptr. 324, 643 P.2d 941.)

*City and County of San Francisco v. Farrell* (1982) 32 Cal.3d 47, 184 Cal.Rptr. 713, 648 P.2d 935 held that a payroll and gross receipts tax imposed on businesses operating within the City and County of San Francisco, but not approved by a two-thirds vote of the voters, was valid. *Farrell* concluded that the requirement in section 4 of article XIII A of the California Constitution that "special taxes" imposed by cities, counties and special districts must be approved by a two-thirds vote of the electors applied only to taxes levied for a specific purpose and did not apply to taxes paid into the general fund to be used for general governmental purposes. (*Farrell, supra,* at p. 57, 184 Cal.Rptr. 713, 648 P.2d 935.)

*Rider v. County of San Diego* (1991) 1 Cal.4th 1, 2 Cal.Rptr.2d 490, 820 P.2d 1000 found invalid a sales tax imposed by the County of San Diego ***1319** for the purpose of financing the construction and operation of criminal detention and courthouse facilities. The tax was enacted without the approval of two-thirds of the voters. [1] Distinguishing *Richmond, supra,* 31 Cal.3d 197, 182 Cal.Rptr. 324, 643 P.2d 941, the *Rider* court held that a local agency that the trial court found was created solely for the purpose of circumventing Proposition 13's two-thirds voter approval requirement was a "special district" (Cal. Const., art. XIII A, § 4) despite its lack of authority to levy taxes on real property. (*Rider, supra,* at pp. 8, 10, 2 Cal.Rptr.2d 490, 820 P.2d 1000.) *Rider* stated, "To hold otherwise clearly would create a wide loophole in Proposition 13 as feared by the dissent in *Richmond*." (*Id.* at p. 10, 2 Cal.Rptr.2d 490, 820 P.2d 1000.) *Rider* noted a proliferation of governmental entities lacking the power to levy real property taxes raising revenues through sales taxes without the approval of two-thirds of the voters following *Richmond, supra,* 31 Cal.3d 197, 182 Cal.Rptr. 324, 643 P.2d 941. (*Rider, supra,* at p. 10, 2 Cal.Rptr.2d 490, 820 P.2d 1000.) *Rider* stated that the framers of Proposition 13

  

and the voters who adopted it could not have "intended to adopt a definition [of 'special districts'] that could so readily permit circumvention of section 4." (*Rider, supra,* at p. 11, 2 Cal.Rptr.2d 490, 820 P.2d 1000.) *Rider* held that the term "special district" includes "any local taxing agency created to raise funds for city or county purposes to replace revenues lost by reason of the restrictions of Proposition 13." (*Ibid.*)

*Knox v. City of Orland* (1992) 4 Cal.4th 132, 14 Cal.Rptr.2d 159, 841 P.2d 144 held that a charge levied against real property in the City of Orland for the maintenance of public parks was a "special assessment," and was not a "special tax" within the meaning of section 4 of article XIII A of the California Constitution. *Knox* stated that a special assessment is a charge levied against real property within a particular district for the purpose of conferring a special benefit on the assessed properties beyond any benefit received by the general public. (*Knox, supra,* at pp. 141–142, 14 Cal.Rptr.2d 159, 841 P.2d 144.) A "special tax," in contrast, is imposed to provide ****359** benefits to the general public. (*Id.* at pp. 142–143, 14 Cal.Rptr.2d 159, 841 P.2d 144.) *Knox* concluded that the park maintenance charge was a special assessment and therefore was not subject to the two-thirds voter approval requirement. (*Id.* at pp. 140–141, 145, 14 Cal.Rptr.2d 159, 841 P.2d 144.)

b. *Proposition 218*

California voters adopted Proposition 218 in November 1992, adding articles XIII C and XIII D to the California Constitution. Proposition 218 imposed additional voting approval requirements on the imposition of taxes by a local government. Proposition 218 also added to Proposition 13's limitations on ad valorem property taxes and special taxes similar limitations on assessments, fees, and charges relating to real property. ( ***1320** *Apartment Assn. of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 837, 102 Cal.Rptr.2d 719, 14 P.3d 930 ( *Apartment Assn.* ).) The initiative measure's findings and declaration of purpose stated:

"The people of the State of California hereby find and declare that Proposition 13 was intended to provide effective tax relief and to require voter approval of tax increases. However, local governments have subjected taxpayers to excessive tax, assessment, fee and charge increases that not only frustrate the purposes of voter approval for tax increases, but also threaten the economic security of all Californians and the California economy itself. This measure protects taxpayers by limiting the methods by which local governments exact revenue from taxpayers without their consent." (Ballot Pamp., Gen. Elec. (Nov. 5, 1996) text of Prop. 218, § 2, p. 108, reprinted in Historical Notes, 2A West's Ann. Cal. Const. (2013 supp.) foll. art. XIII C, § 1, p. 171.)

Section 2, subdivision (a) of article XIII C of the California Constitution, added by Proposition 218, states: "All taxes imposed by any local government shall be deemed to be either general taxes or special taxes. Special purpose districts or agencies, including school districts, shall have no power to levy general taxes." Section 1 of article XIII C defines "[g]eneral tax" as "any tax imposed for general governmental purposes" and defines "[s]pecial tax" as "any tax imposed for specific purposes, including a tax imposed for specific purposes, which is placed into a general fund." (*Id.,* subds.(a), (d).) Proposition 218 required that all general taxes imposed by a local government must be approved by a majority vote of the electorate and all special taxes imposed by a local government must be approved by a two-thirds vote of the electorate.[2] (Cal. Const., art. XIII C, § 2, subds. (b), (d).) Proposition 218, however, did not define the term "tax."

Section 3, subdivision (a) of article XIII D of the California Constitution, added by Proposition 218, states that the only "taxes, assessments, fees, or charges" that a local government may impose "as an incident of property ownership" are ad valorem property taxes, special taxes approved by two-thirds of the voters, "[a]ssessments as provided by this article," and "[f]ees or charges for property related services as provided by this article." Proposition 218 restricted local government's ability to impose real property assessments by (1) tightening the definition of "special benefit" ****360** and "proportionality" (Cal. Const., art. XIII D, §§ 2, subd. (i), 4, subd. (a)); (2) establishing strict procedural requirements for the imposition of an assessment (*id.,* § 4, subds.(b)-(e)); and (3) shifting to the public agency the burden of demonstrating the legality of an assessment (*id.,* § 4, subd. (f)). ( ***1321** *Silicon Valley Taxpayers' Assn., Inc. v. Santa Clara County Open Space Authority* (2008) 44 Cal.4th 431, 443–444, 79 Cal.Rptr.3d 312, 187 P.3d 37.) Proposition 218 also established procedural requirements for the imposition of new or increased fees and charges relating to real property and requirements for existing fees and charges. (Cal. Const., art. XIII D, § 6.)

*Apartment Assn., supra,* 24 Cal.4th at page 838, 102 Cal.Rptr.2d 719, 14 P.3d 930, held that article XIII D of the California Constitution restricted only fees imposed on real property owners in their capacity as owners and therefore did

not apply to an inspection fee imposed by the City of Los Angeles on property owners in their capacity as landlords.

c. *Sinclair Paint Co. v. State Board of Equalization*

In *Sinclair Paint Co. v. State Board of Equalization* (1997) 15 Cal.4th 866, 64 Cal.Rptr.2d 447, 937 P.2d 1350, the California Supreme Court decided the question whether fees imposed by the Legislature on manufacturers and others contributing to environmental lead contamination were "taxes enacted for the purpose of increasing revenues" under former section 3 of article XIII A of the California Constitution, and therefore subject to the requirement of a two-thirds vote of the Legislature. (*Sinclair Paint, supra,* at p. 873, 64 Cal.Rptr.2d 447, 937 P.2d 1350.) *Sinclair Paint* construed the language " 'taxes enacted for the purpose of increasing revenues' " in former section 3 of article XIII A, which had not been construed in any California appellate opinion, by reference to prior opinions construing the term "special taxes" in section 4 of article XIII A. (*Sinclair Paint, supra,* at pp. 873–881, 64 Cal.Rptr.2d 447, 937 P.2d 1350.) *Sinclair Paint* stated:

"The cases recognize that 'tax' has no fixed meaning, and that the distinction between taxes and fees is frequently 'blurred,' taking on different meanings in different contexts. [Citations.] In general, taxes are imposed for revenue purposes, rather than in return for a specific benefit conferred or privilege granted. [Citations.]....

"The 'special tax' cases have involved three general categories of fees or assessments: (1) special assessments, based on the value of benefits conferred on property; (2) development fees, exacted in return for permits or other government privileges; and (3) regulatory fees, imposed under the police power." (*Sinclair Paint,supra,* 15 Cal.4th at p. 874, 64 Cal.Rptr.2d 447, 937 P.2d 1350.)

*Sinclair Paint* stated that the courts had held that special assessments and development fees satisfying certain requirements were not "special taxes" under article XIII A, section 4. (*Sinclair Paint,supra,* 15 Cal.4th at pp. 874–875, 64 Cal.Rptr.2d 447, 937 P.2d 1350.) *Sinclair Paint* stated that regulatory fees that do not exceed the reasonable cost of providing the services for which the ***1322** fees are charged and are not levied for any unrelated revenue purposes also are not "special taxes" subject to the two-thirds voting requirement of section 4. (*Sinclair Paint, supra,* at p. 876, 64 Cal.Rptr.2d 447, 937 P.2d 1350.) *Sinclair Paint* rejected the holding by the Court of Appeal in that case that the fees were not regulatory in nature because the legislation imposing the fees imposed no other conditions ****361** on persons subject to the fees. Instead, *Sinclair Paint* concluded that the fees were regulatory because the legislation "requires manufacturers and other persons whose products have exposed children to lead contamination to bear a fair share of the cost of mitigating the adverse health effects their products created in the community." (*Id.* at p. 877, 64 Cal.Rptr.2d 447, 937 P.2d 1350.) *Sinclair Paint* stated that such " 'mitigating effects' fees" were just as regulatory in nature as fees imposed on polluters or producers of contaminating products for the initial permit or licensing programs, and that such fees in substantial amounts also regulate future conduct by deterring the conduct subject to the fee and by encouraging research and development of alternative products. (*Ibid.*)

*Sinclair Paint* rejected the argument that the state had no authority to impose the fees, stating that the case law "clearly indicates that the police power is broad enough to include mandatory remedial measures to mitigate the *past, present, or future* adverse impact of the fee payer's operations, at least where, as here, the measure requires a casual connection or nexus between the product and its adverse effects. [Citations.]" (*Sinclair Paint,supra,* 15 Cal.4th at pp. 877–878, 64 Cal.Rptr.2d 447, 937 P.2d 1350.) *Sinclair Paint* stated that if the primary purpose of a fee is to regulate rather than to raise revenue, the fee is not a tax. (*Id.* at p. 880, 64 Cal.Rptr.2d 447, 937 P.2d 1350.)

4. *Proposition 26*

California voters approved Proposition 26 on November 2, 2010. Proposition 26 expanded the definition of taxes so as to include fees and charges, with specified exceptions; required a two-thirds vote of the Legislature to approve laws increasing taxes on any taxpayers; and shifted to the state or local government the burden of demonstrating that any charge, levy or assessment is not a tax. Proposition 26 amended section 3 of article XIII A and section 1 of article XIII C of the California Constitution. The initiative was an effort to close perceived loopholes in Propositions 13 and 218 and was largely a response to *Sinclair Paint, supra,* 15 Cal.4th 866, 64 Cal.Rptr.2d 447, 937 P.2d 1350. Proposition 26's findings and declaration of purpose stated:

"The people of the State of California find and declare that:

"(a) Since the people overwhelmingly approved Proposition 13 in 1978, the Constitution of the State of California has required that increases in state taxes be adopted by not less

than two-thirds of the members elected to each house of the Legislature.

***1323** "(b) Since the enactment of Proposition 218 in 1996, the Constitution of the State of California has required that increases in local taxes be approved by the voters.

"(c) Despite these limitations, California taxes have continued to escalate. Rates for state personal income taxes, state and local sales and use taxes, and a myriad of state and local business taxes are at all–time highs. Californians are taxed at one of the highest levels of any state in the nation.

"(d) Recently, the Legislature added another $12 billion in new taxes to be paid by drivers, shoppers, and anyone who earns an income.

"(e) This escalation in taxation does not account for the recent phenomenon whereby the Legislature and local governments have disguised new taxes as 'fees' in order to extract even more revenue from California taxpayers without having to abide by these constitutional voting requirements. Fees couched as 'regulatory' but which ****362** exceed the reasonable costs of actual regulation or are simply imposed to raise revenue for a new program and are not part of any licensing or permitting program are actually taxes and should be subject to the limitations applicable to the imposition of taxes.

"(f) In order to ensure the effectiveness of these constitutional limitations, this measure also defines a 'tax' for state and local purposes so that neither the Legislature nor local governments can circumvent these restrictions on increasing taxes by simply defining new or expanded taxes as 'fees.' " (Ballot Pamp., Gen. Elec. (Nov. 2, 2010) text of Prop. 26, § 1, p. 114, reprinted in Historical Notes, 2A West's Ann. Cal. Const. (2013 supp.) foll. art. XIII C, § 3, pp. 141–142.)

****363** Proposition 26 amended section 3 of article XIII A of the California Constitution to read:

"(a) Any change in state statute which results in any taxpayer paying a higher tax must be imposed by an act passed by not less than two-thirds of all members elected to each of the two houses of the Legislature, except that no new ad valorem taxes on real property, or sales or transaction taxes on the sales of real property may be imposed.

"(b) As used in this section, 'tax' means any levy, charge, or exaction of any kind imposed by the State, except the following:

"(1) A charge imposed for a specific benefit conferred or privilege granted directly to the payor that is not provided to those not charged, and which does ***1324** not exceed the reasonable costs to the State of conferring the benefit or granting the privilege to the payor.

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

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

"(4) A charge imposed for entrance to or use of state property, or the purchase, rental, or lease of state property, except charges governed by Section 15 of Article XI.

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

"(c) Any tax adopted after January 1, 2010, but prior to the effective date of this act, that was not adopted in compliance with the requirements of this section is void 12 months after the effective date of this act unless the tax is reenacted by the Legislature and signed into law by the Governor in compliance with the requirements of this section.

"(d) The State bears the burden of proving by a preponderance of the evidence that a levy, charge, or other exaction is not a tax, that the amount is no more than necessary to cover the reasonable costs of the governmental activity, and that the manner in which those costs are allocated to a payor bear a fair or reasonable relationship to the payor's burdens on, or benefits received from, the governmental activity." [3]

Proposition 26 amended section 1 of article XIII C of the California Constitution to read:

***1325** "(a) 'General tax' means any tax imposed for general governmental purposes.

"(b) 'Local government' means any county, city, city and county, including a charter city or county, any special district, or any other local or regional governmental entity.

"(c) 'Special district' means an agency of the state, formed pursuant to general law or a special act, for the local performance of governmental or proprietary functions with limited geographic boundaries including, but not limited to, school districts and redevelopment agencies.

"(d) 'Special tax' means any tax imposed for specific purposes, including a tax imposed for specific purposes, which is placed into a general fund.

"(e) As used in this article, 'tax' means any levy, charge, or exaction of any kind imposed by a local government, except the following:

"(1) A charge imposed for a specific benefit conferred or privilege granted directly to the payor that is not provided to those not charged, and which does not exceed the reasonable costs to the local government of conferring the benefit or granting the privilege.

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

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

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

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

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

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

***1326** "The local government bears the burden of proving by a preponderance of the evidence that a levy, charge, or other exaction is not a tax, that the amount is no more than necessary to cover the reasonable costs of the governmental activity, and that the manner in which those costs are allocated to a payor bear a fair or reasonable relationship to the payor's burdens on, or benefits received from, the governmental activity."[4]

Proposition 26, in an effort to curb the perceived problem of a proliferation of regulatory fees imposed by the state without a two-thirds vote of the Legislature or imposed ****364** by local governments without the voters' approval, defined a "tax" to include "any levy, charge, or exaction of any kind imposed by" the state or a local government, with specified exceptions. The question here is whether the paper carryout bag charge constitutes a tax and therefore is subject to one of the two voter approval requirements (Cal. Const., art. XIII C, § 2, subds. (b), (d)).

5. *The Paper Carryout Bag Charge Is Not a Tax*

**[7]** The county contends the paper carryout bag charge is not a tax because it is payable to and retained by the retail store and is not remitted to the county. We agree.

**[8]** **[9]** The term "tax" in ordinary usage refers to a compulsory payment made to the government or remitted to the government. Taxes ordinarily are imposed to raise revenue for the government (*California Farm Bureau Federation v. State Water Resources Control Bd.* (2011) 51 Cal.4th 421, 437, 121 Cal.Rptr.3d 37, 247 P.3d 112 (*California Farm* ) ["Ordinarily taxes are imposed for revenue purposes and not 'in return for a specific benefit conferred or privilege granted' "]; *Sinclair Paint, supra,* 15 Cal.4th at p. 874, 64 Cal.Rptr.2d 447, 937 P.2d 1350 ["In general, taxes are imposed for revenue purposes, rather than in return for a specific benefit conferred or privilege granted"]; *Morning Star Co. v. Board of Equalization* (2011) 201 Cal.App.4th 737, 750, 135 Cal.Rptr.3d 457), although taxes may be imposed for nonrevenue purposes as well (see *Washington v. Confederated Tribes of Colville Indian Reservation* (1980) 447 U.S. 134, 158, 100 S.Ct. 2069, 65 L.Ed.2d 10 ["taxes can be used for distributive or regulatory purposes, as well as for raising revenue"] ).

  

The definition of a "tax" in California Constitution, article XIII C, section 1, subdivision (e) does not explicitly state that the levy, charge or exaction must be payable to a local government, but does state that it must be "imposed by a local government." In light of the ordinary meaning of a "tax" as a ***1327** compulsory payment made to the government or remitted to the government, we conclude that subdivision (e) is ambiguous as to whether a levy, charge or exaction must be payable to a local government in order to constitute a tax. Our consideration of other language added to article XIII C by Proposition 26 helps to resolve this ambiguity.

Subdivision (e) of article XIII C, section 1 lists seven exceptions to the rule that " 'tax' means any levy, charge, or exaction of any kind imposed by a local government" (*ibid.*). The exceptions (quoted *ante* ) all relate to charges ordinarily payable to the government, including charges imposed in connection with governmental activities or use of government property, fines imposed by the government for a violation of law, development fees and real property assessments. (*Ibid.*)

The first three exceptions, in particular, state that a charge imposed by a local government is not a tax if the charge does not exceed "the reasonable costs to the local government" of conferring a specific benefit or privilege directly to the payor or providing a specific service or product directly to the payor, and also except from the definition of a tax a charge "for the reasonable regulatory costs to a local government for issuing licenses and permits" and related activities. (Cal. Const., art. XIII C, § 1, subd. (e), items (1), (2) & (3).) These exceptions, generally speaking, except from the definition of a "tax" charges not exceeding the reasonable costs to the local government of providing specific benefits or regulatory services. These exceptions do not contemplate the situation where a charge is paid to an entity or ****365** person other than a local government or where such an entity or person incurs reasonable costs. In our view, this suggests an understanding that the language "any levy, charge, or exaction of any kind imposed by a local government" in the first paragraph of article XIII C, section 1, subdivision (e) is limited to charges payable to a local government. This is consistent with the ordinary meaning of the term "tax." [5]

No reason appears on the face of Proposition 26, or from our consideration of the ballot pamphlet and the historical foundations of the initiative, ***1328** to conclude that the voters approving the initiative intended the definition of a "tax" to include both charges payable to a local government and charges payable to a nongovernmental entity or person, while limiting the "reasonable costs" exceptions to charges payable to a local government. In other words, there is no reason to believe that the voters approving Proposition 26 intended to except from the definition of a "tax" and, consequently, from the voter approval requirements, charges payable to a local government not exceeding the reasonable costs of providing specific benefits or regulatory activities, but intended the same charges if made payable to another person or entity in an amount not exceeding the reasonable costs to be considered taxes subject to the voter approval requirements.

The analysis and arguments for and against the initiative in the official ballot pamphlet discussed the impact of the initiative on the ability of local government to raise revenues. The analysis by the Legislative Analyst stated, "Generally, the types of fees and charges that would become taxes under the measure are ones that government imposes to address health, environmental, or other societal or economic concerns." A chart listed several examples of regulatory fees that could be considered taxes under the measure, stating as to each one that the state or local government "uses the funds" for specified purposes, necessarily implying that the fees were payable to the government. There was no discussion in the ballot pamphlet of any charges or fees payable to a nongovernmental entity or person and nothing to suggest to the voters that Proposition 26 would have any impact on such charges or fees. [6]

****366** **[10]** Accordingly, we conclude that the language "any levy, charge, or exaction of any kind imposed by a local government" in the first paragraph of ***1329** article XIII C, section 1, subdivision (e) is limited to charges payable to, or for the benefit of, a local government. [7]

Petitioners note that Proposition 26 deleted the language "any change in state taxes enacted for the purpose of increasing revenues collected pursuant thereto" in article XIII A, section 3 of the California Constitution and replaced it with "[a]ny change in state statute which results in any taxpayer paying a higher tax." Petitioners argue that this amendment indicates an intent to eliminate the prior requirement that a charge must produce revenue for the government to be considered a tax. We disagree. This amendment was to the provision requiring approval by two-thirds of the Legislature for any increase in state taxes. The provisions requiring voter approval for increases in local taxes (Cal. Const., art. XIII A, § 4, art. XIII C, § 2), in contrast, never included the language "for

the purpose of increasing revenues" or any similar limiting language. The purpose of this amendment to article XIII A, section 3 was to end the Legislature's practice of approving by a simple majority vote so-called "revenue-neutral" laws that increased taxes for some taxpayers but decreased taxes for others. The Legislative Analyst's analysis in the official ballot pamphlet stated:

"*Current Requirement.* The State Constitution currently specifies that laws enacted 'for the purpose of increasing revenues' must be approved by two-thirds of each house of the Legislature. Under current practice, a law that increases the amount of taxes charged to some taxpayers but offers an equal (or larger) reduction in taxes for other taxpayers has been viewed as not increasing revenues. As such, it can be approved by a majority vote of the Legislature.

"*New Approval Requirement.* The measure specifies that state laws that result in *any* taxpayer paying a higher tax must be approved by two-thirds of each house of the Legislature." (Boldface omitted.)

Accordingly, we conclude that the amendment to article XIII A, section 3 does not support Petitioners' position. The paper carryout bag charge is payable to and retained by the retail store providing the bag, which is required to use the funds for specified purposes. The charge is not remitted to the county. Because the charge is not remitted to the county and raises no revenue for the county, we conclude that the charge is not a "tax" for purposes of article XIII C of the California Constitution. The voter approval requirements of article XIII C, section 2 ***1330** therefore are inapplicable. In light of our conclusion, we need not decide whether, if the charge were otherwise considered a tax, any of the specified exceptions would apply.

***DISPOSITION***

The judgment is affirmed. Respondents are entitled to recover their costs on appeal.

****367** WE CONCUR:

KITCHING, J.

ALDRICH, J.

**All Citations**

213 Cal.App.4th 1310, 153 Cal.Rptr.3d 352, 13 Cal. Daily Op. Serv. 2037, 2013 Daily Journal D.A.R. 2393

Footnotes

* Kennard and Corrigan, JJ., are of the opinion the petition should be granted.

1 The tax was approved by 50.8%, a bare majority of the county voters. (*Rider, supra,* 1 Cal.4th at p. 6, 2 Cal.Rptr.2d 490, 820 P.2d 1000.)

2 Article XIII C, section 2, subdivision (b) states, in relevant part, "No local government may impose, extend, or increase any general tax unless and until that tax is submitted to the electorate and approved by a majority vote." Subdivision (d) states, in relevant part, "No local government may impose, extend, or increase any special tax unless and until that tax is submitted to the electorate and approved by a two-thirds vote."

3 Section 3 of article XIII A stated, in its entirety, before the enactment of Proposition 26: "From and after the effective date of this article, any changes in State taxes enacted for the purpose of increasing revenues collected pursuant thereto whether by increased rates or changes in methods of computation must be imposed by an Act passed by not less than two-thirds of all members elected to each of the two houses of the Legislature, except that no new ad valorem taxes on real property, or sales or transaction taxes on the sales of real property may be imposed." Proposition 26 amended the first sentence of section 3, designated the first paragraph as subdivision (a), and added subdivisions (b), (c) and (d).

4 Proposition 26 added subdivision (e) of article XIII C, section 1 and left subdivisions (a) through (d) of section 1 unchanged.

5 None of the seven exceptions expressly refers to the reasonable costs to a nongovernmental entity or person or to activities undertaken by or payments typically made to a nongovernmental entity or person. Consideration of the final paragraph of article XIII C, section 1, subdivision (e) supports the view that the exceptions all refer to activities directly undertaken by the local government. The final paragraph states, "The local government bears the burden of proving by a preponderance of the evidence that a levy, charge, or other exaction is not a tax, that the amount is no more than necessary to cover the reasonable costs of *the governmental activity,* and that the manner in which those costs are allocated to a payor bear a fair or reasonable relationship to the payor's burdens on, or benefits received from, *the governmental activity*." (Italics added.) Use of the term "the governmental activity" as a shorthand reference for the

  

activities described in the exceptions suggests that the exceptions all refer to activities undertaken directly by the local government.

6 Another part of the Legislative Analyst's analysis provided other examples of regulatory fees, including "fees on the purchase of beverage containers to support recycling programs." The California Beverage Container Recycling and Litter Reduction Law (Pub. Resources Code, § 14500 et seq.) requires a payment by the distributor to the Department of Resources Recycling and Recovery for each beverage container sold or transferred to a retailer. (*Id.,* § 14574.) The burden of the distributor's payment is passed on to the consumer through a fee charged by the retailer. The payments are deposited into a fund in the state treasury and used for the administration of the recycling program. (*Id.,* §§ 14574, 14580, subd. (a).) Here, in contrast, the paper carryout bag charge is retained by the retailer, and no payment is made into any government fund. Contrary to Petitioners' argument, the charge here is not akin to a beverage container fee, and the reference in the ballot materials to beverage container fees did not suggest to the voters that a charge such as the paper carryout bag charge would be considered a tax.

7 A charge payable to a third party creditor to extinguish a debt owed by a local government, for example, would effectively be equivalent to a payment made to the local government.

15 Cal.4th 866, 937 P.2d 1350, 64 Cal.Rptr.2d 447, 97 Cal. Daily Op. Serv. 5059, 97 Daily Journal D.A.R. 8242

SINCLAIR PAINT COMPANY, Plaintiff and Respondent,
v.
STATE BOARD OF EQUALIZATION, Defendant and Appellant; DEPARTMENT OF HEALTH SERVICES et al., Interveners and Appellants.

No. S054115.
Supreme Court of California
June 26, 1997.

## SUMMARY

The trial court granted a paint company summary judgment in the company's action against the Board of Equalization for a refund of fees paid pursuant to an assessment under the Childhood Lead Poisoning Prevention Act of 1991 (Health & Saf. Code, § 105275 et seq.). The trial court found that the fees were taxes, and thus they were invalid since the Legislature passed the act by a simple majority, rather than by the two-thirds majority required by Cal. Const., art. XIII A, § 3 (Prop. 13). (Superior Court of Sacramento County, No. CV541310, Joe S. Gray, Judge.) The Court of Appeal, Third Dist., No. C021559, affirmed.

The Supreme Court reversed the judgment of the Court of Appeal. The court held that the Court of Appeal erred in ruling that "fees" assessed on manufacturers or other persons contributing to environmental lead contamination, pursuant to the Childhood Lead Poisoning Prevention Act of 1991, were in legal effect "taxes" required to be enacted by a two-thirds vote of the Legislature under Prop. 13. Rather, the fees imposed were bona fide regulatory fees. The act requires manufacturers and other persons whose products have exposed children to lead contamination to bear a fair share of the cost of mitigating the adverse health effects their products created in the community. The shifting of costs of providing evaluation, screening, and medically necessary follow-up services for potential child victims of lead poisoning from the public to those persons deemed responsible for that poisoning is a reasonable police power decision. The fact that the fees were charged after, rather than before, the product's adverse effects were realized was immaterial to the question whether the measure imposed valid regulatory fees rather than taxes. Also, if regulation is the primary purpose of a fee, the mere fact that revenue is also obtained does not make the imposition a tax. (Opinion ***867** by Chin, J., with George, C. J., Mosk, Kennard, Baxter, Werdegar, JJ., and Armstrong, J.,* concurring.)

## HEADNOTES

### Classified to California Digest of Official Reports

(1)
Property Taxes § 7.2--Constitutional Provisions--Proposition 13.
The purpose of Prop. 13 was to assure effective real property tax relief by means of an interlocking package consisting of a real property tax rate limitation (Cal. Const., art. XIII A, § 1), a real property assessment limitation (Cal. Const., art. XIII A, § 2), a restriction on state taxes (Cal. Const., art. XIII A, § 3), and a restriction on local taxes (Cal. Const., art. XIII A, § 4). Since any tax savings resulting from the operation of Cal. Const., art. XIII A, §§ 1 and 2, could be withdrawn or depleted by additional or increased state or local levies of other than property taxes, Cal. Const., art. XIII A, §§ 3 and 4, combine to place restrictions upon the imposition of such taxes.

(2a, 2b, 2c)
Taxation § 2--Validity of Taxation Legislation--Proposition 13--Fees Assessed Under Childhood Lead Poisoning Prevention Act-- Applicability of Supermajority Requirement:Property Taxes § 7.8--Proposition 13.
The Court of Appeal erred in ruling that "fees" assessed on manufacturers or other persons contributing to environmental lead contamination, pursuant to the Childhood Lead Poisoning Prevention Act of 1991 (Health & Saf. Code, § 105275 et seq.), which the Legislature had enacted by a simple majority, were in legal effect "taxes" required to be enacted by a two-thirds vote of the Legislature under Prop. 13 (Cal. Const., art. XIII A, § 3). Rather, the fees imposed were bona fide regulatory fees. The act requires manufacturers and other persons whose products have exposed children to lead contamination to bear a fair share of the cost of mitigating the adverse health effects their products created in the community. The shifting of costs of providing evaluation, screening, and medically necessary follow-up services for potential child victims of lead poisoning from the public

to those persons deemed responsible for that poisoning is a reasonable police power decision. The fact that the fees were charged after, rather than before, the product's adverse effects were realized was immaterial to the question whether the measure imposed valid regulatory fees rather than taxes. Also, if regulation is ***868** the primary purpose of a fee, the mere fact that revenue is also obtained does not make the imposition a tax.

[See 8 Witkin, Summary of Cal. Law (9th ed. 1988) Constitutional Law, § 784.]

(3)
Property Taxes § 7.6--Constitutional Provisions--Proposition 13-- Assessments as Fees or Taxes:Taxation § 3--Construction.
In determining under Prop. 13 (Cal. Const., art. XIII A, § 3), whether impositions are "taxes" or "fees" is a question of law for the appellate courts to decide on independent review of the facts. The term "tax" has no fixed meaning, and the distinction between taxes and fees is frequently blurred, taking on different meanings in different contexts. In general, taxes are imposed for revenue purposes, rather than in return for a specific benefit conferred or privilege granted. Most taxes are compulsory rather than imposed in response to a voluntary decision to develop or to seek other government benefits or privileges. But compulsory fees may be deemed legitimate fees rather than taxes.

(4a, 4b)
Property Taxes § 7.8--Constitutional Provisions--Proposition 13--Special Taxes:Taxation § 3--Construction.
There are three general categories of fees or assessments involved in disputes concerning whether they are in legal effect "special taxes" required to be enacted by a two-thirds vote of the Legislature under Prop. 13 (Cal. Const., art. XIII A, §§ 3 and 4). They are (1) special assessments, based on the value of benefits conferred on property, (2) development fees, exacted in return for permits or other government privileges, and (3) regulatory fees, imposed under the police power. Special assessments on property or similar business charges, in amounts reasonably reflecting the value of the benefits conferred by improvements, are not "special taxes." Similarly, development fees exacted in return for building permits or other governmental privileges are not special taxes if the amount of the fees bears a reasonable relation to the development's probable costs to the community and benefits to the developer. Also, fees charged in connection with regulatory activities which fees do not exceed the reasonable cost of providing services necessary to the activity for which the fee is charged and which are not levied for unrelated revenue purposes, are not special taxes.

(5)
Property Taxes § 7.8--Constitutional Provisions--Proposition 13-- Assessments as Regulatory Fee:Taxation § 3--Construction.
In order to show that an imposition is a regulatory fee and not a special tax under Prop. 13 (Cal. Const., art. XIII A, § 3), the government should prove (1) the estimated costs of the service or regulatory ***869** activity, and (2) the basis for determining the manner in which the costs are apportioned, so that charges allocated to a payor bear a fair or reasonable relationship to the payor's burdens on or benefits from the regulatory activity.

COUNSEL
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**CHIN, J.**

  

In 1991, by simple majority vote, the Legislature enacted the Childhood Lead Poisoning Prevention Act of 1991 (the Act) (Stats. 1991, ch. 799, § 3, amended Stats. 1995, ch. 415, § 5; see ***870** Health & Saf. Code, § 105275 et seq.).[1] The Act provided evaluation, screening, and medically necessary follow-up services for children who were deemed potential victims of lead poisoning. The Act's program was entirely supported by "fees" assessed on manufacturers or other persons contributing to environmental lead contamination. (See §§ 105305, 105310.) The question arises whether these fees were in legal effect "taxes" required to be enacted by a two-thirds vote of the Legislature. (See Cal. Const., art. XIII A, § 3.)

Contrary to the trial court and Court of Appeal, we conclude that the Act imposed bona fide regulatory fees, not taxes, because the Legislature imposed the fees to mitigate the actual or anticipated adverse effects of the fee payers' operations, and under the Act the amount of the fees must bear a reasonable relationship to those adverse effects. Accordingly, the trial court erred in granting summary judgment to award plaintiff Sinclair Paint Company (Sinclair) a refund of the fees it paid under the Act.

We take the following statement of uncontradicted facts largely from the Court of Appeal opinion in this case. Sinclair paid $97,825.26 in fees for 1991. After the Board of Equalization (the Board) denied Sinclair's administrative claim for refund, Sinclair filed a complaint for refund, alleging the fees assessed under section 105310 were "actually taxes imposed by the California [L]egislature in violation of Proposition 13, Article XIIIA, Section 3 of the California Constitution." The court granted the request of the Department of Health Services (the Department) for leave to intervene. It also granted a similar request to intervene by Ray Cochenour and Cardaryl Commodore, representatives of a class of children suffering from lead poisoning, and People United for a Better Oakland, an unincorporated association whose members include the Act's intended beneficiaries (collectively Cochenour).

Sinclair moved for summary judgment, claiming the Act was invalid on its face because it was not passed by the requisite two-thirds majority vote of the Legislature. The court agreed the Act imposed an unconstitutional tax and granted Sinclair's motion.

The Board, the Department, and Cochenour appealed, contending the Act involves a regulatory fee, not a tax. Appellants also argued the court erred in granting Sinclair summary judgment without compelling it to produce discovery and improperly relied on legislative history in determining the Act's constitutionality. The Court of Appeal affirmed the judgment, concluding that the Act was unconstitutional on its face and rejecting appellants' other claims. We reverse the Court of Appeal's judgment. ***871**

## DiscussionI. *The Childhood Lead Poisoning Prevention Act of 1991*

When the Legislature enacted the Act in 1991, it explained the Act's background and purpose in findings that described the numerous health hazards children face when exposed to lead toxicity and declared four state "goals," namely, (1) evaluating, screening, and providing case management for children at risk of lead poisoning, (2) identifying sources of lead contamination responsible for this poisoning, (3) identifying and utilizing programs providing adequate case management for children found to have lead poisoning, and (4) providing education on lead-poisoning detection and case management to state health care providers. (Stats. 1991, ch. 799, § 1.)

The Act directs the Department to adopt regulations establishing a standard of care for evaluation, screening (i.e., measuring lead concentration in blood), and medically necessary follow-up services for children determined to be at risk of lead poisoning. (§ 105285; see § 105280, subd. (e).) If a child is identified as being at risk of lead poisoning, the Department must ensure "appropriate case management," i.e., "health care referrals, environmental assessments, and educational activities" needed to reduce the child's exposure to lead and its consequences. (§§ 105280, subd. (a), 105290.) Additionally, the Act requires the Department to collect data and report on the effectiveness of case management efforts. (§ 105295.)

The Department has "broad regulatory authority to fully implement and effectuate the purposes" of the Act. (§ 105300.) This authority "include[s], but is not limited to," the development of protocols for screening and for appropriate case management; the designation of laboratories qualified to analyze blood specimens for lead concentrations, and the monitoring of those laboratories for accuracy; the development of reporting procedures by laboratories; reimbursement for state-sponsored services related to screening and case management; establishment of lower lead concentrations in whole blood than those specified by the United States Centers for Disease Control for lead poisoning;

notification to parents or guardians of the results of blood-lead testing and environmental assessment; and establishment of a periodicity schedule for evaluating childhood lead poisoning. (§ 105300.)

The Act states that its program of evaluation, screening, and follow-up is supported *entirely* by fees collected under the Act: "Notwithstanding the scope of activity mandated by this chapter, in no event shall this chapter be interpreted to require services necessitating expenditures in any fiscal year in excess of the fees, and earnings therefrom, collected pursuant to Section ***872** 105310. This chapter shall be implemented only to the extent fee revenues pursuant to Section 105310 are available for expenditure for purposes of this chapter." (§ 105305.)

Section 105310 imposes the fees at issue here. In pertinent part, that section imposes fees on manufacturers and other persons formerly and/or presently engaged in the stream of commerce of lead or products containing lead, or who are otherwise responsible for identifiable sources of lead, which have significantly contributed and/or currently contribute to environmental lead contamination. (§ 105310, subd. (a).) The Department must determine fees based on the manufacturer's or other person's past and present responsibility for environmental lead contamination, or its "market share" responsibility for this contamination. (§ 105310, subd. (b).)

Those persons able to show that their industry did not contribute to environmental lead contamination, or that their lead-containing product does not and did not "result in quantifiably persistent environmental lead contamination," are exempt from paying the fees. (§ 105310, subd. (d).)

The Legislature has authorized the Department to adopt regulations establishing the specific fees to be assessed the parties identified in section 105310, subdivision (a). (§ 105310, subd. (b).) The formula for calculating fees attributable to leaded architectural coatings, including ordinary house paint, is set forth in California Code of Regulations, title 17, section 33020.

### II. *Proposition 13*

() In June 1978, California voters added article XIII A, commonly known as the Jarvis-Gann Property Tax Initiative or Proposition 13 (article XIII A), to the state Constitution. The initiative's purpose was to assure effective real property tax relief by means of an "interlocking 'package' " consisting of a real property tax rate limitation (art. XIII A, § 1), a real property assessment limitation (art. XIII A, § 2), a restriction on state taxes (art. XIII A, § 3), and a restriction on local taxes (art. XIII A, § 4). (*Amador Valley Joint Union High Sch. Dist.* v. *State Bd. of Equalization* (1978) 22 Cal.3d 208, 231 [149 Cal.Rptr. 239, 583 P.2d 1281] (*Amador Valley*); see also *County of Los Angeles* v. *Sasaki* (1994) 23 Cal.App.4th 1442, 1451 [29 Cal.Rptr.2d 103].)

Section 3 of article XIII A restricts the enactment of changes in state taxes, as follows: "From and after the effective date of this article, any changes in State taxes enacted for the purpose of increasing revenues collected pursuant thereto whether by increased rates or changes in methods ***873** of computation must be imposed by an Act passed by not less than two-thirds of all members ... of the Legislature, except that no new ad valorem taxes on real property, or sales or transaction taxes on the sales of real property may be imposed."

Section 4 of article XIII A imposes similar restrictions on local entities: "Cities, Counties and special districts, by a two-thirds vote of the qualified electors of such district, may impose *special taxes* on such district, except ad valorem taxes on real property or a transaction tax or sales tax on the sale of real property within such City, County or special district." (Italics added.)

As we explained in *Amador Valley*, "... since any tax savings resulting from the operation of sections 1 and 2 [of article XIII A] could be withdrawn or depleted by additional or increased state or local levies of other than property taxes, sections 3 and 4 combine to place restrictions upon the imposition of such taxes." (*Amador Valley*, *supra*, 22 Cal.3d at p. 231.)

### III. *Taxes or Fees?*

() Are the "fees" section 105310 imposes in legal effect "taxes enacted for the purpose of increasing revenues" under article XIII A, section 3, and therefore subject to a two-thirds majority vote? Although we have found no cases that interpret the language of section 3, several California appellate decisions have considered whether various fees are really "special taxes" under article XIII A, section 4. (See also *City and County of San Francisco v. Farrell* (1982) 32 Cal.3d 47, 57 [184 Cal.Rptr. 713, 648 P.2d 935] ["special taxes" are taxes levied for a specific purpose rather than for general governmental purposes]; Gov. Code, § 50076 [excluding from the term "special tax" in article XIII A, section 4, "any fee which does not exceed the reasonable cost of providing the service or regulatory activity for which the

fee is charged and which is not levied for general revenue purposes"].) Because of the close, "interlocking" relationship between the various sections of article XIII A (see *Amador Valley*, *supra*, 22 Cal.3d at p. 231), we believe these "special tax" cases may be helpful, though not conclusive, in deciding the case before us. The reasons why particular fees are, or are not, "special taxes" under article XIII A, section 4, may apply equally to section 3 cases. [2]

We first consider certain general guidelines used in determining whether "taxes" are involved in particular situations. () The cases agree that ***874** whether impositions are "taxes" or "fees" is a question of law for the appellate courts to decide on independent review of the facts. (*Bixel Associates v. City of Los Angeles* (1989) 216 Cal.App.3d 1208, 1216 [265 Cal.Rptr. 347]; *California Bldg. Industry Assn. v. Governing Bd.* (1988) 206 Cal.App.3d 212, 234 [253 Cal.Rptr. 497]; *Russ Bldg. Partnership v. City and County of San Francisco* (1987) 199 Cal.App.3d 1496, 1504 [246 Cal.Rptr. 21].)

The cases recognize that "tax" has no fixed meaning, and that the distinction between taxes and fees is frequently "blurred," taking on different meanings in different contexts. (*Russ Bldg. Partnership v. City and County of San Francisco*, *supra*, 199 Cal.App.3d at p. 1504; *Terminal Plaza Corp. v. City and County of San Francisco* (1986) 177 Cal.App.3d 892, 905 [223 Cal.Rptr. 379]; *Mills v. County of Trinity* (1980) 108 Cal.App.3d 656, 660 [166 Cal.Rptr. 674]; *County of Fresno* v. *Malmstrom* (1979) 94 Cal.App.3d 974, 983-984 [156 Cal.Rptr. 777].) In general, taxes are imposed for revenue purposes, rather than in return for a specific benefit conferred or privilege granted. (*Shapell Industries, Inc. v. Governing Board* (1991) 1 Cal.App.4th 218, 240 [1 Cal.Rptr.2d 818]; *County of Fresno* v. *Malmstrom*, *supra*, 94 Cal.App.3d at p. 983 ["Taxes are raised for the general revenue of the governmental entity to pay for a variety of public services."].) Most taxes are compulsory rather than imposed in response to a voluntary decision to develop or to seek other government benefits or privileges. (*Shapell Industries, Inc. v. Governing Board*, *supra*, 1 Cal.App.4th at p. 240; *Russ Bldg. Partnership v. City and County of San Francisco*, *supra*, 199 Cal.App.3d at pp. 1505-1506; see *Terminal Plaza Corp. v. City and County of San Francisco*, *supra*, 177 Cal.App.3d at p. 907.) But compulsory fees may be deemed legitimate fees rather than taxes. (See *Kern County Farm Bureau v. County of Kern* (1993) 19 Cal.App.4th 1416, 1424 [23 Cal.Rptr.2d 910].)

() The "special tax" cases have involved three general categories of fees or assessments: (1) special assessments, based on the value of benefits conferred on property; (2) development fees, exacted in return for permits or other government privileges; and (3) regulatory fees, imposed under the police power. Although these three categories may overlap in a particular case, we consider them separately.

The cases uniformly hold that *special assessments* on property or similar business charges, in amounts reasonably reflecting the value of the benefits conferred by improvements, are not "special taxes" under article XIII A, section 4. (*Evans v. City of San Jose* (1992) 3 Cal.App.4th 728, 735-739 [4 Cal.Rptr.2d 601] [assessments on businesses for downtown promotion]; ***875** *J. W. Jones Companies v. City of San Diego* (1984) 157 Cal.App.3d 745, 750-758 [203 Cal.Rptr. 580] [facilities benefit assessments]; *City Council v. South* (1983) 146 Cal.App.3d 320, 332 [194 Cal.Rptr. 110] [special assessments on real property]; *County of Fresno v. Malmstrom*, *supra*, 94 Cal.App.3d at pp. 984-985 [special assessments for construction of streets].)

Similarly, *development fees* exacted in return for building permits or other governmental privileges are not special taxes if the amount of the fees bears a reasonable relation to the development's probable costs to the community and benefits to the developer. (*Shapell Industries, Inc. v. Governing Board*, *supra*, 1 Cal.App.4th at p. 240 [school facilities fees]; *Bixel Associates v. City of Los Angeles*, *supra*, 216 Cal.App.3d at pp. 1211, 1218-1219 [fire hydrant fees]; *California Bldg. Industry Assn. v. Governing Bd.*, *supra*, 206 Cal.App.3d at pp. 235-237 [school facilities development fees]; *Russ Bldg. Partnership v. City and County of San Francisco*, *supra*, 199 Cal.App.3d at pp. 1504-1506 [transit impact fees]; *Beaumont Investors v. Beaumont-Cherry Valley Water Dist.* (1985) 165 Cal.App.3d 227, 235-238 [211 Cal.Rptr. 567] [new facilities water hookup fees]; *Trent Meredith, Inc.* v. *City of Oxnard* (1981) 114 Cal.App.3d 317, 325-328 [170 Cal.Rptr. 685] [fees as precondition for building permits]; *Mills v. County of Trinity*, *supra*, 108 Cal.App.3d at pp. 661-663 [fees for processing subdivision, zoning, and land use applications]; see *Ehrlich v. City of Culver City* (1996) 12 Cal.4th 854, 898 [50 Cal.Rptr.2d 242, 911 P.2d 429] (conc. opn. of Mosk, J.).)

According to Sinclair, because the present fees have been imposed solely to defray the cost of the state's program of evaluation, screening, and follow-up services for children determined to be at risk for lead poisoning, they are not analogous to either special assessments or development fees,

for they neither reimburse the state for special benefits conferred on manufacturers of lead-based products nor compensate the state for governmental privileges granted to those manufacturers. As the Court of Appeal observed, the fees challenged here "do not constitute payment for a government benefit or service. The program described in the Act bears no resemblance to regulatory schemes involving special assessments, developer fees, or efforts to recoup the cost of processing land use applications where the benefit analysis is typically applied. [Citations.] The face of the Act makes clear the funds collected pursuant to section 105310 are used to benefit children exposed to lead, not Sinclair or other manufacturers in the stream of commerce for products containing lead."

() Appellants argue, however, that the challenged fees fall squarely within a third recognized category not dependent on government-conferred benefits or privileges, namely, *regulatory fees* imposed under the police power, rather than the taxing power. We agree. ***876**

() We have acknowledged that the term "special taxes" in article XIII A, section 4, " 'does not embrace fees charged in connection with regulatory activities which fees do not exceed the reasonable cost of providing services necessary to the activity for which the fee is charged and which are not levied for unrelated revenue purposes.' [Citations.]" (*Pennell v. City of San Jose* (1986) 42 Cal.3d 365, 375 [228 Cal.Rptr. 726, 721 P.2d 1111] (*Pennell*), affd. on other grounds *sub nom. Pennell v. San Jose* (1988) 485 U.S. 1 [108 S.Ct. 849, 99 L.Ed.2d 1], quoting from *Mills v. County of Trinity*, *supra*, 108 Cal.App.3d at pp. 659-660; see *City of Oakland v. Superior Court* (1996) 45 Cal.App.4th 740, 760-762 [53 Cal.Rptr.2d 120] [upholding regulatory fees charged to alcoholic beverage sale licensees to support pilot project to address public nuisances associated with those sales]; *Kern County Farm Bureau v. County of Kern*, *supra*, 19 Cal.App.4th at pp. 1422-1425 [upholding landfill assessment based on land use to reduce illegal waste disposal]; *City of Dublin v. County of Alameda* (1993) 14 Cal.App.4th 264, 280-285 [17 Cal.Rptr.2d 845] [upholding waste disposal surcharge imposed on waste haulers]; *Evans v. City of San Jose*, *supra*, 3 Cal.App.4th at p. 737; *San Diego Gas & Electric Co.* v. *San Diego County Air Pollution Control Dist.* (1988) 203 Cal.App.3d 1132, 1145-1149 [250 Cal.Rptr. 420] (*SDG&E*) [upholding emissions-based formula for recovering direct and indirect costs of pollution emission permit programs]; *United Business Com.* v . *City of San Diego* (1979) 91 Cal.App.3d 156, 166-168 [154 Cal.Rptr. 263] (*United Business*) [upholding fees for inspecting and inventorying on-premises advertising signs].)

*Pennell* upheld rental unit fees that a city imposed under its rent control ordinance to assure it recovered the actual costs of providing and administering a rental dispute hearing process. (*Pennell*, *supra*, 42 Cal.3d at p. 375.) We explained in *Pennell* that regulatory fees in amounts necessary to carry out the regulation's purpose are valid despite the absence of any perceived "benefit" accruing to the fee payers. (*Id.* at p. 375, fn. 11; see also *SDG&E*, *supra*, 203 Cal.App.3d at p. 1146, fn. 18; *Mills* v. *County of Trinity*, *supra*, 108 Cal.App.3d at p. 661.)

We observe that Sinclair, in moving for summary judgment, did not contend that the fees exceed in amount the reasonable cost of providing the protective services for which the fees are charged, or that the fees were levied for any *unrelated* revenue purposes. (See *Pennell*, *supra*, 42 Cal.3d at p. 375.) Moreover, Sinclair has not yet sought to establish that the amount of the fees bears no reasonable relationship to the social or economic "burdens" that Sinclair's operations generated. (See *SDG&E*, *supra*, 203 Cal.App.3d at p. 1146; see also § 105310, subds. (b), (d); *Sea & Sage Audubon Society, Inc.* v. *Planning Com.* (1983) 34 Cal.3d 412, 421 [ ***877** 194 Cal.Rptr. 357, 668 P.2d 664] [persons challenging fees have burden of establishing invalidity].) Sinclair does contend, however, that the Act is not *regulatory* in nature, being primarily aimed at producing revenue.

According to Sinclair, the challenged fees were in effect "taxes" because the compulsory revenue measure that imposed them was not part of a *regulatory* effort. The Court of Appeal agreed, relying on prior cases indicating that where payments are exacted solely for *revenue* purposes and give the right to carry on the business with no further conditions, they are taxes. (E.g., *United Business*, *supra*, 91 Cal.App.3d at p. 165.) The Court of Appeal held that "Placing the factors distinguishing taxes and fees along a continuum, we conclude the monies paid by Sinclair pursuant to the Act are more like taxes than fees. [¶] *There is nothing on the face of the Act to show the fees collected are used to regulate Sinclair.* Apart from mere calculation of the payment, the Department's regulatory authority involves implementation of the program to evaluate, screen, and provide followup services to children at risk for lead poisoning. The Act does not require Sinclair to comply with any other conditions; it merely requires Sinclair to pay what the Department determines to be its share of the program cost."

Contrary to the Court of Appeal, we believe that section 105310 imposes bona fide regulatory fees. It requires manufacturers and other persons whose products have exposed children to lead contamination to bear a fair share of the cost of mitigating the adverse health effects their products created in the community. Viewed as a "mitigating effects" measure, it is comparable in character to similar police power measures imposing fees to defray the actual or anticipated adverse effects of various business operations.

From the viewpoint of general police power authority, we see no reason why statutes or ordinances calling on polluters or producers of contaminating products to help in mitigation or cleanup efforts should be deemed less "regulatory" in nature than the initial permit or licensing programs that allowed them to operate. Moreover, imposition of "mitigating effects" fees in a substantial amount (Sinclair allegedly paid $97,825.26 in 1991) also "regulates" future conduct by deterring further manufacture, distribution, or sale of dangerous products, and by stimulating research and development efforts to produce safer or alternative products. (Cf. *SDG&E*, *supra*, 203 Cal.App.3d at p. 1147, fn. 20 [emissions-based fees provide incentive to use nonpollutant fuels].)

Sinclair disputes the state's authority to impose industry-wide "remediation fees" to compensate for the adverse societal effects generated by an industry's products. To the contrary, the case law previously cited or discussed clearly indicates that the police power is broad enough to include ***878** mandatory remedial measures to mitigate the *past, present, or future* adverse impact of the fee payer's operations, at least where, as here, the measure requires a causal connection or nexus between the product and its adverse effects. (See *City of Oakland v. Superior Court*, *supra*, 45 Cal.App.4th at pp. 760-762; *Kern County Farm Bureau v. County of Kern*, *supra*, 19 Cal.App.4th at pp. 1422-1425; *City of Dublin v. County of Alameda*, *supra*, 14 Cal.App.4th at pp. 284-285; *SDG&E*, *supra*, 203 Cal.App.3d at pp. 1146-1149; *United Business*, *supra*, 91 Cal.App.3d at p. 168; *Russ Bldg. Partnership v. City and County of San Francisco*, *supra*, 199 Cal.App.3d at pp. 1504-1506 [fees to pay for increased transit costs]; *J. W. Jones Companies v. City of San Diego*, *supra*, 157 Cal.App.3d at pp. 755, 758 [fees to defray costs of additional public facilities]; *Trent Meredith, Inc.* v. *City of Oxnard*, *supra*, 114 Cal.App.3d at p. 325 [fees to reduce growth impact of new subdivision]; see also *Western Indemnity Co. v. Pillsbury* (1915) 170 Cal. 686, 694 [151 P. 398] [police power authorizes legislation necessary or proper for protection of legitimate public interest]; *County of Plumas* v . *Wheeler* (1906) 149 Cal. 758, 761-764 [87 P. 909] [broad legislative discretion to regulate business, including license fees or charges]; 8 Witkin, Summary of Cal. Law (9th ed. 1988) Constitutional Law, § 784, p. 311 ["police power is simply the power of sovereignty or power to govern-the inherent reserved power of the state to subject individual rights to reasonable regulation for the general welfare"]; see generally, 6A McQuillan, The Law of Municipal Corporations (3d rev. ed. 1997) Municipal Police Power and Ordinances, § 24.01 et seq., p. 7 et seq.)

*SDG&E* involved regulatory fees comparable in some respects to the fees challenged here. (*SDG&E*, *supra*, 203 Cal.App.3d 1132.) There, 1982 legislation (see § 42311) empowered local air pollution control districts to apportion the costs of their permit programs among all monitored polluters according to a formula based on the amount of emissions they discharged. (See *SDG&E*, *supra*, 203 Cal.App.3d at p. 1135.) () The *SDG&E* court observed that "to show a fee is a regulatory fee and not a special tax, the government should prove (1) the estimated costs of the service or regulatory activity, and (2) the basis for determining the manner in which the costs are apportioned, so that charges allocated to a payor bear a fair or reasonable relationship to the payor's burdens on or benefits from the regulatory activity." (*Id.* at p. 1146, fn. omitted; see *Beaumont Investors v. Beaumont-Cherry Valley Water Dist.*, *supra*, 165 Cal.App.3d at pp. 234-235.)

In *SDG&E,* the amount of the regulatory fees was limited to the reasonable costs of each district's program, and the allocation of costs based on emissions "fairly relates to the permit holder's burden on the district's programs." (*SDG&E*, *supra*, 203 Cal.App.3d at p. 1146.) Accordingly, the ***879** court concluded that the fees were not "special taxes" under article XIII A, section 4. (*SDG&E*, *supra*, 203 Cal.App.3d at p. 1148.)

As the court observed in *SDG&E*, "Proposition 13's goal of providing effective property tax relief is not subverted by the increase in fees or the emissions-based apportionment formula. A reasonable way to achieve Proposition 13's goal of tax relief is to shift the costs of controlling stationary sources of pollution from the tax-paying public to the pollution-causing industries themselves ...." (*SDG&E*, *supra*, 203 Cal.App.3d at p. 1148.) () In our view, the shifting of costs of providing evaluation, screening, and medically necessary follow-up services for potential child victims of

lead poisoning from the public to those persons deemed responsible for that poisoning is likewise a reasonable police power decision. (See also *Mills* v. *County of Trinity*, *supra*, 108 Cal.App.3d at p. 663; *County of Fresno v. Malmstrom*, *supra*, 94 Cal.App.3d at p. 985 [special assessments have no impact on government spending].)

The fact that the challenged fees were charged after, rather than before, the product's adverse effects were realized is immaterial to the question whether the measure imposes valid regulatory fees rather than taxes. *City of Oakland v. Superior Court* seems close on point. There, the court upheld city fees imposed on retailers of alcoholic beverages to defray the cost of providing and administering hearings into nuisance problems associated with the prior sale of those beverages. The court first observed that "If a business imposes an unusual burden on city services, a municipality may properly impose fees pursuant to its police powers" to assure that the persons responsible "pay their fair share of the cost of government." (*City of Oakland v. Superior Court*, *supra*, 45 Cal.App.4th at p. 761.) The court concluded that "The ordinance's primary purpose is regulatory-to create an environment in which nuisance and criminal activities associated with alcoholic beverage retail establishments may be reduced or eliminated. Thus, the fee imposed ... is not a tax imposed to pay general revenue to the local governmental entity, but is a regulatory fee intended to defray the cost of providing and administering the hearing process set out in the ordinance. [Citation.]" (*Id.* at p. 762.)

The court in *United Business* applied the "regulation/revenue" distinction to conclude that sign inventory fees adopted to recover the city's cost of inventorying signs and bringing them into conformance with law were regulatory fees, not revenue-raising taxes. The court observed that, under the police power, municipalities may impose fees for the purpose of legitimate regulation, and not mere revenue-raising, if the fees do not exceed the reasonably necessary expense of the regulatory effort. ( ***880** *United Business*, *supra*, 91 Cal.App.3d at p. 165, and authorities cited.) Quoting with approval from an earlier decision, the court noted that, if revenue is the primary purpose, and regulation is merely incidental, the imposition is a tax, but if regulation is the primary purpose, the mere fact that revenue is also obtained does not make the imposition a tax. (*Ibid.*) Moreover, according to *United Business,* if a fee is exacted for revenue purposes, and its payment gives the right to carry on business without any further conditions, it is a tax. (*Ibid.*; see also *City of Oakland v. Superior Court*, *supra*, 45 Cal.App.4th at p. 761; *County of Plumas* v. *Wheeler*, *supra*, 149 Cal. at p. 763 [fee in amount greater than reasonably needed to regulate business "cannot stand as an exercise of the police power"]; *Mills* v. *County of Trinity*, *supra*, 108 Cal.App.3d at pp. 659-660; *City & County of San Francisco v. Boss* (1948) 83 Cal.App.2d 445, 450-451 [189 P.2d 32].)

The Court of Appeal, citing *United Business,* stressed that the challenged fees were exacted solely for revenue purposes, and their payment gave Sinclair and others the right to carry on the business without any further conditions. We see two flaws in that analysis. First, *all* regulatory fees are necessarily aimed at raising "revenue" to defray the cost of the regulatory program in question, but that fact does not automatically render those fees "taxes." As stated in *United Business,* if regulation is the primary purpose of the fee measure, the mere fact that the measure also generates revenue does not make the imposition a tax. (*United Business*, *supra*, 91 Cal.App.3d at p. 165; see also *Mills* v. *County of Trinity*, *supra*, 108 Cal.App.3d at p. 660 [rejecting broad definition of "tax" as including all fees and charges that exact money for public purposes].)

Second, we find inconclusive the fact that the Act permits Sinclair and other producers to carry on their operations without any further conditions *specified in the Act itself*. As we have indicated, fees can "regulate" business entities without directly licensing them by mitigating their operations' adverse effects. Moreover, as appellants observe, the Act is part of a broader regulatory scheme by which, under various state and federal statutes, the state regulates Sinclair and other manufacturers in the stream of commerce for products containing lead. That being so, Sinclair's payment of the challenged fees did not confer the right to carry on business without any further conditions or regulation.

The Court of Appeal rejected appellants' argument invoking other state and federal regulations: "First, there is nothing on the face of the Act or the accompanying statement of legislative purpose which links the Act's programs for children at risk for lead poisoning with the cited state or federal statutes regulating lead. Second, none of the fees collected pursuant to ***881** section 105310 are used to fund those regulatory efforts." However, it is undisputed that Sinclair and other manufacturers of lead-based products remain subject to government regulation, that payment of the challenged fees therefore does not entitle those manufacturers to operate free of regulation, and that the state must use the funds it collects under section 105310 *exclusively* for

  

mitigating the adverse effects of lead poisoning of children, and not for general revenue purposes. (§ 105310, subd. (f).)

Under existing case law, we can reasonably characterize the challenged fees as *regulatory fees* rather than as taxes. Accordingly, we conclude the trial court erred in granting Sinclair summary judgment on the constitutional issues. Of course, Sinclair should be permitted to attempt to prove at trial that the amount of fees assessed and paid exceeded the reasonable cost of providing the protective services for which the fees were charged, or that the fees were levied for unrelated revenue purposes. (See *Pennell*, *supra*, 42 Cal.3d at p. 375.) Additionally, Sinclair will have the opportunity to try to show that no clear nexus exists between its products and childhood lead poisoning, or that the amount of the fees bore no reasonable relationship to the social or economic "burdens" its operations generated. (*SDG&E*, *supra*, 203 Cal.App.3d. at p. 1146; see also § 105310, subds. (b), (d).)

**Disposition**

The judgment of the Court of Appeal, affirming the trial court's grant of summary judgment in Sinclair's favor, is reversed.

George, C. J., Mosk, J., Kennard, J., Baxter, J., Werdegar, J., and Armstrong, J.,* concurred.

Footnotes

* Associate Justice of the Court of Appeal, Second District, Division Five, assigned by the Chief Justice pursuant to article VI, section 6 of the California Constitution.

1 All further statutory references are to the Health and Safety Code unless otherwise noted.

2 We are not here concerned with issues arising under constitutional amendments effected by a recent initiative measure (Proposition 218) adopted at the November 5, 1996, General Election. That measure contains new restrictions on local agencies' power to impose fees and assessments.

* Associate Justice of the Court of Appeal, Second District, Division Five, assigned by the Chief Justice pursuant to article VI, section 6 of the California Constitution.

91 Cal.App. 168, 266 P. 845

C. M. TORSON et al., Petitioners,
v.
WALTER R. FLEMING, Respondent.

Civ. No. 6002.
Court of Appeal, Second District, Division 2, California.
April 20, 1928.

[1]
STATUTES--TITLE OF ACT--CONSTRUCTION.
The title of an act must be read not as a limitation upon the authority conferred or as sufficiently defining the power to be given by the act, but as a reference to or a skeleton of that which will be found in its body.

[2]
ID.--SUBJECT OF ACT--LIBERAL CONSTRUCTION--CONSTITUTIONAL LAW.
The constitutional provision requiring the subject of an act to be expressed in its title must be liberally construed.

2. See 23 **Cal. Jur.** 644; 25 **R. C. L.** 837.

[3]
ID.--SUFFICIENCY OF TITLE--STATUTORY CONSTRUCTION.
Where the title of an act is sufficient to suggest to the mind the field of legislation to be occupied, the title will not be construed to restrict the act in its operation.

3. See 23 **Cal. Jur.** 650.

[4]
MUNICIPAL CORPORATIONS--CITY BOUNDARY LINE ACT--STREETS--IMPROVEMENTS--BOUNDARIES--STATUTORY CONSTRUCTION.
The grant of power to the city council by the City Boundary Line Act (Deering's General Laws 1923, p. 3376, and Cons. Supp. 1925-1927, p. 1995) section 2, as amended by Stats. 1927, p. 1414, to include any kinds of improvement work mentioned therein on any number of streets, avenues, etc., "whether contiguous or directly connected, or otherwise, in one proceeding," is not limited to the construction of sewers in streets forming or extending across the exterior boundaries of the city, either by the title of said act or by sections 1 or 36 thereof, especially in view of section 19.

PROCEEDING in Mandamus to compel the Director of Public Service of the City of Long Beach to execute a contract awarded to petitioners under the City Boundary Line Act. Writ granted.

The facts are stated in the opinion of the court.

***169** Clock, McWhinney & Clock for Petitioners.
C. A. Windham for Respondent.

THOMPSON, J.

This original proceeding in *mandamus* is brought for the purpose of securing the peremptory writ commanding the respondent as director of public service of the city of Long Beach to execute a contract with petitioners for the construction of a sanitary sewer system in certain territory lying partly within the boundaries of the city of Long Beach and partly within the boundaries of the city of Los Angeles. The system proposed is a comprehensive plan for supplying sewer facilities to the inhabitants on either side of the line. On the Los Angeles side it consists of approximately 2,400 feet to be laid on a street crossing the boundary and connecting with approximately 1,300 feet on a street running at right angles to the first-mentioned street and then connecting on another street running at right angles with the last-mentioned street for a distance of approximately 2,800 feet and there connecting with 2,620 feet of sewer already constructed. All of these streets cross the boundary, but the proposed system itself crosses only on the street first mentioned. On the Long Beach side of the invisible ***170** line the system runs along the line of the street first mentioned which crosses the boundary for a distance of some 400 or 500 feet, then along a right of way and connects with several thousand feet of laterals and branches in that city.

It appears from the petition and return that all the preliminary steps, including a consent to the proceedings by the council of the city of Los Angeles, were taken as required by the provisions of the act which has been termed the "City Boundary Line Act" (Deering, Gen. Laws 1923, p. 3376, and Deering, Cons. Supp. 1925-1927, p. 1995), up to the point where the city council of the city of Long Beach awarded the contract to the petitioners and they had complied with everything to be done by them prior to the signing of the contract by the respondent. When the contract properly

  

executed by petitioners was tendered to the respondent, together with the necessary bonds, he declined to sign. In order to understand the objection raised by the respondent to the contract it is necessary to call attention to the further fact that the only street affected which extends across the exterior boundary of the two municipalities is one which it is proposed shall carry the main trunk line of the sewer system, and that by far the greater portion of the system lies within the boundaries of the city of Long Beach.

The respondent asserts that the Boundary Line Act was never intended to cover the improvement of streets or the construction therein of sewers other than those forming or extending across the exterior boundaries. He points to the title and to sections 1, 2 and 36 of the act and argues that they indicate a legislative intent to so limit the authority of the municipality exercising jurisdiction. That portion of the title which would seem to bear such construction reads: "An act to provide for the establishment and change of grade of public streets, avenues, lanes, alleys, courts, places and rights of way, forming the exterior boundaries of any municipality, whether partly or wholly within or without said boundaries, or extending into the territory of two or more municipalities, or extending into the territory of one or more municipalities and unincorporated territory, and providing for work upon and the improvement thereof, and providing for the construction of sanitary and storm sewers, drains and drainage systems together with any and all appurtenances ***171** and appurtenant work in connection with any of such work or improvements; … " Section 1, which declares that certain streets, alleys, and rights of way shall be deemed and held to be open public streets, uses the exact phraseology of the title except that there is inserted the words "or crossing" after the word "forming" so that it reads "forming or crossing the exterior boundaries." Section 36 reads: "The provisions of this act shall apply to and authorize the improvement of any street or right of way extending along the boundary line between two municipalities … or extending from or through one or more municipalities into or through unincorporated territory. … " Section 2, as amended in 1927 (Stats. 1927, p. 1414) is set forth in full as follows:

"Whenever the public interest and convenience may require, and whenever the city council or other legislative body of each of the municipalities and the board of supervisors of the county, having jurisdiction over any portion of the territory proposed to be included in an assessment district to be formed under this act, shall by resolution consent to the formation of such assessment district and the commencement of a proceeding under this act for the construction of any public work or improvement, the city council of any municipality and the board of supervisors of the county in which said municipality is situated, are hereby severally authorized and empowered to establish, change or modify the grade of, and to order the whole or any portion or portions either in length or width, of any one or more of the streets, avenues, lanes, alleys, courts, places or rights of way forming or crossing the exterior boundary or boundaries of any municipality or municipalities of this state, whether partly or wholly within or without said boundaries, or extending into or through the territory of two or more municipalities or extending into or through the territory of one or more municipalities and unincorporated territory, graded or regraded to the existing or proposed official grade, paved or repaved, macadamized or remacadamized, graveled or regraveled, oiled or reoiled, and to order the construction, reconstruction or repair therein of sidewalks, culverts, bridges, gutters and curbs; and to order the construction, reconstruction or repair therein or in any property or right of way owned by any such municipality or county, of ***172** sanitary sewers, storm sewers, drains and drainage systems, ditches and conduits of any kind or character, for sanitary or drainage purposes, and all structures, plants and appurtenances and appurtenant work of any kind or character necessary or convenient in connection therewith; and to order the construction, reconstruction or repair therein or in any property or right of way owned by such municipality or county, or wells, pumps, drains, reservoirs, storage tanks, channels, tunnels, pipes, hydrants, meters or other appurtenances for supplying or distributing a domestic water supply; and to order any other work to be done which shall be deemed necessary to improve the whole or any portion of such streets, avenues, lanes, alleys, courts, places or rights of way. The council or board of supervisors may include any of the different kinds of work mentioned in this section, and may include such work on any number of streets, avenues, lanes, alleys, courts places or rights of way, or any portions thereof whether contiguous or directly connected, or other wise, in one proceeding, or one contract, or both, and may except therefrom any of such work already done to the official grade and which may be in good condition and repair."

It is worthy of note that the words "and to order the construction, reconstruction or repair therein or in any property or right of way owned by such municipality or county, of wells, pumps, drains, reservoirs, storage tanks, channels, tunnels, pipes, hydrants, meters, or other appurtenances, for supplying or distributing a domestic water supply" were added by the amendment of 1927. It is also to be

  

observed that the legislature at its last session, with the evident purpose of making the act more available and workable and to conform to the procedure extensively employed by municipalities in improvement work, adopted *verbatim,* by way of amendment, those portions of the Street Improvement Act of 1911 (Deering, Gen. Laws 1923, p. 3328) largely containing the procedure to be followed.

So far as we have been able to discern, the only case which has passed upon the legislative intent of the act under consideration is that of *Gadd v. McGuire,* 69 Cal. App. 347 [231 Pac. 754], wherein it was said: "The conditions which the City Boundary Line Act is designed to remedy extend beyond the boundaries of any one municipality. Where the ***173** evil to be remedied reaches beyond the boundaries and jurisdiction of any one municipality--whether such extra municipal ill be due to an unimproved roadway extending into one or more municipalities, or to unsanitary conditions due to the lack of a suitable regional sanitary sewer system, or to a widespread overflow of rain waters--a proceeding to correct the evil by a single comprehensive scheme of improvement on lands in an improvement district which embraces a portion of all of the municipalities affected by the evil conditions is, as we have shown, more than a mere municipal affair." And again the court, after speaking of the advantages to accrue by having a city street and connecting highway in connecting contiguous unincorporated territory improved in one comprehensive scheme, and a like community of interest which the inhabitants of two or more municipalities or of a municipality and unincorporated territory may have in the construction of a storm sewer system by a similarly inclusive plan of improvement, says: "In the same way we can readily imagine a case where it would be equally vital that there should be a common sanitary sewer system, serving the lands on either side of the invisible boundary line. If the city should construct a sanitary sewer system and none should be constructed in the thickly settled community occupying the contiguous unincorporated territory, it is more than likely that there would be unsanitary conditions, threatening the health and welfare of the near-by city dwellers as well as those living just outside of the city, in spite of the city's enterprise."

A portion of the language of section 2 of the act so perfectly coincides with the part of the opinion just quoted that we feel the necessity of repeating it for the sake of calling attention directly to it. It reads: "The council or board of supervisors may include any of the different kinds of work mentioned in this section, and may include such work on any number of streets, avenues, lanes, alleys, courts, places or rights of way, or any portions thereof, whether contiguous or directly connected, or otherwise, in one proceeding, or one contract, or both, and may except therefrom any of said work already done to the official grade and which may be in good condition and repair." It would seem that this grant of power would be ample in its scope to permit the construction of a sanitary sewer system extending ***174** beyond the boundaries of the municipality, and not necessarily confined to streets forming or crossing the exterior boundaries. It is argued, however, that this language is limited by the title, section 1 and section 36, which we have already quoted.

(1) The title must be read not as a limitation upon the authority conferred or as sufficiently defining the power to be given by the act, but as a reference to or skeleton of that which will be found in its body. It will be noted, of course, that the title includes reference to sanitary sewer systems "together with any and all appurtenances and appurtenant work" in connection therewith. It would be most illogical to say that a sanitary sewer *system* could consist of a main trunk line without laterals or branches.

(2) It is a familiar rule that the constitutional provision requiring the subject of an act to be expressed in its title must be liberally construed, for which we only need to cite *Estate of Wellings,* 192 Cal. 506 [221 Pac. 628].

(3) It is also established that where the title is sufficient to suggest to the mind the field of legislation to be occupied the title will not be construed to restrict the act in its operation. (*People v. Jordan,* 172 Cal. 391 [156 Pac. 451]; *Hunt v. Manning,* 24 Cal. App. 44 [140 Pac. 39].)

(4) We think the reference in the title to sewer systems and appurtenant work is ample reference to authorize the subsequent language of the act and the obvious purpose of the legislature. Neither can section 1 be considered as limiting the authority conferred in section 2, but rather as a declaration on the part of the legislature that the streets, avenues, lanes, etc., therein mentioned are public streets and that the improvements anticipated in the section are for the public weal. It is apparent from the wording of section 36 of the act and from the fact that no mention is made therein of the construction of sanitary or storm sewers or drainage systems, or of sidewalks or culverts or waterworks, or the establishment or change of grade, that it was not intended to limit the powers of the body acquiring jurisdiction, but rather to make it clear beyond controversy that the improvement of the streets was authorized, as well

  

as the establishment of or change of grade. It cannot be seriously doubted that such was the legislative intent to which we should give effect. To say that section 36 had the effect of limiting the authority conferred by section 2 would be to say that the ***175** municipalities would have no authority under the act (excluding for the moment the provisions of section 19) to install a sanitary sewer system even when laid below the surface of streets forming or crossing the exterior boundaries, for the very patent reason that the installation of a sewer system is not an improvement of the streets. And yet it cannot be successfully argued that the legislature was less desirous of protecting the health of its citizens from unsanitary conditions than of providing improved streets for its motorists. That it was the intent of the legislature to provide for the construction of regional sewer systems is further evident from the provisions of section 19 of the act, which reads as follows:

"The council, or board, shall have full power and authority to construct sewers, gutters, and manholes and provide for the cleaning of the same, and culverts or cesspools, or crosswalks or sidewalks, or any portion of any sidewalk upon or in any of such streets, avenues, lanes, alleys, courts or places, and also for drainage purposes over or through any right of way obtained or granted for such purposes, with necessary and proper outlet or outlets to the same, of such materials, in such a manner, and upon such terms as it may be deemed proper."

It will be noted that this language is quite comprehensive when it uses the expression "over or through any right of way obtained or granted for such purposes," and is in keeping with the portion of section 2 which we have already emphasized.

As has already been suggested, it would be manifestly unfair to the citizens of a municipality as well as the citizens of adjoining territory to subject them to the contamination of unsanitary conditions of adjoining territory by reason of lack of authority to comprehend a logical district in one proceeding. We can assume that there will be nothing unjust or unfair to the inhabitants without the limits of the city acquiring jurisdiction in the scope of the work to be done by reason of the safeguard against such contingency found in the provision that proceedings thereunder are subject to the limitation that the legislative body having jurisdiction over the territory outside the municipality shall consent to the proceedings. There is nothing in this proceeding which would indicate that the district was not properly laid ***176** out as one comprehensive plan for the benefit of all of the inhabitants of the district, whether within the city of Long Beach or within the city of Los Angeles. The return indicates no other reason than the one discussed for the refusal to sign the contract.

The peremptory writ will issue.

Works, P. J., and Craig, J., concurred.

A petition by respondent to have the cause heard in the supreme court, after judgment in the district court of appeal, was denied by the supreme court on June 18, 1928.

All the Justices present concurred.

# ATTACHMENT E
# STATE NPDES PERMITS

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD
ORDER 2012-0011-DWQ

AS AMENDED BY
ORDER WQ 2014-0006-EXEC,
ORDER WQ 2014-0077-DWQ,
ORDER WQ 2015-0036-EXEC, AND
ORDER WQ 2017-0026-EXEC

NPDES NO. CAS000003

# NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STATEWIDE STORM WATER PERMIT WASTE DISCHARGE REQUIREMENTS (WDRS) FOR STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

| | |
|---|---|
| The State Water Resources Control Board adopted Order 2012-0011-DWQ on: | September 19, 2012 |
| The Order 2012-0011-DWQ became effective on: | July 1, 2013 |
| This Order expires on: | June 30, 2018 |
| The Executive Director of the State Water Resources Control Board issued Order WQ 2014-0006-EXEC on: | January 17, 2014 |
| The State Water Resources Control Board adopted Order WQ 2014-0077-DWQ on: | May 20, 2014 |
| The Executive Director of the State Water Resources Control Board issued Order WQ 2015-0036-EXEC on: | April 7, 2015 |
| The Executive Director of the State Water Resources Control Board issued Order WQ 2017-0026-EXEC on: | November 27, 2017 |

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board on September 19, 2012, amended by the Executive Director of the State Water Resources Control Board on January 17, 2014, amended by the State Water Resources Control Board on May 20, 2014, amended by the Executive Director of the State Water Resources Control Board on April 7, 2015, and amended by the Executive Director of the State Water Resources Control Board on November 27, 2017.

_____
Jeanine Townsend
Clerk to the Board

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD
ORDER 2012-0011-DWQ

AS AMENDED BY
ORDER WQ 2014-0006-EXEC,
ORDER WQ 2014-0077-DWQ,
ORDER WQ 2015-0036-EXEC, AND
ORDER WQ 2017-0026-EXEC

NPDES NO. CAS000003

# NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STATEWIDE STORM WATER PERMIT WASTE DISCHARGE REQUIREMENTS (WDRS) FOR STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

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CALIFORNIA STATE WATER RESOURCES CONTROL BOARD
ORDER 2012-0011-DWQ

AS AMENDED BY
ORDER WQ 2014-0006-EXEC,
ORDER WQ 2014-0077-DWQ,
ORDER WQ 2015-0036-EXEC, AND
ORDER WQ 2017-0026-EXEC
NPDES NO. CAS000003

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)**
**STATEWIDE STORM WATER PERMIT**
**WASTE DISCHARGE REQUIREMENTS (WDRS)**
**FOR**
**STATE OF CALIFORNIA**
**DEPARTMENT OF TRANSPORTATION**

## FINDINGS

The State Water Resources Control Board (State Water Board) finds that:

Permit Application

1. The State of California, Department of Transportation (hereafter the Department) has applied to the State Water Board for reissuance of its statewide storm water permit and waste discharge requirements to discharge storm water and permitted non-storm water to waters of the United States under the National Pollutant Discharge Elimination System (NPDES) permit program.

### Background and Authority

Permit Background

2. Prior to issuance of the Department's first statewide storm water permit (Order No. 99-06-DWQ), the Regional Water Boards regulated storm water discharges from the Department's storm drain systems with individual permits. On July 15, 1999, the State Water Board adopted a statewide permit to consolidate storm water permits previously adopted by the Regional Water Boards. This statewide permit regulates storm water and non-storm water discharges from the Department's properties and facilities, and discharges associated with operation and maintenance of the State highway system. The Department's properties include all Right-of-Way (ROW) owned by the Department. The Department's facilities include, but are not limited to, maintenance stations/yards, equipment storage areas, storage facilities, fleet vehicle parking and maintenance areas and warehouses with material storage areas.

Federal Authority

3. In 1987, the United States Congress amended the federal Clean Water Act (CWA) and added section 402(p), which established a framework for regulating municipal and industrial storm water discharges under the NPDES Permit Program. On November 16, 1990, the U.S. Environmental Protection Agency (USEPA) promulgated federal regulations for

controlling pollutants in storm water runoff discharges (known as Phase I storm water regulations). Phase I storm water regulations require permit coverage for storm water discharges from large and medium Municipal Separate Storm Sewer Systems (MS4s), certain categories of industrial facilities, and construction activities disturbing five or more acres of land. On December 8, 1999, USEPA promulgated regulations, known as Phase II storm water regulations, which require NPDES permit coverage for storm water discharges from small MS4s and construction sites which disturb one to five acres of land.

State Authority

4. California Water Code (Wat. Code) section 13376 provides that any person discharging or proposing to discharge pollutants to waters of the United States within the jurisdiction of the state shall apply for and obtain Waste Discharge Requirements (WDRs). (For this permit, the State term "WDRs" is equivalent to the federal term "NPDES permits" as used in the Clean Water Act). The State Water Board issues this Order pursuant to section 402 of the Clean Water Act and implementing regulations adopted by USEPA and chapter 5.5, division 7 of the California Water Code (commencing with § 13370 et seq.). It shall serve as an NPDES permit for point source discharges to surface waters. This Order also serves as WDRs pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with § 13260 et seq.). Applicable State regulations on discharges of waste are contained in the California Code of Regulations (Cal. Code Regs.), tit. 23, Division 3, Chapter 9.

**Storm Water Definition**

Storm Water Discharge

5. Storm water discharges consist only of those discharges that originate from precipitation events. Storm water is defined in the Code of Federal Regulations (40 C.F.R. § 122.26(b)(13)) as storm water runoff, snowmelt runoff, and surface runoff and drainage. During precipitation events, storm water picks up and transports pollutants into and through MS4s and ultimately to waters of the United States.

Non-Storm Water Discharge

6. Non-storm water discharges consist of all discharges from an MS4 that do not originate from precipitation events.

   Generally, non-storm water discharges to an MS4 are prohibited, conditionally exempt from prohibition, or regulated separately by an NPDES permit. The categories of conditionally exempt non-storm water discharge are specified at 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B)(1). Non-storm water discharges that are regulated by a separate NPDES permit are not subject to the discharge prohibition. Prohibited non-storm water discharges include conditionally exempt discharges that are found to be a source of pollutants to waters of the United States. Illicit discharges must also be prohibited. An illicit discharge is defined in 40 Code of Federal Regulations section 122.26(b)(2) as "any discharge to a municipal storm sewer that is not composed entirely of storm water except discharges pursuant to an NPDES permit (other than the NPDES Permit for discharges from the Municipal Separate Storm Sewer System) and discharges resulting from fire fighting activities." Provision B of this Order addresses non-storm water discharge.

   Non-storm water discharges to an MS4 with a discharge to an ASBS are subject to a different set of conditions as stated in Finding 22.a.

**Performance Standards**

Performance Standard for Discharges from MS4s

7. Clean Water Act section 402(p) establishes performance standards for discharges from MS4s. Clean Water Act section 402(p)(3)(B) requires that municipal permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." This Order prohibits storm water discharges that do not comply with the maximum extent practicable (MEP) standard.

8. Compliance with the MEP standard involves applying Best Management Practices (BMPs) that are effective in reducing or eliminating the discharge of pollutants to the waters of the United States. MEP emphasizes pollutant reduction and source control BMPs to prevent pollutants from entering storm water runoff. MEP may require treatment of the storm water runoff if it contains pollutants. BMP development is a dynamic process, and the menu of BMPs contained in a SWMP may require changes over time as experience is gained and/or the state of the science and art progresses. MEP is the cumulative effect of implementing, evaluating, and making corresponding changes to a variety of technically appropriate and economically feasible BMPs, ensuring that the most appropriate controls are implemented in the most effective manner. The State Water Board has held that “MEP requires permittees to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs would not be technically feasible, or the costs would be prohibitive.” (SWRCB, 2000b).

**Permit Coverage and Scope**

Discharges Regulated by this Permit

9. This Order regulates the following discharges:

   a. Storm water discharges from all Department-owned MS4s;
   b. Storm water discharges from the Department’s vehicle maintenance, equipment cleaning operations facilities and any other non-industrial facilities with activities that have the potential of generating significant quantities of pollutants; and
   c. Certain categories of non-storm water discharges as listed under provision B. of this Order.

   This Order does not regulate storm water discharges from leased office spaces, Department owned batch plants or any other industrial facilities, as industrial facilities defined in the Statewide Industrial General Permit. The Department will obtain coverage for storm water discharges associated with industrial activities under the Statewide Industrial General Permit for each batch plant and industrial facility, and shall comply with applicable requirements. While this Order does not regulate storm water discharges associated with industrial activities, it does impose contractor requirements for certain industrial facilities.

   This Order does not regulate discharges from the Department’s construction activities, including dewatering effluent discharges from construction projects. Instead, the Department will obtain coverage for storm water discharges associated with construction activities under Order No. 2009-0009-DWQ Statewide Construction General Permit. While

this Order does not regulate storm water discharges associated with construction activities, it does impose electronic filing, notification, reporting and contractor requirements for certain construction projects, and imposes limitations on types of materials that may be used during construction which may have an impact on post-construction discharges. Any discharges from a site occurring after completion of construction are fully subject to the requirements of this Order.

Some Regional Water Boards have issued specific requirements for dewatering effluent discharges in their regions. The Department will consult with the appropriate Regional Water Board and comply with the applicable dewatering requirements in each region.

**Department Activities and Discharges**

Department Activities

10. The Department is primarily responsible for the design, construction, management, and maintenance of the State highway system including; freeways, bridges, tunnels, and facilities such as corporation yards, maintenance facilities, rest areas, weigh stations, park and ride lots, toll plazas and related properties. The Department is also responsible for initial emergency spill response and cleanup for unauthorized discharges of waste within the Department's ROW.

Department Discharges

11. The Department's discharges include storm water and non-storm water discharges generated from:

    a. Maintenance and operation of State-owned ROW;
    b. Department storage and disposal areas;
    c. Department facilities;
    d. Department Airspaces; and
    e. Other properties and facilities owned and operated by the Department.

    The Department discharges either directly to surface waters or indirectly through municipal storm water conveyance systems. These surface waters include creeks, rivers, reservoirs, wetlands, saline sinks, lagoons, estuaries, bays, and the Pacific Ocean and tributaries thereto, some or all of which are waters of the United States as defined in 40 Code of Federal Regulations section 122.2. As specified, this Order regulates the Department's municipal storm water and non-storm water discharges.

Potential Pollutants

12. Discharges of storm water and non-storm water from Department properties, facilities, and activities have been shown to contribute pollutants to waters of the United States. As such, these discharges may be causing or threatening to cause violations of water quality objectives and can have damaging effects on human health and aquatic ecosystems. The quality and quantity of these discharges vary considerably and are affected by many environmental factors including hydrology, geology, land use, climatology and chemistry, and by controllable management factors including maintenance practices, spill prevention and response activities, public education (i.e., concerning trash and other storm water pollutants) and pollution prevention.

Pollutant sources from the Department properties, facilities, and activities include motor vehicles, highway surface materials such as fine particles of asphalt and concrete, highway maintenance products, construction activities, erodible shoulder materials, eroding cut and filled slopes, abrasive sand and deicing salts used in winter operations, abraded tire rubber, maintenance facilities, illegal connections, illegal dumping, fluids from accidents and spills, and landscape care products.

Pollutant categories include, but are not limited to, metals (such as copper, lead, and zinc), synthetic organic compounds (pesticides), Polycyclic Aromatic Hydrocarbons (PAHs) from vehicle emissions, oil and grease, Total Petroleum Hydrocarbons (TPH), sediment, nutrients (nitrogen and phosphorus fertilizers), debris (trash and litter), pathogens, and oxygen demanding substances (decaying vegetation, animal waste, and other organic matter).

Characterization Monitoring

13. Under the previous permit (Order No. 99-06-DWQ), the Department conducted a comprehensive, multi-component storm water monitoring program. The Department monitored and collected pollutant characterization information at more than 180 sites statewide, yielding more than 60,000 data points. The Department used the data to evaluate the effectiveness of the Department's maintenance facility pollution prevention plans and highway operation control measures. This information is also used to identify pollutants of concern in the Department's discharges.

Department Discharge Characterization Studies

14. The Department compared the monitoring results from the 2002 and 2003 Runoff Characterization Studies (California Department of Transportation, 2003)[1] to California Toxics Rule (CTR) objectives and to several surface water quality objectives considered potentially relevant to storm water runoff quality. The Department prioritized constituents as high, medium, and low, according to a percentage estimate by which the most stringent water quality objective was exceeded. The Department identified lead, copper, zinc, aluminum, diazinon, chlorpyrifos, and iron as high priority constituents in the Department's runoff. The sources of other water quality objectives considered were:

    a. National Primary Drinking Water Maximum Contaminant Levels (40 C.F.R., § 141.1);
    b. USEPA Action Plan for Beaches and Recreational Waters;
    c. USEPA Aquatic Life Criteria;
    d. California Department of Public Health Maximum Contaminant Levels; and California Department of Fish and Game Recommended Criteria for Diazinon and Chlorpyrifos.

Department Discharges that are Subject to MS4 Permit Regulations

15. An MS4 is a conveyance or system of conveyances, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains. An MS4 is designed or used for collecting or conveying storm water. It is not a combined sanitary sewer and is not part of a Publicly Owned Treatment Works (POTW). Clean Water Act section 402(p) and 40 Code of Federal Regulations section 122.26 (a)(v) give the State authority to regulate discharges from an MS4 on a system-

[1] References are found in Attachment X of this Order.

wide or jurisdiction-wide basis. All MS4s under the Department's jurisdiction are considered one system, and are regulated by this Order. Therefore, all storm water and exempted and conditionally exempted non-storm water discharges from the Department owned MS4 are subject to the requirements in this Order.

Maintenance and Construction Activities not Subject to the Construction General Permit

16. Some maintenance and construction activities such as roadway and parking lot repaving and resurfacing may not be subject to the Construction General Permit. Such activities may involve grinding and repaving the existing surface and have the potential to mobilize pollutants, even though it may not involve grading or land disturbance. The Department's Maintenance Staff Guide (Department, 2007b), Project Planning and Design Guide (Department, 2010) and the California Stormwater Quality Association (CASQA) California Construction Stormwater BMP Handbook (CASQA, 2009) specify BMPs for paving and grinding operations. The Department is required to implement BMPs for such operations to control the discharge of pollutants to the MEP.

Department Construction Projects Involving Lead Contaminated Soils

17. Department construction projects may involve soils that contain lead in quantities that meet the State definition of hazardous waste but not the federal definition. The Department of Toxic Substances Control (DTSC) has issued a variance (V09HQSCD006) effective July 1, 2009, allowing the Department to place soil containing specific concentrations of aerially deposited lead under pavement or clean soil. In addition to complying with the terms of the variance, the Department also needs to notify the appropriate Regional Water Boards to determine the appropriate regulation of these soils.

18. Past monitoring data show that storm water runoff from the Department's facilities contains pollutants that may adversely affect the beneficial uses of receiving waters. Facilities not subject to the Industrial General Permit are required to implement BMPs to reduce the discharge of pollutants from these facilities to the MEP.

**Provisions of This Order**

19. Storm water discharges from MS4s are highly variable in frequency, intensity, and duration, and it is difficult to characterize the amount of pollutants in the discharges. In accordance with 40 Code of Federal Regulations section 122.44(k)(2), the inclusion of BMPs in lieu of numeric effluent limitations is appropriate in storm water permits. This Order requires implementation of BMPs to control and abate the discharge of pollutants in storm water to the MEP. To assist in determining if the BMPs are effectively achieving MEP standards, this Order requires effluent and receiving water monitoring. The monitoring data will be used to determine the effectiveness of the applied BMPs and to make appropriate adjustments or revisions to BMPs that are not effective.

Receiving Water Limitations

20. The effect of the Department's storm water discharges on receiving water quality is highly variable. For this reason, this Order requires the Department to implement a storm water program designed to achieve compliance with water quality standards, over time through an iterative approach. If discharges are found to be causing or contributing to an exceedance of an applicable Water Quality Standard, the Department is required to revise its BMPs (including use of additional and more effective BMPs).

Discharges to Areas of Special Biological Significance

21. The State Water Board has designated 34 coastal marine waters as Areas of Special Biological Significance (ASBS) in the California Ocean Plan. An ASBS is a coastal area requiring protection of species or biological communities. The Department discharges storm water into the following ASBS:

    a. Redwoods National Park ASBS
    b. Saunders Reef ASBS
    c. James V. Fitzgerald ASBS
    d. Año Nuevo ASBS
    e. Carmel Bay ASBS
    f. Point Lobos ASBS
    g. Julia Pfeiffer Burns ASBS
    h. Salmon Creek Coast ASBS
    i. Laguna Point to Latigo Point ASBS
    j. Irvine Coast ASBS

22. The Ocean Plan prohibits waste discharges into ASBS. The Ocean Plan allows the State Water Board to grant exceptions to this prohibition, provided that: (1) the exception will not compromise protection of ocean waters for beneficial uses, and (2) the public interest will be served. The Department has applied for and been granted an exception under the General Exception for Storm Water and Non-Point Source Discharges to ASBS. The exception allows the continued discharge into ASBS provided the Department complies with the special protections specified in the General Exception.

22a. Non-storm water discharges to ASBS are prohibited except as specified in the General Exception. Certain enumerated non-storm water discharges are allowed under the General Exception if essential for emergency response purposes, structural stability, slope stability, or if occur naturally. In addition, an NPDES permitting authority may authorize non-storm water discharges to an MS4 with a direct discharge to an ASBS to the extent the NPDES permitting authority finds that the discharge does not alter natural ocean water quality in the ASBS. This Order allows utility vault discharges to segments of the Department MS4 with a direct discharge to an ASBS, provided the discharge is authorized by the General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Water, NPDES No. CAG 990002. The State Water Board is in the process of reissuing the General NPDES Permit for Utility Vaults. As part of the renewal, the State Water Board will require a study to characterize representative utility vault discharges to an MS4 with a direct discharge to an ASBS and will impose conditions on such discharges to ensure the discharges do not alter natural ocean water quality in the ASBS. Given the limited number of utility vault discharges to MS4s that discharge directly to an ASBS, the State Water Board finds that discharges from utility vaults and underground structures to a segment of the Department's MS4 with a direct discharge to an ASBS are not expected to result in the MS4 discharge causing a substantial alteration of natural ocean water quality in the ASBS in the interim period while the General NPDES Permit for Discharges from Utility Vaults is renewed and the study is completed. However, if a Regional Water Board determines a specific discharge from a utility vault or underground structure does alter the natural ocean water quality in an ASBS, the Regional Water Board may prohibit the discharge as specified in this Order.

New Development and Re-development Design Standards

23. 40 Code of Federal Regulations section 122.26(d)(2)(iv)(A)*(2)* requires municipal storm water permittees to implement a new development and redevelopment program to reduce the post-construction generation and transport of pollutants. Development can involve grading and soil compaction, an increase in impervious surfaces (roadways, roofs, sidewalks, parking lots, etc.), and a reduction of vegetative cover, all of which increase the amount of rainfall that ends up as runoff, and decrease the particle size and the load of watershed sediment. The increase in runoff generally leads to increased pollutant loading from watersheds, even if post-construction pollutant concentrations are similar to pre-construction concentrations. The accelerated erosion and deposition resulting from an increase in runoff and a decrease in the size and load of watershed sediment generally causes a stream channel to respond by deepening and widening and detaching from the historic floodplain. The magnitude of response depends on geology, land use, and channel stability at the time of the watershed disturbance. Increased pollutant loads and alteration of the runoff/sediment balance have the potential to negatively impact the beneficial uses of receiving waters including streams, lakes, wetlands, ground water, oceans, bays and estuaries, and the biological habitats supported by these aquatic systems.

24. Department projects have the potential to negatively impact stream channels and downstream receiving waters through modification of the existing runoff hydrograph. The hydromodification requirements in this Order are “effluent limitations,” which are defined by the Clean Water Act to include any restriction on the quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources (C.W.A., § 502(11)).

25. Waters of the United States supporting the beneficial use of fish migration could be adversely impacted by improperly designed or maintained stream crossings, or through natural channel evolution processes affected by Department activities. This Order requires the Department to submit to the State Water Board the annual report required under Article 3.5 of the Streets and Highways Code reporting on the Department’s progress in locating, assessing, and remediating barriers to fish passage.

26. Low Impact Development (LID) is a sustainable practice that benefits water supply and contributes to water quality protection. Unlike traditional storm water management, which collects and conveys storm water runoff through storm drains, pipes, or other conveyances to a centralized storm water facility, LID uses site design and storm water management to maintain the site’s pre-project runoff rates and volumes by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source.

27. On October 5, 2000, the State Water Board adopted a precedential decision concerning the use of Standard Urban Storm Water Mitigation Plans (SUSMPs) (Order WQ 2000-11). The SUSMP in that case required sizing design standards for post-construction BMPs for specific categories of new development and redevelopment projects. Order WQ 2000-11 found that provisions in the SUSMPs, as revised in the order, reflected MEP. The LID requirements, post-construction requirements for impervious surface and the design standards in this Order are consistent with Order WQ 2000-11 and meet the requirement for development of a SUSMP.

Self-Monitoring Program

28. Effluent and receiving water monitoring are necessary to evaluate the effectiveness of BMP measures and to track compliance with water quality standards. This Order requires the Department to conduct effluent and receiving water monitoring.

Storm Water Management Plan (SWMP)

29. The SWMP describes the procedures and practices that the Department proposes to reduce or eliminate the discharge of pollutants to storm drainage systems and receiving waters. On May 17, 2001, the State Water Board approved a Storm Water Management Plan submitted by the Department. That SWMP was updated in 2003 (Department, 2003c) and the updates were approved by the Executive Director of the State Water Board on February 13, 2003. On January 15, 2004, the Department submitted a proposed Storm Water Management Plan as part of its NPDES permit application to renew its previous statewide storm water permit (Order No. 99-06-DWQ). The State Water Board and Regional Water Board staff and the Department discussed and revised Best Management Practices (BMP) controls and many other components proposed in each section of the SWMP during numerous meetings from January 2004 to 2006. The Department submitted a revised SWMP in June 2007. The 2004 and 2007 SWMPs have not been approved by the State Water Board and the Department has continued to implement the 2003 SWMP. The Department is in the process of revising aspects of the 2003 SWMP to address the Findings of Violation and Order for Compliance issued by USEPA in 2011 (USEPA Docket No. CWA-09-2011-0001).

30. The SWMP and any future modifications or revisions are integral to and enforceable components of this Order. Any documents incorporated into the SWMP by reference that specify the manner in which the Department will implement the SWMP shall be consistent with the requirements of this Order.

31. This Order requires the Department to submit an Annual Report each year to the State Water Board. The Annual Report serves the purpose of evaluating, assessing, and reporting on each relevant element of the storm water program, and revising activities, control measures, BMPs, and measurable objectives, as necessary, to meet the applicable standards.

32. Revisions to the SWMP requiring approval by the State Water Board's Executive Director are subject to public notice and the opportunity for a public hearing.

Total Maximum Daily Load (TMDL) Requirements

33. TMDLs are calculations of the maximum amount of a pollutant that a water body can receive and still meet water quality standards. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point sources (the waste load allocations or WLAs) and non-point sources (load allocations or LAs), plus the contribution from background sources and a margin of safety (40 C.F.R., § 130.2, subd.(i)). Discharges from the Department's MS4 are considered point source discharges.

34. This Order implements USEPA-approved or USEPA-established TMDLs applicable to the Department. This Order requires the Department to comply with all TMDLs listed in Attachment IV. Attachment IV identifies TMDLs adopted by the Regional Water Boards and approved by the State Water Board and USEPA that assign the Department a Waste Load Allocation (WLA) or that specify the Department as a responsible party in the

implementation plan. In addition, Attachment IV identifies TMDLs established by USEPA that specify the Department as a responsible party or that identify NPDES permitted storm water sources or point sources generally, or identify roads generally, as subject to the TMDL. In accordance with 40 Code of Federal Regulations section 122.44, subdivision (d)(1)(vii)(B), NPDES water quality-based effluent limitations (WQBELs) must be consistent with the assumptions and requirements of available TMDL WLAs. In addition, Water Code section 13263, subdivision (a), requires that waste discharge requirements implement any relevant water quality control plans. The TMDL requirements in this Order are consistent with the assumptions and requirements of the TMDLs applicable to the Department.

35. TMDL WLAs in this Order are not limited by the MEP standard. Due to the nature of storm water discharges, and the typical lack of information on which to base numeric WQBELs, federal regulations (40 C.F.R., § 122.44, subd. (k)(2)) allow for the implementation of BMPs to control or abate the discharge of pollutants from storm water.

36. The Department reported in its 2008-09 Annual Report to the State Water Board that it is subject to over 50 TMDLs and is in the implementation phase of over 30 TMDLs. The State Water Board has since determined that the Department is subject to 84 TMDLs. WLAs and LAs for some TMDLs are shared jointly among several dischargers, with no specific mass loads assigned to individual dischargers. In some of these cases, multiple dischargers are assigned a grouped or aggregate waste load allocation, and each discharger is jointly responsible for complying with the aggregate waste load allocation.

37. The high variance in the level of detail and specificity in the TMDLs developed by the Regional Water Boards and USEPA necessitates the development of more specific permit requirements in many cases, including deliverables and required actions, derived from each TMDL's WLA and implementation requirements. These requirements will provide clarity to the Department regarding its responsibilities for compliance with applicable TMDLs. The development of TMDL-specific permit requirements is subject to notice and a public comment period. Because most of the TMDLs were developed by the Regional Water Boards, and because some of the WLAs are shared by multiple dischargers, the development of TMDL-specific permit requirements has been coordinated initially at the Regional Water Board level.

38. Attachment IV specifies TMDL-specific permit implementation requirements for the Lake Tahoe sediment and nutrients TMDL, Napa River Sediment TMDL, Sonoma Creek Sediment TMDL, and the Lake Elsinore and Canyon Lake Nutrients TMDL. These requirements are consistent with the assumptions and requirements of applicable WLAs assigned to the Department, and with the adopted and approved TMDL, Basin Plan, and related Regional Water Board Orders and Resolutions.

39. For all remaining TMDLs identified in Attachment IV, the Regional Water Boards, in consultation with the State Water Board and the Department, developed categorical pollutant permit requirements. The Fact Sheet contains supporting analyses explaining how the proposed categorical pollutant permit requirements will implement the TMDL and are consistent with the assumptions and requirements of any applicable WLA and how the BMPs will be sufficient to implement applicable WLAs. Following a notice and comment period, Attachment IV of this Order and the Fact Sheet was reopened consistent with provision E.11.c. for incorporation of these requirements and supporting analysis into the Order and Fact Sheet.

40. This Order specifies the requirements to be followed for the Comprehensive TMDL Monitoring Plan. TMDL monitoring requirements are found in Attachment IV, Section III.A. The Regional Water Boards may require additional monitoring through Regional Water Board orders pursuant to Water Code section 13383.

41. Attachment IV may additionally be reopened consistent with provision E.11.b. of this Order for incorporation of newly adopted TMDLs or amendments to existing TMDLs into the Permit.

Non-Compliance

42. NPDES regulations require the Department to notify the Regional Water Board and/or State Water Board of anticipated non-compliance with this Order (40 C.F.R., § 122.41(l)(2)); or of instances of non-compliance that endanger human health or the environment (40 C.F.R., § 122.41(l)(6)).

**Regional Water Board and State Water Board Enforcement**

43. The Regional Water Boards and the State Water Board will enforce the provisions and requirements of this Order.

**Region Specific Requirements**

Basin Plans

44. Each Regional Water Board has adopted a Basin Plan for the watersheds within its jurisdiction. Basin Plans identify the beneficial uses for each water body and the water quality objectives necessary to protect them. The Department is subject to the prohibitions and requirements of each Basin Plan.

Region Specific Requirements

45. Regional Water Boards have identified Region-specific water quality issues and concerns pertaining to discharges from the Department's properties. Region-specific requirements to address these issues are included in this Order.

**Local Municipalities and Preemption**

46. Storm water and non-storm water from MS4s that are owned and managed by other NPDES permitted municipalities may discharge to storm water conveyance systems owned and managed by the Department. This Order does not supersede the authority of the Department to prohibit, restrict, or control storm water discharges and conditionally exempt non-storm water discharges to storm drain systems or other watercourses within its jurisdiction as allowed by State and federal law.

    Storm water and non-storm water from the Department's ROW, properties, facilities, and activities may discharge to storm water conveyance systems managed by other NPDES permitted municipalities. This Order does not preempt or supersede the authority of the permitted municipalities to prohibit, restrict, or control storm water discharges and conditionally exempt non-storm water discharges to storm drain systems or other watercourses within their jurisdiction as allowed by State and federal law.

**Anti-Degradation Policy**

47. 40 Code of Federal Regulations section 131.12 requires that state water quality standards include an anti-degradation policy consistent with the federal policy. The State Water Board established California's anti-degradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal anti-degradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plans implement, and incorporate by reference, both the State and federal anti-degradation policies. This Order is consistent with the anti-degradation provision of 40 Code of Federal Regulations section 131.12 and State Water Board Resolution No. 68-16.

**Endangered Species Act**

48. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2115.5) or the Federal Endangered Species Act (16 U.S.C.A., §§ 1531 to 1544). This Order requires compliance with effluent limitations, receiving water limitations, and other requirements to protect the beneficial uses of waters of the United States. The Department is responsible for meeting all requirements of the applicable Endangered Species Act.

California Environmental Quality Act (CEQA)

49. The action to adopt an NPDES Permit is exempt from the provisions of CEQA (Public Resources Code, § 21100, et. seq.), pursuant to section 13389 of the California Water Code (County of Los Angeles et al., v. California Water Boards et al., (2006), 143 Cal.App.4th 985).

Public Notification

50. The Department, interested agencies, and persons have been notified of the State Water Board's intent to reissue requirements for storm water discharges and have been provided an opportunity to submit their written comments and recommendations. State Water Board staff prepared a Fact Sheet and Response to Comments, which are incorporated by reference as part of this Order.

Public Hearing

51. The State Water Board, through public testimony in public meetings and in written form, has received and considered all comments pertaining to this Order.

Cost of Compliance

52. The State Water Board has considered the costs of complying with this Order and whether the required BMPs meet the minimum "maximum extent practicable" standard required by federal law. The MEP approach is an evolving, flexible, and advancing concept, which considers technical and economic feasibility. Because of the numerous advances in storm water regulation and management and the size of the Department's MS4, the Order does not require the Department to fully incorporate and implement all advances in a single permit term, but takes an incremental approach that allows for prioritization of efforts for the most effective use of the increased, but nevertheless limited, Department funds. This Order will have an effect on costs to the Department above and beyond the

costs from the Department's prior permit. Such costs will be incurred in complying with the post-construction, hydrograph modification, Low Impact Development, and monitoring and reporting requirements of this Order. Additional costs will also be incurred in correcting non-compliant discharges.[2] These incremental costs are necessary to advance the controls and management of storm water by the Department and to facilitate reduction of the discharge of pollutants to the MEP.

53. This Order supersedes Order No. 99-06-DWQ.

54. This Order serves as an NPDES permit pursuant to Clean Water Act section 402 or amendments thereto, and shall become effective on July 1, 2013, provided that the Regional Administrator, USEPA, Region IX, expresses no objections.

**IT IS HEREBY ORDERED**, pursuant to the provisions of Division 7 of the California Water Code, regulations, and plans and policies adopted thereafter, and to the provisions of the Clean Water Act and regulations and guidelines adopted thereafter, that the Department shall comply with the following:

## A. GENERAL DISCHARGE PROHIBITIONS

1. Storm water discharges from the Department's Municipal Separate Storm Sewer System (MS4) containing pollutants that have not been reduced to the Maximum Extent Practicable (MEP), are prohibited. The Department shall achieve the pollutant reductions described in this Prohibition through implementation of the provisions in this Order and the approved SWMP.

2. Discharges to Areas of Special Biological Significance (ASBS).

   a. Existing storm water discharges into an ASBS are allowed only if the discharges:

      1) Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;
      2) Are designed to prevent soil erosion;
      3) Occur only during wet weather; and
      4) Are composed of only storm water runoff, except as provided at B.6.

   b. Discharges composed of storm water runoff shall not alter natural water quality in an ASBS.

   c. The discharge of trash is prohibited.

   d. Only discharges from existing storm water outfalls are allowed. Any proposed or new storm water runoff discharge shall be routed to existing storm water discharge outfalls and shall not result in any new contribution of waste to an ASBS (i.e., no additional pollutant loading). "Existing storm water outfalls" are those that were constructed or under construction prior to January 1, 2005. "New contribution of waste" is defined as any addition of waste beyond what would have occurred as of January 1, 2005. A change to an existing storm water outfall, in terms of re-

[2] Although the cost of compliance with TMDL waste load allocations was considered, compliance with TMDLs is not subject to the MEP standard.

location or alteration, in order to comply with these special conditions, is allowed and does not constitute a new discharge.

e. The discharges comply with all terms, prohibitions, and special conditions contained in sections E.2.c.2)a)i) and E.5. of this Order.

3. Discharge of material other than storm water, or discharge that is not composed entirely of storm water, to waters of the United States or another permitted MS4 is prohibited, except as conditionally exempted under Section B.2 of this Order or authorized by a separate National Pollutant Discharge Elimination System (NPDES) permit.

4. The discharge of storm water or conditionally exempt non-storm water that causes or contributes to the violation of water quality standards or water quality objectives (collectively WQSs), the California Toxics Rule (CTR), or impairs the beneficial uses established in a Water Quality Control Plan, or a promulgated policy of the State or Regional Water Boards, is prohibited. The Department shall comply with all discharge prohibitions contained in Regional Water Board Basin Plans.

5. The discharge of storm water to surface waters of the United States in a manner causing or threatening to cause a condition of pollution or nuisance as defined in Water Code section 13050 is prohibited.

6. Discharge of wastes or wastewater from road-sweeping vehicles or from other maintenance activities to any waters of the United States or to any storm drain leading to waters of the United States is prohibited unless in compliance with section E.2.h.3)c)ii) of this Order or authorized by another NPDES permit.

7. The dumping, deposition, or discharge of waste by the Department directly into waters of the United States or adjacent to such waters in any manner that may allow its being transported into the waters is prohibited unless authorized by the Regional Water Board.

8. The discharge of sand, silt, clay, or other earthen materials from any activity in quantities which cause deleterious bottom deposits, turbidity, or discoloration in waters of the United States or which unreasonably affect or threaten to affect beneficial uses of such waters, is prohibited.

## B. NON-STORM WATER DISCHARGE PROHIBITIONS

Non-storm water discharges, other than those to ASBS, must comply with the following provisions:

1. The Department shall effectively prohibit non-storm water discharges into its storm water conveyance system unless such discharges are either:

   a. Authorized by a separate NPDES permit; or
   b. Conditionally exempt in accordance with provision B.2. of this NPDES permit

2. Conditionally Exempt Non-storm Water Discharges.

   The following non-storm water discharges are conditionally exempt from Prohibition B.1 unless the Department or the State Water Board Executive Director identifies them as sources of pollutants to receiving waters. For discharges identified as

sources of pollutants, the Department shall either eliminate the discharge or otherwise effectively prohibit the discharge.

a. Diverted stream flows;
b. Rising ground waters;
c. Uncontaminated ground water infiltration (as defined at 40 C.F.R., § 35.2005(20)) to MS4s;
d. Uncontaminated pumped ground water;
e. Foundation drains, including slope lateral drains;
f. Springs;
g. Water from crawl space pumps;
h. Footing drains;
i. Air conditioning condensation;
j. Flows from riparian habitats and wetlands;
k. Water line flushing[3];
l. Minor, incidental discharges of landscape irrigation water[4];
m. Discharges from potable water sources3;
n. Irrigation water[5];
o. Minor incidental discharges from lawn watering;
p. Individual residential car washing; and
q. Dechlorinated swimming pool discharges.

3. Some Regional Water Boards have separate dewatering and/or "de minimus" NPDES discharge permits or Basin Plan requirements for some or all of these listed non-storm water discharges. The Department shall check with the appropriate Regional Water Board to determine if a specific non-storm water discharge requires coverage under a separate NPDES permit.

4. The Department is not required to prohibit emergency fire fighting flows (i.e., flows necessary for the protection of life or property). Discharges associated with emergency firefighting do not require BMPs, but they are recommended if feasible. As part of the SWMP, the Department shall develop and implement a program to reduce pollutants from non-emergency fire fighting flows (i.e., flows from controlled or practice blazes and maintenance activities) as specified in the SWMP.

5. If the State Water Board Executive Director determines that any category of conditionally exempt non-storm water discharge is a source of pollutants, the State Water Board Executive Director may require the Department to conduct additional monitoring and submit a report on the discharges. The State Water Board Executive Director may also order the Department to cease a non-storm water discharge if it is found to be a source of pollutants.

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[3] In order to remain conditionally exempt, discharges shall be dechlorinated prior to discharge.

[4] In order to remain conditionally exempt, landscape irrigation systems must be designed, operated and maintained to control non-incidental runoff. See definition of incidental runoff in Attachment VIII.

[5] Return flows from irrigated agriculture are not point-source discharges and are not prohibited from entering the Department's MS4.

Non-storm water discharges to ASBS must comply with the following provisions:

6. Non-storm water discharges to ASBS are prohibited except as stated in this Section.

   The following non-storm water discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability, or occur naturally:

   a. Discharges associated with emergency fire fighting operations.
   b. Foundation and footing drains.
   c. Water from crawl space or basement pumps.
   d. Hillside dewatering.
   e. Naturally occurring groundwater seepage via a storm drain.
   f. Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.

   Discharges from utility vaults and underground structures to a segment of the Department's MS4 with a direct discharge to an ASBS are permitted if such discharges are authorized by the General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Water, NPDES No. CAG 990002. A Regional Water Board may nonetheless prohibit a specific discharge from a utility vault or underground structure if it determines that the discharge is causing the MS4 discharge to the ASBS to alter natural ocean water quality in the ASBS.

   Additional non-storm water discharges to a segment of the Department's MS4 with a direct discharge to an ASBS are allowed only to the extent the relevant Regional Water Board finds that the discharge does not alter natural ocean water quality in the ASBS.

   Authorized non-storm water discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan or alter natural ocean water quality in an ASBS.

## C. EFFLUENT LIMITATIONS

The Department shall reduce the discharge of pollutants from its MS4 to waters of the United States to the MEP, as necessary to achieve TMDL WLAs established for discharges by the Department, and to comply with the Special Protections for discharges to ASBS.

## D. RECEIVING WATER LIMITATIONS

1. Receiving water quality objectives, as specified in the Water Quality Control Plans and promulgated policies and regulations of the State and Regional Water Boards, are applicable to discharges from the Department's facilities and properties.
2. The discharge of storm water from a facility or activity shall not cause or contribute to an exceedance of any applicable water quality standard.
3. Storm water discharges shall not cause the following conditions to create a condition of nuisance or to adversely affect beneficial uses of waters of the United States:

   a. Floating or suspended solids, deposited macroscopic particulate matter, or foam;

b. Bottom deposits or aquatic growth;
c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
d. Visible, floating, suspended, or deposited oil or other products of petroleum origin, and/or;
e. Toxic or deleterious substances present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

4. The Department shall comply with Sections A.4, D.2 and D.3 of this Order through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with the SWMP and other requirements of this Order including any modifications. The SWMP shall be designed to achieve compliance with Sections A.4, D.2 and D.3 of this Order. If exceedance(s) of WQS persist notwithstanding implementation of the SWMP and other requirements of this Order, the Department shall assure compliance with Sections A.4, D.2 and D.3 of this Order by complying with the procedure specified at Section E.2.c.6)c) of this Order.

5. Provided the Department has complied with the procedure set forth in provision E.2.c.6)c) of this Order and is implementing the revised SWMP required by provision E.1., the Department is not required to repeat the procedure called for in provision E.2.c.6)c) for continuing or recurring exceedances of the same receiving water limitations unless directed by the State Water Board's Executive Director or Regional Water Board Executive Officer to develop additional BMPs.

6. Where the Department discharges waste to a water of the State that is not a water of the United States, compliance with the prohibitions, limitations, and provisions of this Order when followed for that water of the State will constitute compliance with the requirements of the Porter-Cologne Water Quality Control Act, unless the Department is notified otherwise in writing by the State Water Board Executive Director or a Regional Water Board Executive Officer.

## E. PROVISIONS

### 1. Storm Water Management Plan (SWMP)

a. The Department shall update, maintain and implement an effective SWMP that describes how the Department will meet requirements of this Order as outlined in E.1.b below. The Department shall submit for Executive Director approval an updated SWMP consistent with the provisions and requirements of this Order within one year of the effective date of this Order. The SWMP shall identify and describe the BMPs that shall be used. The SWMP shall be reviewed annually and modified as necessary to maintain an effective program in accordance with the procedures of this Order. The SWMP shall reflect the principles that storm water management is to be a year-round proactive program to eliminate or control pollutants at their source or to reduce them from the discharge by either structural or nonstructural means when elimination at the source is not possible.

b. The SWMP shall contain the following elements:

1) Overview
2) Management And Organization
3) Monitoring And Discharge Characterization Program
4) Project Planning And Design
5) BMP Development and Implementation
6) Construction
7) Compliance with the Industrial General Permit
8) Maintenance Program Activities, including facilities operations
9) Non-Departmental Activities
10) Non-Storm Water Activities/ Discharges
11) Training
12) Public Education and Outreach
13) Region Specific Activities (See provision E.6 and Attachment V.)
14) Program Evaluation
15) Measurable Objectives
16) Reporting
17) References

The Department shall implement all requirements of this Order regardless of whether those requirements are addressed by an element of the SWMP.

c. The SWMP shall include all provisions and commitments in the 2003 SWMP (Department, 2003c), as revised in response to USEPA's Findings of Violation and Order for Compliance (USEPA Docket No. C.W.A.-09-2011-0001). The Department shall continue to implement the 2003 SWMP to the extent that it does not conflict with the requirements of this Order and until a new SWMP is approved pursuant to this Order.

d. All policies, guidelines, and manuals referenced by the SWMP and related to storm water are intended to facilitate implementation of the SWMP, and shall be consistent with the requirements of this Order.

e. The SWMP shall define terms in a manner that is consistent with the definitions in 40 Code of Federal Regulations section 122.2. This includes, but is not limited to, the definitions for pollutant, waters of the United States, and point source. Where there is a conflict between the SWMP and the language of this Order, the language of this Order shall govern.

f. Unless otherwise specified in this Order, proposed revisions to the SWMP shall be submitted to the State Water Board Executive Director as part of the Annual Report. The Department shall revise all other appropriate manuals to reflect modifications to the SWMP.

g. Revisions to the SWMP requiring Executive Director approval will be publicly noticed for thirty days on the State Water Board's website and via the storm water electronic notification list. During the public notice period, members of the public may submit written comments or request a public hearing. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be

raised at the hearing. Upon review of the request or requests for a public hearing, the Executive Director may, in his or her discretion, schedule a public hearing prior to approval of the SWMP revision. The Executive Director shall schedule a hearing if there is a significant degree of public interest in the proposed revision. If no public hearing is conducted, the Executive Director shall consider all public comments received and may approve the SWMP revision if it meets the conditions set forth in this Order. Any SWMP revision approved by the Executive Director will be posted on the State Water Board's website.

h. The Department shall maintain for public access on its website the latest approved version of the SWMP. The Department shall update the SWMP on its website within 30 days of approval of revisions by the State Water Board.

**2. Storm Water Program Implementation Requirements**

a. Overview

The Department shall provide an overview of the storm water program in the SWMP. The overview will include:

1) A statement of the SWMP purpose;
2) A description of the regulatory background;
3) A description of the SWMP applicability;
4) A description of the relationship of the Permit, SWMP, and related Department documents; and
5) A description of the permits addressed by the SWMP.

b. Management and Organization

The Department shall provide in the SWMP an overview of its management and organizational structure, roles and responsibilities of storm water personnel, a description of the role and focal point of the Department's storm water program, and a description of the Storm Water Advisory Teams. The Department shall implement the program specified in the SWMP. The Department shall also implement any additional requirements contained in this Order.

1) *Coordination with Local Municipalities*
   a) The Department is expected to comply with the lawful requirements of municipalities and other local, regional, and/or other State agencies regarding discharges of storm water to separate storm sewer systems or other watercourses under the agencies' jurisdictions.
   b) The Department shall include a ***MUNICIPAL COORDINATION PLAN*** in the SWMP. The plan shall describe the specific steps that the Department will take in establishing communication, coordination, cooperation, and collaboration with other MS4 storm water management agencies and their programs including establishing agreements with municipalities, flood control departments, or districts as necessary or appropriate. The Department shall report on the status and progress of interagency coordination activities in each Annual Report.
2) *Legal Authority*
   a) The Department shall establish, maintain, and certify that it has adequate legal authority through statute, permit, contract or other means to control discharges to and from the Department's properties, facilities and activities.
   b) The Department has provided a statement certified by its chief legal counsel that the Department has adequate legal authority to implement and enforce each of the key regulatory requirements contained in 40 Code of Federal Regulations sections 122.26(d)(2)(i)(A-F). The Department shall submit annually, as part of the Annual Report, a ***CERTIFICATION OF THE ADEQUACY OF LEGAL AUTHORITY***.
3) *Fiscal Resources*
   a) The Department shall seek to maintain adequate fiscal resources to comply with this NPDES Permit. This includes but is not limited to:
      i) Implementing and maintaining all BMPs;

ii) Implementing an effective storm water monitoring program; and
iii) Retaining qualified personnel to manage the storm water program.

b) The Department shall submit a ***FISCAL ANALYSIS*** of the storm water program annually. At a minimum, the fiscal analysis shall show:
i) The allocation of funds to the Districts for compliance with this Order;
ii) The funding for each program element;
iii) A comparison of actual past year expenditures with the current year's expenditures and next year's proposed expenditures;
iv) How the funding has met the goals specified in the SWMP and District workplans; and
v) Description of any cost sharing agreements with other responsible parties in implementing the storm water management program.

c) The fourth year report shall contain a ***BUDGET ANALYSIS*** for the next permit cycle.

4) *Practices and Policies*
The Department shall identify in the SWMP any of the Department's practices and policies that conflict with implementation of the storm water program. The Department shall annually propose changes, including changes to implementation schedules, needed to resolve these conflicts and otherwise effectively implement the SWMP and the requirements of this Order.

5) *Inspection Program*
The Department shall have an inspection program to ensure that this Order and the SWMP are implemented, and that facilities are constructed, operated, and maintained in accordance with this Order and the SWMP. The program shall include training for inspection personnel, documentation of field activities, a reporting system that can be used to track effectiveness of control measures, enforcement procedures (or referral for enforcement) for non-compliance, procedures for taking corrective action, and responsibilities and responsible personnel of all affected functional offices and branches.

The inspection program shall also include standard operating procedures for documenting inspection findings, a system of escalating enforcement response to non-compliance (including procedures for addressing third party (i.e., contractor) non-compliance), and a system to ensure the timely resolution of all violations of this Order or the SWMP. The Department shall delegate adequate authority to appropriate personnel within all affected functional offices and branches to require corrective actions (including stop work orders).

6) *Incident Reporting - Non-Compliance and Potential/Threatened Non-Compliance*
The Department shall report all known incidents of non-compliance with this Order. Non-compliance may be emergency, field, or administrative. The Department shall electronically file a complete ***INCIDENT REPORT FORM*** (Attachment I) in the Storm Water Multiple Application Report and Tracking System (SMARTS)[6] and provide

[6] https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp

verbal notifications as soon as practicable, but no later than the time frames specified in Attachment I. Submission of an Incident Report Form is not an admission by the Department of a violation of this Order. The types of incidents requiring non-compliance reporting are discussed in Attachment I. The State Water Board or Regional Water Board may require additional information. The Department shall include in the Annual Report a summary of all incidents by type and District, and report on the status of each.

The Department shall report all potential or threatened non-compliance to the State Water Board and appropriate Regional Water Board in accordance with the "Anticipated non-compliance" provisions described in Attachment VI (Standard Provisions). The report shall describe the timing, nature and extent of the anticipated non-compliance. An Incident Report Form is not required for anticipated non-compliance. Anticipated non-compliance may be for field or administrative incidents only.

c. Monitoring and Discharge Characterization Requirements

The Department shall revise and implement the SWMP consistent with the requirements specified below.

1) *Monitoring Site Selection*

Monitoring shall be conducted in two tiers. Tier 1 consists of all sites for which monitoring is required pursuant to the requirements of the General Exception, including Special Protections, to the California Ocean Plan waste discharge prohibitions for storm water and non-point source discharges to ASBS, and sites in impaired watersheds for which the Department has been assigned a WLA and monitoring requirements pursuant to an approved TMDL. Tier 2 consists of all sites where the Department has existing monitoring data, including both storm water and non-storm water. Tier 2 sites may include locations where the Department has conducted characterization monitoring or where monitoring has been conducted for other purposes.

The Department shall conduct without limitation all Tier 1 monitoring as required under the ASBS Special Protections and under the adopted and approved TMDLs. The Department may satisfy Tier 1 monitoring requirements by participating in stakeholder groups. Retrofitting and verification monitoring under Tier 2 need not be initiated until there are less than 100 sites actively monitored under Tier 1. There shall be a minimum of 100 active monitoring sites at any one time, consisting of Tier 1, Tiers 1 and 2, or Tier 2.

Sites from Tier 2 shall be prioritized by the Department in consideration of the threat to water quality, including the pollutant and its concentration or load, the distance to receiving water, water quality objectives, and any existing impairments in the receiving waters. The prioritized list shall be submitted to the State Water Board within eight (8) months of the effective date of this Order. The State Water Board will review the prioritized list and may revise it to reflect Regional or State Water Board

priorities. The revised list will be approved by the Executive Director and will become effective upon notice to the Department.

2) *Water Quality Monitoring*

a) Tier 1 Monitoring Requirements

i) Areas of Special Biological Significance

The Department's ASBS monitoring program shall include both core discharge monitoring and ocean receiving water and reference site monitoring. The State and Regional Water Boards must approve receiving water and reference site sampling locations and any adjustments to the monitoring program. All ocean receiving water and reference area monitoring must be comparable with the Water Boards' Surface Water Ambient Monitoring Program (SWAMP).

Safety concerns: Sample locations and sampling periods must be determined considering safety issues. Sampling may be postponed upon notification to the State and Regional Water Boards if hazardous conditions exist.

(1) Core Discharge Monitoring Program

Core discharge monitoring is the monitoring of storm water effluents from the storm water outfalls at the priority discharge locations listed in Attachment III.

(a) General Sampling Requirements for Timing and Storm Size

Runoff must be collected during a storm event that is greater than 0.1 inch and generates runoff, and at least 72 hours from the previously measurable storm event. Runoff samples shall be collected during the same storm and at approximately the same time when post-storm receiving water is sampled, and analyzed for the same constituents as receiving water and reference site samples (see section E.2.c.2)a)i)(2)) as described below.

(b) Runoff Flow Measurements

For storm water outfalls in existence as of December 31, 2007, 18 inches (457mm) or greater in diameter/width, including multiple outfall pipes in combination having a width of 18 inches, runoff flows must be measured or calculated, using a method acceptable to and approved by the State Water Board. Report measurements annually for each precipitation season to the State and Regional Water Boards.

(c) Runoff samples – storm events

(i) Outfalls equal to or greater than 18 inches (0.46m) in diameter or width.

Samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination. Samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate

or algal species) at least once during each storm season when receiving water is sampled in the ASBS. If the Department has no outfall greater than 36 inches, then storm water runoff from the applicant's largest outfall shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B (shown in Attachment II) metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates).

(ii) Outfalls equal to or greater than 36 inches (0.91m) in diameter or width.
Samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination. Samples of storm water runoff shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates). Samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.

(d) If the Department does not participate in a regional monitoring program as described in provision E.2.c.2)a)i)(2)(b)in addition to (i) and (ii) above, a minimum of the two largest outfalls or 20 percent of the larger outfalls, whichever is greater, shall be sampled (flow weighted composite samples) at least three times annually during wet weather (storm event) and analyzed for all Ocean Plan Table A (shown in Attachment II) constituents, Table B constituents for marine aquatic life protection (except for toxicity, only chronic toxicity for three species shall be required), DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, and Ocean Plan indicator bacteria. For discharges to ASBS in more than one Regional Water Board, at a minimum, one (the largest) such discharge shall be sampled annually in each Region.

(e) The Executive Director of the State Water Board may reduce or suspend core monitoring once the storm runoff is fully characterized. This determination may be made at any point after the discharge is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

(2) Ocean Receiving Water and Reference Area Monitoring Program
In addition to performing the Core Discharge Monitoring Program in provision E.2.c.2)a)i)(1) above, the Department must perform ocean receiving water monitoring. The Department may either implement an individual monitoring program or participate in a regional integrated monitoring program.

(a) Individual Monitoring Program
If the Department elects to perform an individual monitoring program to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within the affected ASBS, in addition to Core Discharge Monitoring, the following additional monitoring requirements shall be met:

(i) Three times annually, during wet weather (storm events), the receiving water at the point of discharge from the outfalls described in provision E.2.c.2)a)i)(1)(c) above shall be sampled and analyzed for Ocean Plan Table A constituents, Table B constituents for marine aquatic life, DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, salinity, chronic toxicity (three species), and Ocean Plan indicator bacteria.

The sample location for the ocean receiving water shall be in the surf zone at the point of discharges; this must be at the same location where storm water runoff is sampled. Receiving water shall be sampled prior to (pre-storm) and during (or immediately after) the same storm (post storm). Post storm sampling shall be during the same storm and at approximately the same time as when the runoff is sampled. Reference water quality shall also be sampled three times annually and analyzed for the same constituents pre-storm and post-storm, during the same storm seasons when receiving water is sampled. Reference stations will be determined by the State Water Board's Division of Water Quality and the applicable Regional Water Board(s).

(ii) Sediment sampling shall occur at least three times during every five (5) year period. The subtidal sediment (sand or finer, if present) at the discharge shall be sampled and analyzed for Ocean Plan Table B constituents for marine aquatic life, DDT, PCBs, PAHs, pyrethroids, and OP pesticides. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed.

(iii) A quantitative survey of intertidal benthic marine life shall be performed at the discharge and at a reference site. The survey shall be performed at least once every five (5) year period. The survey design is subject to approval by the Regional Water Board

and the State Water Board's Division of Water Quality. The results of the survey shall be completed and submitted to the State Water Board and Regional Water Board at least six months prior to the end of the permit cycle.

(iv) Once during each permit term and in each subsequent five year period, a bioaccumulation study shall be conducted to determine the concentrations of metals and synthetic organic pollutants at representative discharge sites and at representative reference sites. The study design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The bioaccumulation study may include California mussels (*Mytilus californianus*) and/or sand crabs (*Emerita analoga* or *Blepharipoda occidentalis*). Based on the study results, the Regional Water Board and the State Water Board's Division of Water Quality, may adjust the study design in subsequent permits, or add or modify additional test organisms (such as shore crabs or fish), or modify the study design appropriate for the area and best available sensitive measures of contaminant exposure.

(v) Marine Debris: Representative quantitative observations for trash by type and source shall be performed along the coast of the ASBS within the influence of the discharger's outfalls. The design, including locations and frequency, of the marine debris observations is subject to approval by the Regional Water Board and State Water Board's Division of Water Quality.

(vi) The monitoring requirements of the Individual Monitoring Program in this section are minimum requirements. After a minimum of one (1) year of continuous water quality monitoring of the discharges and ocean receiving waters, the Executive Director of the State Water Board may require additional monitoring, or adjust, reduce or suspend receiving water and reference station monitoring. This determination may be made at any point after the discharge and receiving water is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

(b) Regional Integrated Monitoring Program

The Department may elect to participate in a regional integrated monitoring program, in lieu of an individual monitoring program, to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within an ASBS. This regional approach shall characterize natural water quality, pre- and post-storm, in ocean reference areas near the mouths of identified open space watersheds and the effects of the discharges on natural water quality (physical, chemical, and toxicity) in the ASBS receiving waters, and should include benthic marine aquatic life and

bioaccumulation components. The design of the ASBS stratum of a regional integrated monitoring program may deviate from the prescribed individual monitoring approach described in provision E.2.c.2)a)i)(2)(a) if approved by the State Water Board's Division of Water Quality and the Regional Water Boards.

(i) Ocean reference areas shall be located at the drainages of flowing watersheds with minimal development (in no instance more than 10% development), and shall not be located in CWA Section 303(d) listed waterbodies or have tributaries that are 303(d) listed. Reference areas shall be free of wastewater discharges and anthropogenic non-storm water runoff. A minimum of low threat storm runoff discharges (e.g. stream highway overpasses and campgrounds) may be allowed on a case-by-case basis. Reference areas shall be located in the same region as the ASBS receiving water monitoring occurs. The reference areas for each Region are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean reference water samples must be collected from each station, each from a separate storm during the same storm season that receiving water is sampled. A minimum of one reference location shall be sampled for each ASBS receiving water site sampled by the Department. Because the Department discharges to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

(ii) ASBS ocean receiving water must be sampled in the surf zone at the location where the runoff makes contact with ocean water (i.e. at "point zero"). Ocean receiving water stations must be representative of worst-case discharge conditions (i.e. co-located at a large drain greater than 36 inches, or if drains greater than 36 inches are not present in the ASBS then the largest drain greater than18 inches). Ocean receiving water stations are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean receiving water samples must be collected during each storm season from each station, each from a separate storm. A minimum of one receiving water location shall be sampled in each ASBS by the Department. At a minimum, one reference station and one receiving water station shall be sampled in each applicable Regional Water Board.

(iii) Reference and receiving water sampling shall commence during the first full storm season following the adoption of these special conditions, and post-storm samples shall be collected during the

same storm event when storm water runoff is sampled. Sampling shall occur in a minimum of two storm seasons.

(iv) Receiving water and reference samples shall be analyzed for the same constituents as storm water runoff samples. At a minimum, constituents to be sampled and analyzed in reference and discharge receiving waters must include oil and grease, total suspended solids, Ocean Plan Table B metals for protection of marine life, Ocean Plan PAHs, pyrethroids, OP pesticides, ammonia, nitrate, phosphates, and critical life stage chronic toxicity for three species. In addition, within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination shall be analyzed.

(v) Determinations of compliance with Special Protections requirements for ASBS discharges (State Water Board resolution DWQ 2012-0012) shall be made by the Executive Director of the State Water Board or his designee. When a determination is made that a site or discharge is in compliance with the Special Protections, the site will no longer be considered an active monitoring site pursuant to provision E.2.c.1). This provision applies regardless of any continued monitoring that may be required at the site pursuant to the Special Protections.

ii) Total Maximum Daily Load Watersheds
The Department shall comply with the TMDL monitoring requirements in Attachment IV, or in orders of the Regional Water Boards pursuant to Water Code section 13383 that require TMDL-related monitoring. TMDL monitoring shall also include the constituents listed in Attachment II, except as exempted in Attachment IV.

Determinations of compliance with the TMDL shall be made by the Executive Officer of the Regional Water Board or his designee. When a determination is made that a site or discharge is in compliance with the TMDL, the site will no longer be considered an active monitoring site pursuant to provision E.2.c.1) and monitoring of Attachment II constituents will be discontinued. This provision applies regardless of any continued monitoring that may be required at the site pursuant to the TMDL.

b) Tier 2 Retrofit and Verification Monitoring Requirements
Corrective actions shall be implemented at the top 15 percent of sites (rounded up) on the Tier 2 priority list, subject to the number of sites per year specified in provision E.2.c.1). Follow up monitoring shall be conducted to confirm the effectiveness of the measures implemented, as determined by the Executive Officer of the Regional Water Board or his designee. Follow up monitoring is not required where the discharge has been eliminated, or where the implemented BMP provides full retention of the 85$^{th}$ percentile, 24-hour rain event.

Determinations of compliance at the Tier 2 sites shall be made by the Executive Officer of the Regional Water Board or his designee. When a determination is

made that a site or discharge is in compliance, the site will no longer be considered an active monitoring site pursuant to provision E.2.c.1).

3) *Corrective Actions*
Corrective actions may include structural or non-structural BMPs. All structural BMPs must be designed according to the requirements in provisions E.2.d. and E.2.e.

4) *Field and Laboratory Data Requirements*
The Department shall prepare, maintain, and implement a Quality Assurance Project Plan (QAPP) in accordance with the Surface Water Ambient Monitoring Program. All monitoring samples shall be collected and analyzed according to the Department's QAPP developed for the purpose of compliance with this Order. SWAMP Quality Assurance Program Plan (2008) is available at: http://www.waterboards.ca.gov/water_issues/programs/swamp/tools.shtml

All samples shall be analyzed by a certified or accredited laboratory as required by Water Code section 13176. Global Positioning System (GPS) coordinates shall be recorded for all monitoring sites, including sites selected for the final Tier 2 priority list (top 15%) according to existing data.

Water quality data (receiving water and effluent) shall be uploaded to the Storm Water Multi-Application Reporting and Tracking System (SMARTS) and must conform to "CEDEN Minimum Data Templates" format. CEDEN Minimum Data Templates are available at http://ceden.org/.

Analytical results shall be filed electronically in SMARTS within 30 days of receipt by the Department.

5) *Monitoring Results Report*
The Department shall submit, separate from the Annual Report, a **MONITORING RESULTS REPORT** (**MRR)** by October 1 of each year.

a) The MRR shall include a list of all sites in Tier 1 and Tier 2 being actively monitored, and the results of the past fiscal year's monitoring activities including effluent and receiving water quality monitoring.
b) The Department shall specifically highlight sample values that exceed applicable WQSs, including toxicity objectives. Complete sample results or lab data need not be included, but must be retained and filed electronically, and must be provided to the Regional Water Board or State Water Board as provided in provision E.2.c.4).
c) The MRR shall include a summary of sites requiring corrective actions needed to achieve compliance with this Order, and a review of any iterative procedures (where applicable) at sites needing corrective actions.
d) The reporting period for the MRR shall be July 1 of the prior year through June 30 of the current year.

6) *Compliance Monitoring and Reporting*
a) The Department shall review and propose any updates, as needed, to the Non-compliance Reporting Plan for Municipal and Construction Activities in section 9.4.1 of the SWMP. The plan shall identify the staff in each District Office and

Regional Water Board to send and receive **INCIDENT REPORT FORMS** (Attachment I). The Department shall continue to implement the July 2008 Construction Compliance Evaluation Plan or any updated plan as approved by the Executive Director.

b) The Department shall summarize, by District, all non-compliance incidents, including construction, in the Annual Report. The summary shall include incident dates, types, locations, and the status of the non-compliance incidents.

c) Receiving Water Limitations Compliance.
   i) Upon a determination by the Department or the Regional Water Board Executive Officer that a discharge is causing or contributing to an exceedance of an applicable WQS, the Department shall provide verbal notification within five (5) days, and within 30 days thereafter submit a report to the appropriate Regional Water Board with a copy to the State Water Board. Verbal notification is not required where the determination is made by the Regional Water Board. An Incident Report is not required. Where the pollutant causing the exceedance is subject to a waste load allocation listed in Attachment IV of this Order, the Department shall comply with the requirements of the relevant TMDL in lieu of this provision.
   ii) The report shall describe BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance. The report shall include an implementation schedule. The Regional Water Board Executive Officer may require modifications to the report.
   iii) The Department shall submit any modifications to the report required by the Regional Water Board within 30 days of notification.
   iv) The Department shall implement the revised BMPs and conduct any additional monitoring required according to the implementation schedule.

d) Toxicity
   i) Tests for chronic toxicity, where required, shall be estimated as specified in Short-term Method for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA/821-R-02-013, October 2002; Table IA, 40 Code of Federal Regulations section 136 and its subsequent amendments or revisions.

   ii) For the Department's discharges, the In-stream Waste Concentration (IWC) is 100 percent (i.e., either is 100 percent storm water or 100% non-storm water). To calculate either a Pass or Fail of the effluent concentration chronic toxicity test at the IWC, the instructions in Appendix A in the National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA/833-R-10-003) shall be used. A Pass result indicates no toxicity at the IWC, and a Fail result indicates toxicity at the IWC. Results shall be reported as provided in provision E.2.c.5).

e) Toxicity Reduction Evaluations (TREs)
   i) The Department shall include in the SWMP a TRE workplan (1-2 pages) specifying the steps that will be taken in preparing a TRE, when a TRE is

required pursuant to provision E.2.c.6)e)ii). The workplan shall include, at a minimum:

(a) A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and BMP efficiencies.

(b) A description of the steps that will be taken to identify effective pollutant/toxicity reduction opportunities.

(c) If a Toxicity Identification Evaluation (TIE) is necessary, an indication of who would conduct the TIEs (i.e., a Department laboratory or outside contractor).

ii) Upon a determination that a discharge is causing or contributing to an exceedance of an applicable toxicity standard, a TRE may be required by the appropriate Regional Water Board Executive Officer on a site specific basis. The TRE shall be conducted according to the workplan in the SWMP.

d. Project Planning and Design

The Department shall describe in the SWMP how storm water management is incorporated into the project planning and design process, and how the procedures and methodologies used in the selection of Design and Construction BMPs will be used in Department projects. The Department shall implement the program specified in the SWMP, any documents incorporated into the SWMP by reference, and any additional requirements contained in this Order.

Department and Non-Department projects within the Department's ROW that are new development or redevelopment shall comply with the standard project planning and design requirements for new development and redevelopment specified below. These requirements shall apply to all new and redevelopment projects that have not completed the project initiation phase on the effective date of this Order.

1) *Design Pollution Prevention Best Management Practices*

The following design pollution prevention best management practices shall be incorporated into all projects that create disturbed soil area (DSA), including projects designed to meet the post-construction treatment requirements (Section E.2.d.2)). The SWMP shall be updated to reflect these principles.

a) Conserve natural areas, to the extent feasible, including existing trees, stream buffer areas, vegetation and soils;
b) Minimize the impervious footprint of the project;
c) Minimize disturbances to natural drainages;
d) Design and construct pervious areas to effectively receive runoff from impervious areas, taking into consideration the pervious areas' soil conditions, slope and other pertinent factors;
e) Implement landscape and soil-based BMPs such as compost-amended soils and vegetated strips and swales;
f) Use climate-appropriate landscaping that minimizes irrigation and runoff, promotes surface infiltration, and minimizes the use of pesticides and fertilizers; and

g) Design all landscapes to comply with the California Department of Water Resources Water Efficient Landscape Ordinance.

http://www.water.ca.gov/wateruseefficiency/landscapeordinance/technical.cfm.

Where the California Department of Water Resources Water Efficient Landscape Ordinance conflicts with a local water conservation ordinance, the Department shall comply with the local ordinance.

2) *Post-Construction Storm Water Treatment Controls*

a) Projects Subject to Post-Construction Treatment Requirements

i) Department Projects
The Department shall implement post construction treatment control BMPs for the following new development or redevelopment projects:

(1) Highway Facility projects that create 1 acre or more of new impervious surface.
(2) Non-Highway Facility projects that create 5,000 square feet or more of new impervious surface.

ii) Non-Department Projects within Department ROW
(1) The Department shall exercise control or oversight over Non-Department projects through encroachment permits or other means.
(2) Non-Department development or redevelopment projects shall be subject to the same post-construction treatment control requirements as Department projects.
(3) For all Non-Department Projects that trigger post-construction treatment control requirements, the Department shall review and approve the design of post-construction treatment controls and BMPs prior to implementation.

iii) Waiver
Where a Regional Water Board Executive Officer finds that a project will have a minimal impact on water quality, the Executive Officer may waive the treatment control requirements, or lessen the stringency of the requirements, for a project. Waivers may not be granted for projects subject to treatment control requirements based on a waste load allocation assigned to the Department.

b) Numeric Sizing Criteria for Storm Water Treatment Control BMPs:
Treatment control BMPs constructed for Department and Non-Department projects shall be designed according to the following priorities (in order of preference):
i) Infiltrate, harvest and re-use, and/or evapotranspire the storm water runoff;
ii) Capture and treat the storm water runoff.

The storm water runoff volumes and rates used to size BMPs shall be based on the 85$^{th}$ percentile 24-hour storm event. This sizing criterion shall apply to the entire treatment train within Project Limits. Design Pollution Prevention BMPs can be used to comply with this requirement.

In the event the entire runoff volume from an 85th percentile 24-hour storm event cannot be infiltrated, harvested and re-used, or evapotranspired, the excess volume may be treated by Low Impact Development (LID)-based flow-through treatment devices. Where LID-based flow-through treatment devices are not feasible, the excess volume may be treated through conventional volume-based or flow-based storm water treatment devices.

The Department shall always prioritize the use of landscape and soil-based BMPs to treat storm water runoff. Other BMPs may be used only after landscape and soil-based BMPs are determined to be infeasible. The Department shall also consider other effective storm water treatment control methods or devices for Department approval.

c) Scope of Design Criteria Applicability for Redevelopment Projects

i) For Highway Facilities:

(1) Where redevelopment results in an increase in impervious area that is less than or equal to 50 percent of the total post-project impervious area within Project Limits, the numeric sizing criteria shall only apply to the new impervious area and not to the entire project.

If the redeveloped impervious area cannot be hydraulically separated from the existing impervious area, the Department shall either: provide treatment for redeveloped areas and as much of the hydraulically inseparable flow as feasible, based on site conditions and constraints; or identify treatment opportunities equivalent to the redeveloped area (see Alternative Compliance, below).

If it is not possible to separate the flows from redeveloped areas from the existing impervious area, the treatment system shall be designed to treat as much of the hydraulically inseparable flow as feasible, and shall bypass or divert any excess around the treatment device. The purpose of this requirement is to prevent overloading the treatment device and impairing its performance.

(2) Where redevelopment results in an increase in impervious area that is greater than 50 percent of the total post-project impervious area within Project Limits, the numeric sizing criteria apply to the entire project.

ii) For Non-Highway Facilities, where redevelopment results in an increase in impervious area that is less than or equal to 50 percent of the total post-project impervious area of an existing development, the numeric sizing criteria shall only apply to the new impervious area and not to the entire project.

(1) If the redeveloped impervious area cannot be hydraulically separated from the existing impervious area, the Department shall either provide treatment for existing and redeveloped areas, or identify treatment opportunities equivalent to the redeveloped area (See Alternative Compliance, below).

(2) Where redevelopment results in an increase in impervious area that is greater than 50 percent of the total post-project impervious area of an existing development, the numeric sizing criteria apply to the entire project.

d) Alternative Compliance

If the Department determines that all or any portion of on-site treatment for a project is infeasible on-site, the Department shall prepare a proposal for alternative compliance for approval by the Regional Water Board Executive Officer or his designee until such time as a statewide process is approved by the Executive Director of the State Water Board. The proposal shall include documentation supporting the determination of infeasibility. Alternative compliance may be achieved outside Project Limits within the Department's ROW, including within another Department project. Alternative compliance to be achieved outside Project Limits shall include provisions for the long-term maintenance of such treatment facilities.

3) *Hydromodification Requirements*

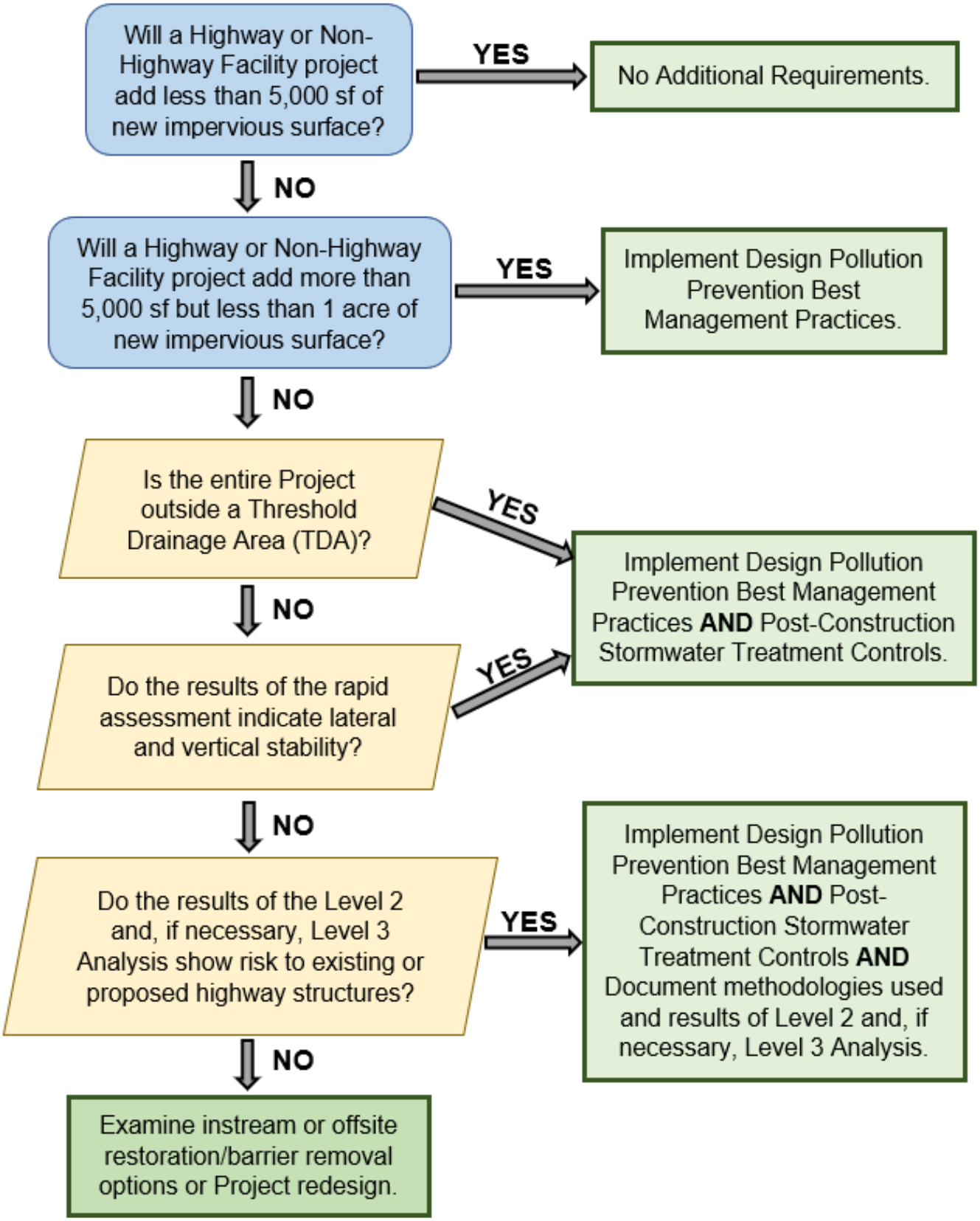
The Department shall ensure that all new development and redevelopment projects do not cause a decrease in lateral (bank) and vertical (channel bed) stability in receiving stream channels. Unstable stream channels negatively impact water quality by yielding much greater quantities of sediment than stable channels. The Department shall employ the risk-based approach detailed in this permit to assess lateral and vertical stability. The approach assists the Department in assessing pre-project channel stability and implementing mitigation measures that are appropriate to protect structures and minimize stream channel bank and bed erosion. The approach is depicted in Figure 1 and described below.

a) Highway or Non-Highway Facility projects that add between 5,000 square feet and 1 acre of new impervious surface must implement the Design Pollution Prevention Best Management Practices in Section E.2.d.1).

b) Highway or Non-Highway Facility projects that add 1 acre or more of new impervious surface completely outside of a Threshold Drainage Area[7] must implement the Design Pollution Prevention Best Management Practices and the Post-Construction Storm Water Treatment Controls in Section E.2.d.

[7] Threshold Drainage Area is defined as the area draining to a location at least 20 channel widths downstream of a stream crossing (pipe, swale, culvert, or bridge) within Project Limits. Delineating the Threshold Drainage Area is not necessary if there is/ are no stream crossing(s) within the Project Limits.

**Figure 1: Hydromodification Flowchart**



c) Highway or Non-Highway Facility projects that add 1 acre or more of new impervious surface with any impervious portion of the project located within a Threshold Drainage Area must conduct a rapid assessment of stream stability[8] at each stream crossing (e.g., pipe, culvert, swale or bridge) within that Threshold Drainage Area. If the stream crossing is a bridge, a follow up rapid assessment of stream stability is also required and can be coordinated with the federally-mandated bridge inspection process. The assessment will be conducted within a representative channel reach to assess lateral and vertical stability. A representative reach is a length of stream channel that extends at least 20 channel widths upstream and downstream of a stream crossing. For example, a 20 foot-wide channel would require analyzing a 400 foot distance upstream and downstream of the discharge point or bridge. If sections of the channel within the 20 channel width distance are immediately upstream or downstream of steps, culverts, grade controls, tributary junctions, or other features and structures that significantly affect the shape and behavior of the channel, more than 20 channel widths should be analyzed.

d) If the results of the rapid assessment indicate that the representative reach is laterally and vertically stable (i.e., a rating of excellent or good) the Department does not have to conduct further analyses and must implement the Design Pollution Prevention Best Management Practices and the Post-Construction Storm Water Treatment Controls in Section E.2.d.

e) If the results of the rapid assessment indicate that the representative reach will not be laterally and vertically stable (i.e., a rating of excellent or good), the Department must determine whether the instability, in conjunction with the proposed project, poses a risk to existing or proposed highway structures by conducting appropriate Level 2 (and, if necessary, Level 3) analyses. The Department shall follow the Level 2 and 3 analysis guidelines contained in HEC-20 (FHWA, 2001) or a suitable equivalent within an accessible portion of the reach. If the results of the appropriate Level 2 (and, if necessary Level 3) analyses indicate that there is no risk to existing or proposed highway structures, the Department must implement the Design Pollution Prevention Best Management Practices and the Post-Construction Storm Water Treatment Controls in Section E.2.d. and document the methodologies used, the results, and the mitigation measures suggested as part of the appropriate Level 2 and, if necessary, Level 3 analyses.

f) If the results of the Level 2 and 3 analysis indicate that the instability, in conjunction with the proposed project, poses a risk to existing or proposed highway structures, other options must be implemented, including, but not limited to, in-stream and floodplain enhancement/restoration, fish barrier removal as

[8] Guidance and worksheets used for the rapid assessment of stream stability are in the Federal Highway Administration publication "*Assessing Stream Channel Stability at Bridges in Physiographic Regions"* (FHWA, 2006).

identified in the report required under Article 3.5 of the Streets and Highways Code (see below), regional flow control, off-site BMPs, and, if necessary, project re-design.

4) *Stream Crossing Design Guidelines to Maintain Natural Stream Processes*
The Department shall review and revise as necessary the guidance document "Fish Passage Design for Road Crossings" (Department, 2009). In reviewing and revising the guidance document, the Department shall be consistent with the latest stream crossing design, construction, and rehabilitation criteria contained in the California Salmonid Stream Habitat Restoration Manual (California Department of Fish & Game, 2010) and National Marine Fisheries Service guidance (NMFS, 2001). The review shall be completed no later than one year after the effective date of this Order. The Department shall submit in the Year 2 Annual Report a report detailing the review of the guidance document. The Year 2 Annual Report shall also report on the implementation of the road crossing guidelines.

If it is infeasible to meet any of the guidelines specified above, the Department shall prepare written documentation justifying the determination of infeasibility. Documentation shall be provided to the Regional Water Board for approval.

The Department shall submit to the State Water Board by October 1 of each year the same report required under Article 3.5 of the Streets and Highways Code requiring the Department to report on the status of its efforts in locating, assessing, and remediating barriers to fish passage.

e. <u>BMP Development & Implementation</u>
In the SWMP, the Department shall include a description of how BMPs will be developed, constructed and maintained. The Department shall continue to evaluate and investigate new BMPs through pilot studies. The Department shall submit updates to the ***STORM WATER TREATMENT BMP TECHNOLOGY REPORT*** and the ***STORM WATER MONITORING AND BMP DEVELOPMENT STATUS REPORT*** in the Annual Report.

1) *Vector Control*
   a) All storm water BMPs that retain storm water shall be designed, operated and maintained to minimize mosquito production, and to drain within 96 hours of the end of a rain event, unless designed to control vectors. BMPs shall be maintained at the frequency specified by the manufacturer. This limitation does not apply in the Lake Tahoe Basin and in other high-elevation regions of the Sierra Nevada above 5000 feet elevation with similar alpine climates. The Department shall operate and maintain all BMPs to prevent the propagation of vectors, including complying with applicable provisions of the California Health and Safety Code relating to vector control.

   b) The Department shall cooperate and coordinate with the California Department of Public Health (CDPH) and with local mosquito and vector control agencies on issues related to vector production in the Department's structural BMPs. The Department shall prepare and maintain an inventory of structural BMPs that retain

water for more than 96 hours. The inventory need not include BMPs in the Lake Tahoe Basin or other regions of the Sierra Nevada above 5000 feet. The inventory shall be provided to CDPH in electronic format for distribution to local mosquito and vector control agencies. The inventory shall be provided in Year 2 of the permit and updated every two years.

2) *Storm Water Treatment BMPs*
   a) The Department shall inspect all newly installed storm water treatment BMPs within 45 days of installation to ensure they have been installed and constructed in accordance with approved plans. If approved plans have not been followed, the Department shall take appropriate remedial actions to bring the BMP or control into conformance with its approved design.
   b) The Department shall inspect all installed storm water treatment BMPs at least once every year, beginning one year after the effective date of this Order.
   c) The Department may drain storm water treatment BMPs to the MS4 if the discharge does not cause or contribute to exceedances of water quality standards. Retained sediments shall be disposed of properly, in compliance with all applicable local, State, and federal acts, laws, regulations, ordinances, and statutes.
   d) The Department shall develop and utilize a watershed-based database to track and inventory treatment BMPs and treatment BMP maintenance within its jurisdiction. At a minimum, the database shall include:

      i) Name and location of BMP;
      ii) ii) Watershed, Regional Water Board and District where project is located;
      iii) Size and capacity;
      iv) Treatment BMP type and description;
      v) Date of installation;
      vi) Maintenance certifications or verifications;
      vii) Inspection dates and findings;
      viii)Compliance status;
      ix) Corrective actions, if any; and
      x) Follow-up inspections to ensure compliance.

      Electronic reports for each BMP inspected during the reporting period shall be submitted to each associated Regional Water Board in tabular form. A summary of the tracking system data shall be included in the Annual Report along with a report on maintenance activities for post construction BMPs. The tracking system database shall be made available to the State Water Board or any Regional Water Board upon request.

3) *BMPs shall not constitute a hazard to wildlife.*

4) *Biodegradable Materials.*
The Department shall utilize wildlife-friendly 100% biodegradable[9] erosion control products wherever feasible. At any site where erosion control products containing non-biodegradable materials have been used for temporary site stabilization, the Department shall remove such materials when they are no longer needed. If the Department finds that erosion control netting or products have entrapped or harmed wildlife at any site or facility, the Department shall remove the netting or product and replace it with wildlife-friendly biodegradable products.

f. Construction

1) *Compliance with the Statewide Construction Storm Water General Permit (CGP) and Lake Tahoe Construction General Permit (TCGP)*
Construction activities that may receive coverage under the CGP or the TCGP are not covered under this MS4 Permit. The Department shall electronically file Permit Registration Documents (PRD) for coverage under the CGP or TCGP for all projects subject to the CGP or TCGP.

2) *Construction Activities not Requiring Coverage Under the CGP*
For construction activities that are not subject to the CGP or the TCGP, the Department shall implement BMPs to reduce the discharge of pollutants to the MEP in storm water discharges associated with land disturbance activities including clearing, grading and excavation activities that result in the disturbance of less than one acre of total land area. The Department shall also implement BMPs to reduce the discharge of pollutants to the MEP for construction and maintenance activities that do not involve land disturbance such as roadway and parking lot repaving and resurfacing. The Department must comply with any region-specific waste discharge requirements, including any requirements applicable to activities involving less than one acre land disturbance.

3) *Construction Projects Involving Lead Contaminated Soils*
The Department has applied for and received variances from the California Department of Toxic Substances Control (DTSC) for the reuse of some soils that contain lead. For construction projects that have received a DTSC variance, the Department shall notify the appropriate Regional Water Board in writing 30 days prior to advertisement for bids to allow a determination by the Regional Water Board of the need for development of Waste Discharge Requirements (WDRs).

4) *Pavement Grindings*
The Department shall comply with the requirements of the Regional Water Boards for the management of pavement grindings as well as with all local and State regulations, including Titles 22 and 27 of the California Code of Regulations.

[9] For purposes of this Order, photodegradable synthetic products are not considered biodegradable.

5) *Contractor Compliance*
The Department shall require its contractors to comply with this Order and with all applicable requirements of the CGP.

6) *Construction Non-Compliance Reporting*
Incidents of non-compliance with the CGP shall be reported pursuant to the provisions of the CGP. The Department shall provide in the Annual Report a summary of all construction project non-compliance (Section E.2.c.6)b)).

g. Compliance with Statewide Industrial Storm Water General Permit (IGP)
Industrial activities are not covered under this MS4 permit. The Department shall electronically file PRDs for coverage under the IGP for all facilities subject to coverage under the IGP. The categories of industrial facilities are provided in Attachment 1 of the Industrial General Permit (NPDES Permit No. CAS000001; the current Order No. 97-03-DWQ). The Department shall require its industrial facility contractors to comply with all requirements of the IGP. The discharge of pollutants from facilities not covered by the Industrial General Permit will be reduced to the MEP through the appropriate implementation of BMPs.

h. Maintenance Program Activities and Facilities Operations

1) *Implement SWMP Requirements*
The Department shall implement the program specified in the SWMP to reduce or eliminate pollutants in storm water discharges from Department maintenance facilities and maintenance activities. The Department shall also implement any additional requirements contained in this Order.

2) A ***FACILITY POLLUTION PREVENTION PLAN (FPPP)*** describes the activities conducted at a facility and the BMPs to be implemented to reduce or eliminate the discharge of pollutants in storm water runoff from the facility.

The Department shall prepare, revise and/or update the FPPPs for all maintenance facilities by October 1 of the first year. Each facility shall be evaluated separately and assigned appropriate site specific BMPs. The FPPP shall describe the activities conducted at the facility and the BMPs to be implemented to reduce or eliminate the discharge of pollutants in storm water runoff from the facility. The FPPP shall describe the inspection program used to ensure that maintenance BMPs are implemented and maintained. The Department shall identify in each Annual Report the status of the FPPP for each Maintenance Facility by District and Region, including the date of the last update or revision and the nature of any revisions.

The Department shall evaluate all non-maintenance Facilities, excluding leased properties, for water quality problems. If the Department identifies a water quality problem at a non-maintenance facility, it shall prepare an FPPP for that facility. If Regional Water Board staff determines that a non-maintenance facility may discharge pollutants to the storm water drainage system or directly to surface waters, the Department shall prepare an FPPP for that facility.

Regional Water Board staff has the authority to require the submittal of an FPPP at any time, to require changes to a FPPP, and to require changes in the implementation of the provisions of a FPPP.

3) *Highway Maintenance Activities*
   a) The Department shall develop and implement runoff management programs and systems for existing roads, highways, and bridges to reduce runoff pollutant concentrations and volumes entering surface waters. The Department shall:
      i) Identify priority and watershed pollutant reduction opportunities (e.g., improvements to existing urban runoff control structures). Priority shall be given to sites in sensitive watersheds or where there is an existing or potential threat to water quality;
      ii) Establish schedules for implementing appropriate controls; and
      iii) Identify road segments with slopes that are prone to erosion and sediment discharge and stabilize these slopes to control the discharge of pollutants to the MEP. An inventory of vulnerable road segments shall be maintained in the District Work Plans. Stabilization activities shall be reported in the Annual Report. This section does not apply to landslides and other forms of mass wasting which are covered under section E.2.h.3)d).

   b) Vegetation Control
      The Department shall control its handling and application of chemicals including pesticides, herbicides, and fertilizers to reduce or eliminate the discharge of pollutants to the MEP. The Department shall incorporate integrated pest management and integrated vegetation management practices into its vegetation control program[10]. At a minimum, the Department shall:

      i) Apply herbicides and pesticides in compliance with federal, state and local use regulations and product label directions.

         (1) Violations of regulations shall be reported to the County Agricultural Commissioners within 10 business days.
         (2) The Annual Report shall include a summary of violations and follow-up actions to correct them.

      ii) Minimize the application of chemicals by using integrated pest management and integrated vegetation management. For example, the Department may reduce the need for application of fertilizers and herbicides by using native species and using mechanical and biological methods for control of exotic species.

      iii) Prior to chemical applications, assess site-specific and application-specific conditions to prevent discharge. The assessment shall include the following variables:
         (1) Expected precipitation events, especially those with the potential for high intensity;
         (2) Proximity to water bodies;
         (3) Intrinsic mobility of the chemical;
         (4) Application method, including any tendency for aerial dispersion;

[10] http://www.epa.gov/opp00001/factsheets/ipm.htm and http://www.ipm.ucdavis.edu/

(5) Fate and transport of the chemical after application;
(6) Effects of using combinations of chemicals; and
(7) Other conditions as identified by the applicator.

iv) Apply nutrients at rates and by means necessary to establish and maintain vegetation without causing significant nutrient runoff to surface water.

v) Ensure that all employees or contractors who, within the scope of their duties, prescribe or apply herbicides, pesticides, or fertilizers (including over-the-counter products) are appropriately trained and licensed to comply with these provisions.

vi) Propose SWMP provisions as appropriate.

vii) Include the following items in the Annual Report:

(1) A summary of the Department's chemical use. Report the quantity of chemicals used during the previous reporting period by name and type of chemical, by District, and by month.
(2) An assessment of long-term trends in herbicide usage. Include a table presenting yearly District herbicide totals by chemical type;
(3) A comparison of the statewide herbicide use with the Department's herbicide reduction goals;
(4) An analysis of the effectiveness of implementation of vegetation control BMPs. Improvements to BMP implementation either being used or proposed for usage shall be discussed. If no improvements are proposed, explain why;
(5) Justification for any increases in use of herbicides, pesticides, and fertilizers;
(6) A report on the number and percentage of employees who apply pesticides and have been trained and licensed in the Department's Pesticide and Fertilizer Pollution Control Program policies; and
(7) Training materials, if requested by the State Water Board.

c) Storm Water Drainage System Facilities Maintenance

i) The Department shall inspect all urban[11] drainage inlets and catch basins a minimum of once per year and shall remove all waste and debris from drainage inlets and catch basins when waste and debris have accumulated to a depth of 50 percent of the inlet or catch basin capacity.

ii) Waste and debris, including sweeper and vacuum truck waste, shall be managed and reported in accordance with all applicable laws and regulations, including the Cal. Code Regs. Title 27, Division 2, Subdivision 1.

iii) The Department shall develop a ***WASTE MANAGEMENT PLAN*** that includes a comprehensive inventory of waste storage, transfer, and disposal sites; the source(s) of waste and the physical and chemical characterization of the waste retained at each site; estimated annual volumes of material and existing or planned waste management practices for each waste and facility type.

[11] For purposes of this requirement, the term "urban" shall mean located within an "urbanized area" as determined by the latest Decennial Census by the Bureau of the Census (Urbanized Area).

Waste characterization need not be conducted on a site-by-site basis but may be evaluated programmatically based upon the highway environment and associated land uses contributing to the sites, climate, and ecoregion. The Waste Management Plan shall be submitted for State Water Board review and approval within one year of the effective date of this Order.

d) Landslide Management Activities
The Department shall develop a ***LANDSLIDE MANAGEMENT PLAN*** that includes BMPs for Department construction and maintenance work landslide-related activities (e.g., prevention, containment, clean-up). The *Landslide Management Plan* shall address all forms of mass wasting such as slumps, mud flows, and rockfalls, and shall include BMPs specifically for burn site management activities. The Department shall submit the *Landslide Management Plan* with the Year 1 Annual Report and implement the *Landslide Management Plan* for the remainder of the Permit term.

4) *Surveillance Activities*

a) Spill Response
The Department will follow the applicable Emergency Management Agency (EMA) procedures and timelines specified in Water Code sections 13271 and 13272 for reporting spills.

b) Illegal Connection/Illicit Discharge (IC/ID) and Illegal Dumping Response

i) The Department shall implement the BMPs and other requirements of the SWMP and this Order to reduce and eliminate IC/IDs and illegal dumping.

ii) The Department shall develop an ***IC/ID AND ILLEGAL DUMPING RESPONSE PLAN*** that includes, at a minimum, the following:

(a) Procedures for investigating reports or discoveries of IC/IDs or incidents of illegal dumping, for remediating or eliminating the IC/IDs, and for clean-up of illegal dump sites.
(b) Procedures for prevention of illegal dumping at sites subject to repeat or chronic incidents of illegal dumping.
(c) Procedures for educating the public, raising awareness and changing behaviors regarding illegal dumping, and encouraging the public to contact the appropriate local authorities if they witness illegal dumping.

Within 6 months of the effective date of this Order, the Department shall submit the ***IC/ID AND ILLEGAL DUMPING RESPONSE PLAN*** to the State Water Board Executive Director for approval.

iii) The Department shall report all suspected IC/IDs to the Regional Water Board.

c) Reporting Requirements for Trash and Litter
The Department shall report on the trash and litter removal activities that are currently underway or are initiated after adoption of this Order. Activities include, but are not limited to, storm drain maintenance, road sweeping, public education and the Adopt-A-Highway program. Reporting and assessment of these or future activities shall follow protocols established by the Department and shall include estimated annual volumes of the trash and litter removed. Results shall be

submitted as part of the Annual Report in a summary format by District. Prior year's data shall be included to facilitate an analysis of trends.

d) Department Activities Outside the Department's Right-of-Way
The Department shall include provisions in its contracts that require the contractor to obtain and comply with applicable permits for project-related facilities and operations outside the Department's ROW. Facilities may include concrete or asphalt batch plants, staging areas, concrete slurry processing or other material recycling operations, equipment and material storage yards, material borrow areas, and access roads.

5) *Maintenance Facility Compliance Inspections*

a) District staff shall inspect all maintenance facilities at least twice annually. Follow up inspections shall be conducted when deficiencies are noted. The inspections are to identify areas contributing to a discharge of pollutants associated with maintenance facility activities, to determine if control practices to reduce pollutant loadings identified in the Facility Pollution Prevention Plans (FPPP) are adequate and properly implemented, and to determine whether additional control practices are needed. The District shall keep a record of inspections. The record of the inspections shall include the date of the inspection, the individual(s) who performed the inspection, a report of the observations, recommendations for any corrective actions identified or needed, and a description of any corrective actions undertaken.

b) The Regional Water Board may require the Department to conduct additional site inspections, to submit reports and certifications, or to perform additional sampling and analysis to the extent authorized by the Water Code.

c) Records of all inspections, compliance certifications, and non-compliance reporting shall be retained for a period of at least three years. With the exception of non-compliance reporting, the Department is not required to submit these records unless requested.

6) *Operation and Maintenance of Post-Construction BMPs*

The Department shall prepare and implement long-term operation and maintenance plans for every site subject to the post-construction storm water treatment design standards. The plans must ensure the following: a) Long-term structural LID BMPs are maintained as necessary to ensure they continue to work effectively; b) Proprietary devices are maintained according to the manufacturer's directions; and c) Post-construction BMPs are replaced if they lose their effectiveness.

i. Non-Departmental Activities

The Department shall summarize its control over all non-departmental (third party) activities performed on Department ROW in the SWMP. The summary shall describe how the Department shall ensure compliance with this Order in all non-departmental activities.

The Department shall not grant or renew encroachment permits or easements benefitting any third party required to obtain coverage under the Statewide Construction and/or Industrial Storm Water General Permits unless the party has obtained coverage. In all

leases, rental agreements, and all other contracts with third parties conducting activities within the ROW, the Department shall require the third party to comply with applicable requirements of the Construction General Permit, the Industrial General Permit, and this Order.

j. Non-Storm Water Activities/ Discharges

1) The Department shall describe the management activities for all non-storm water discharges in the SWMP. Management activities shall include the procedures for prohibiting illicit discharges and illegal connections, and procedures for spill response, cleanup, reporting, and follow-up.

2) *Agricultural Return Flows*
The Department shall provide reasonable support to the monitoring activities of agricultural dischargers whose runoff enters the MS4. Reasonable support includes facilitating monitoring activities, providing necessary access to monitoring sites, and cooperating with monitoring efforts as needed. It does not include actively conducting monitoring or providing funding. The Department may require agricultural dischargers to follow established Department access and encroachment procedures in establishing sites and conducting monitoring activities, and may deny access at sites that may restrict traffic flow or pose a danger to any party.

3) See Section B of this Order for the complete list of conditionally exempt non-storm water discharges and compliance requirements.

k. Training

1) The Department shall implement a training program for Department employees and construction contractors. The training program shall be described in the SWMP.

2) The training program shall cover:
   a) Causes and effects of storm water pollution;
   b) Regulatory requirements;
   c) Best Management Practices;
   d) Penalties for non-compliance with this Order; and
   e) Lessons learned.

3) The Department shall provide a review and assessment of all training activities in the Annual Report.

l. Public Education and Outreach

The Department shall implement a Statewide Public Education Program and describe it in the SWMP. The Department shall continue to seek opportunities to participate in public outreach and education activities with other MS4 permittees.

1) The Statewide Public Education Program shall include the following elements:
   a) Research: A plan for conducting research on public behavior that affects the quality of the Department's runoff. The information gathered will form the foundation for all the public education conducted.
   b) Education: Education of the general public to modify behavior and communicate with commercial and industrial entities whose actions may add pollutants to the Department's storm water.

c) Mass Media Advertising: Continue the advertising campaign as a focal point of the public education strategy. The campaign should focus on the behaviors of concern and should be designed to motivate the public to change those behaviors. The public education campaign should be revised and updated according to the results of the research. The Department may cooperate with other organizations to implement the public education campaign.

2) A ***PUBLIC EDUCATION PROGRAM PROGRESS REPORT*** shall be submitted as part of the Annual Report.

m. Program Evaluation

1) The Department shall implement the program specified in the SWMP and any additional requirements contained in this Order.

2) *Field Activities* ***SELF-AUDIT***
The Department will perform compliance evaluations for field activities including construction, highway maintenance, facility maintenance, and selected targeted program components. The results of the field compliance evaluations for each fiscal year will be provided in the Annual Report.

3) OVERALL PROGRAM EFFECTIVENESS EVALUATION:
Each year, the Department shall submit an ***OVERALL PROGRAM EFFECTIVENESS EVALUATION*** together with the Annual Report. The Department shall increase the scope of the evaluation each year in response to the environmental monitoring data it collects. The effectiveness evaluation shall be comparable to that outlined in CASQA's *Municipal Stormwater Program Effectiveness Assessment Guidance*[12] and shall emphasize assessment of BMPs specifically targeting primary pollutants of concern. The effectiveness evaluation shall include, but is not limited to, the following components:

a) Assessment of program effectiveness in achieving permit requirements and measurable objectives.
b) Assessment of program effectiveness in protecting and restoring water quality and beneficial uses.
c) Identification of quantifiable effectiveness measurements for each BMP, including measurements that link BMP implementation with improvement of water quality and beneficial use conditions.
d) Identification of how the Department will propose revisions to the SWMP to optimize BMP effectiveness when effectiveness assessments identify BMPs or programs that are ineffective or need improvement.

n. Measurable Objectives
The Department shall implement the program specified in the SWMP and any additional requirements contained in this Order. In the SWMP, the Department shall identify measurable objectives to meet the SWMP's goals, proposed activities and tasks to meet the objectives, and a time schedule for the proposed activities and tasks. In the Annual Report, the Department shall report on its progress in meeting the measurable objectives.

[12] https://www.casqa.org/store/products/tabid/154/p-7-effectiveness-assessment-guide.aspx

o. References

The Department shall provide references for all information, documents, and studies used in the development of the SWMP.

**3. Annual Report**

a. The Department shall submit 13 copies of an ***ANNUAL REPORT*** to the State Water Board Executive Director by October 1 of each year. An electronic copy shall also be uploaded into SMARTS in the portable document format (PDF). The reporting period for the Annual Report shall be July 1 through June 30. The Annual Report shall contain all information and submittals required by this Order including, but not limited to:

1) A District-by-District description of storm water pollution control activities conducted during the reporting period;
2) A progress report on meeting the SWMP's measurable objectives;
3) An Overall Program Effectiveness Evaluation as described in section E.2.m.3);
4) Proposed revisions to the SWMP, including revisions to existing BMPs, along with corresponding justifications;
5) A report on post-construction BMP maintenance activities;
6) A list of non-approved BMPs that were implemented in each District during the reporting period including the type of BMP, reason for use, physical location, and description of any monitoring;
7) An evaluation of project planning and design activities conducted during the year;
8) A summary of non-compliance with this Order and the SWMP as specified in Section E.2.c.6)b). The summary shall include an assessment of the effectiveness of any Department enforcement and penalties, and as appropriate, proposed solutions to improve compliance;
9) An evaluation of the Monitoring Results Report, including a summary of the monitoring results;
10) Proposed revisions to the Department's Vegetation Control Program;
11) Proposals for monitoring and control of non-storm water discharges that are found to be sources of pollutants as described in Section B. of this Order;
12) District Workplans (See below); and
13) Measures implemented to meet region-specific requirements.

A partial summary of reporting requirements is contained in Attachment IX of this Order.

b. ***DISTRICT WORKPLANS***

The Department shall submit ***DISTRICT WORKPLANS*** (workplans) for each District by October 1 of each year, as part of the Annual Report. The workplans will be forwarded to the appropriate Regional Water Board Executive Officer for acceptance. Workplans are deemed accepted after 60 days after receipt by the Regional Water Board unless rejected in writing. District staff shall meet with Regional Water Board staff on an annual basis prior to submittal of the workplans to discuss alternatives and ensure that appropriate post construction controls are included in the project development process through review of the workplan and early consultation and coordination between District and Regional Water Board staff. Workplans shall conform with the requirements of applicable Regional Water Board Basin Plans and shall include, at a minimum:

1) A description of all activities and projects, including maintenance projects, to be undertaken by the Districts. For all projects with soil disturbing activities, this shall include a description of the construction and post construction controls to be implemented;
2) The area of new impervious surface and the percentage of new impervious surface to existing impervious surface for each project;
3) The area of disturbed soil associated with each project or activity;
4) A description of other permits needed from the Regional Water Boards for each project or activity;
5) Potential and actual impacts of the discharge(s) from each project or activity;
6) The proposed BMPs to be implemented in coordination with other MS4 permittees to comply with WLAs and LAs assigned to the Department for specific pollutants in specific watersheds or sub watersheds;
7) The elements of the statewide monitoring program to be implemented in the District;
8) Identification of high-risk areas (such as locations where spills or other releases may discharge directly to municipal or domestic water supply reservoirs or ground water percolation facilities);
9) Spill containment, spill prevention and spill response and control measures for high-risk areas; and
10) Proposed measures to be taken to meet Region-specific requirements included in Attachment V.
11) An inventory of vulnerable road segments having slopes that are prone to erosion and sediment discharge.

**4. TMDL Compliance Requirements**

a. Implementation

The Department shall comply with all TMDL-related requirements identified in Attachment IV.

In addition, consistent with provision E.11.b of this Order, the State Water Board may reopen this Order to incorporate any modifications or revisions to the TMDLs in Attachment IV, or to incorporate any new TMDLs adopted during the term of this Order that assign a WLA to the Department or that identify the Department as a responsible party in the TMDL implementation plan.

b. Status Review Report

The Department shall prepare a ***TMDL STATUS REVIEW REPORT*** to be submitted with each Annual Report. The ***TMDL Status Review Report*** shall include all information required in Attachment IV.

**5. ASBS Compliance Requirements**

a. Priority Discharges

Attachment III, ASBS Priority Discharge Locations, identifies representative monitoring locations where the Department has priority discharges to ASBS. Priority discharges are those that pose the greatest threat to water quality in the ASBS and which the State

Water Board identifies to require monitoring and potential installation of structural or non-structural controls.

b. Alternate Locations
The Executive Director of the State Water Board may authorize revisions to Attachment III, ASBS Priority Discharge Locations, where access limitations or safety considerations make it infeasible to conduct monitoring. Alternate locations proposed by the Department shall be in as close proximity to the original priority discharge locations as is feasible.

c. Compliance Schedule
1) On the effective date of the Exception, all non-authorized non-storm water discharges (e.g., dry weather flow) to ASBS shall be effectively prohibited.
2) No later than September 20, 2013, the Department shall submit a draft written ASBS Compliance Plan to the State Water Board Executive Director that describes its strategy to comply with these provisions, including the requirement to maintain natural water quality in the affected ASBS (see provision E.5.d.). The final ASBS Compliance Plan, including a description and final schedule for structural controls based on the results of runoff and receiving water monitoring, shall be submitted no later than September 20, 2015 and shall be included in the SWMP.
3) Within 18 months of the effective date of the Exception, any non-structural controls that are necessary to comply with these provisions shall be implemented.
4) Within six (6) years of the effective date of the Exception, any structural controls identified in the ASBS Compliance Plan that are necessary to comply with these provisions shall be operational.
5) Within six (6) years of the effective date of the Exception, the Department must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85$^{th}$ percentile threshold of reference water quality data and the pre-storm receiving water levels, then the Department must re-sample the receiving water, pre- and post-storm. If after re-sampling, the post-storm levels are still higher than the 85$^{th}$ percentile threshold of reference water quality data, and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See Figure 2.
6) The Executive Director of the State Water Board may only authorize additional time to comply with provisions E.5.b.4) and E.5.b.5) above if good cause exists to do so. Good cause means a physical impossibility or lack of funding.

   If the Department claims physical impossibility, it shall notify the Executive Director of the State Water Board in writing within thirty (30) days of the date that the discharger Department first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in provisions E.5.c.4) or E.5.c.5). The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Permit provision. The Department shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the Department to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance.

The Department shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

The Department may request an extension of time for compliance based on lack of funding. The request for an extension shall require a demonstration and documentation of a good faith effort to acquire funding through the Department's budgetary process, and a demonstration that funding was unavailable or inadequate.

d. ASBS Compliance Plan
The Department shall develop and submit to the Executive Director of the State Water Board a draft ASBS Compliance Plan not later than September 20, 2013. The ASBS Compliance Plan shall address all locations listed in Attachment III as follows:

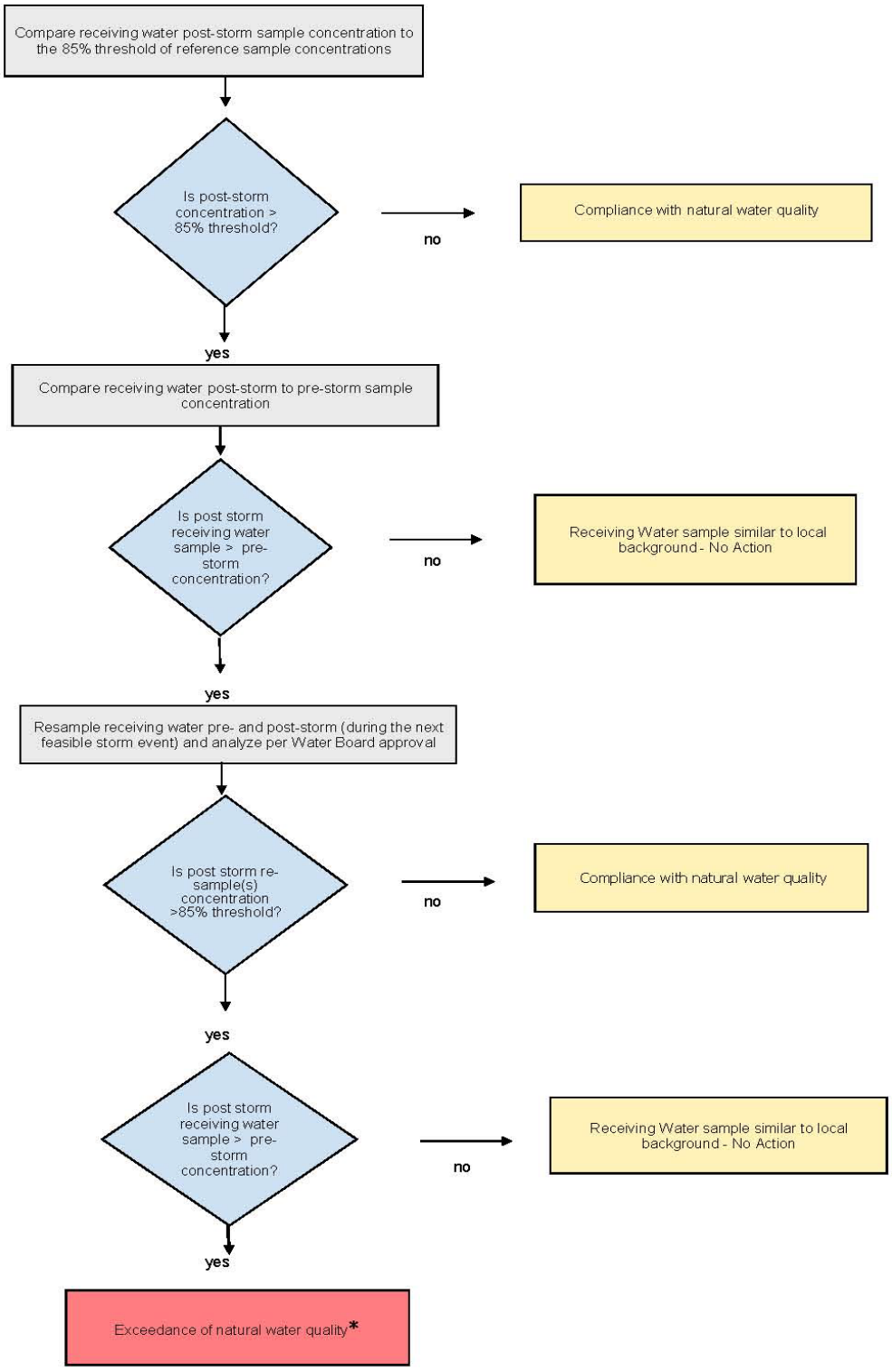
1) Include a map of surface drainage of storm water runoff, showing areas of sheet runoff, priority discharge locations, and any structural Best Management Practices (BMPs) already employed and/or BMPs to be employed in the future. The map shall also show the storm water conveyances in relation to other features such as service areas, sewage conveyances and treatment facilities, landslides, areas prone to erosion, and waste and hazardous material storage areas, if applicable.

2) Describe the measures by which all non-authorized non-storm water runoff (e.g., dry weather flows) has been eliminated, how these measures will be maintained over time, and how these measures are monitored and documented.

3) Require minimum inspection frequencies as follows:

   a) The minimum inspection frequency for construction sites shall be weekly during the rainy season;
   b) The minimum inspection frequency for industrial facilities shall be monthly during the rainy season; and
   c) Storm water outfall drains equal to or greater than 18 inches (457 mm) in diameter or width shall be inspected once prior to the beginning of the rainy season and once during the rainy season, and maintained to remove trash and other anthropogenic debris.

**Figure 2**
**ASBS Special Protections**
**Flowchart to Determine Compliance with Natural Water Quality**




*** When an exceedance of natural water quality occurs, the Department must comply with section I.A.2.h of the Special Protections as well as the requirements of this Order. Note, when sampling data is available, end-of-pipe effluent concentrations will be considered by the Water Boards in making this determination.**

4) Address storm water discharges (wet weather flows) and, in particular, describe how pollutant reductions in storm water runoff, that are necessary to comply with these special conditions, will be achieved through BMPs. Structural BMPs need not be installed if the discharger can document to the satisfaction of the State Water Board Executive Director that such installation would pose a threat to health or safety. BMPs to control storm water runoff discharges (at the end-of-pipe) during a design storm shall be designed to achieve on average the following target levels:

   a) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or
   b) A 90% reduction in pollutant loading during storm events, for the Department's total discharges.

   The baseline for these determinations is the effective date of the Exception, except for those structural BMPs installed between January 1, 2005 and adoption of the Special Protections.

5) Address erosion control and the prevention of anthropogenic sedimentation in ASBS. The natural habitat conditions in the ASBS shall not be altered as a result of anthropogenic sedimentation.

6) Describe the non-structural BMPs currently employed and planned in the future (including those for construction activities), and include an implementation schedule. The ASBS Compliance Plan shall include non-structural BMPs that address public education and outreach. The ASBS Compliance Plan shall also describe the structural BMPs, including any low impact development (LID) measures currently employed and planned for higher threat discharges, and shall include an implementation schedule. To control storm water runoff discharges (at the end-of-pipe) during a design storm, the Department must first consider, and use where feasible, LID practices to infiltrate, use, or evapotranspire storm water runoff on-site, if LID practices would be the most effective at reducing pollutants from entering the ASBS.

7) The BMPs and implementation schedule shall be designed to ensure that natural water quality conditions in the receiving water are achieved and maintained by either reducing flows from impervious surfaces or reducing pollutant loading, or some combination thereof.

e. Reporting

If the results of the receiving water monitoring described in provision E.2.c.2)a)i) indicate that the storm water runoff is causing or contributing to an alteration of natural ocean water quality in the ASBS, the discharger shall submit a report to the State Water Board and Regional Water Board within 30 days of receiving the results.

1) The report shall identify the constituents in storm water runoff that alter natural ocean water quality and the sources of these constituents.

2) The report shall describe BMPs that are currently being implemented, BMPs that are identified in the SWMP for future implementation, and any additional BMPs that may be added to the SWMP to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the BMPs.

3) Within 30 days of the approval of the report by the State Water Board Executive Director, the discharger shall revise its ASBS Compliance Plan to incorporate any new or modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required.

4) As long as the discharger has complied with the procedures described above and is implementing the revised SWMP, the discharger does not have to repeat the same procedure for continuing or recurring exceedances of natural ocean water quality conditions due to the same constituent.

**6. Region Specific Requirements**

a. The Department shall implement the region-specific requirements specified in this Order.

b. In the SWMP, the Department shall describe how individual Districts will address region-specific requirements in each Regional Water Board.

c. Region specific requirements are specified in Attachment V of this Order.

**7. Regional Water Board Authorities**

a. Upon the effective date of this Order, the Regional Water Boards shall enforce the requirements of this Order. Enforcement may include, but is not limited to, reviewing FPPPs, reviewing workplans and monitoring reports, conducting compliance inspections, conducting monitoring, reviewing Annual Reports and other information, and issuing enforcement orders.

b. Regional Water Boards may require submittal of FPPPs.

c. Regional Water Boards may require retention of records for more than three years.

d. To the extent authorized by the Water Code, Regional Water Boards may impose additional monitoring and reporting requirements and may provide guidance on monitoring plan implementation (Water Code, § 13383).

e. Regional Water Board staff may inspect the Department's facilities, roads, highways, bridges, and construction sites.

f. Regional Water Boards may issue other individual storm water NPDES permits or WDRs to the Department, particularly for discharges beyond the scope of this Order.

**8. Requirements of Other Agencies**

This Order does not preempt or supersede the authority of other State or local agencies (such as the Department of Toxic Substances Control or the California Coastal Commission) and local municipalities to prohibit, restrict, or control storm water discharges and conditionally exempt non-storm water discharges to storm drain systems or other watercourses within their jurisdictions as allowed by State and federal law.

**9. Standard Provisions**

The Department shall comply with the Standard Provisions (Attachment VI) and any amendments thereto.

**10. Permit Compliance and Rescission of Previous Waste Discharge Requirements**

This Order shall serve and become effective as an NPDES permit and the Department shall comply with all its requirements on July 1, 2013. Requirements prescribed by this Order supersede the requirements prescribed by Order No. 99-06-DWQ, except for compliance purposes for violations occurring before the effective date of this Order.

**11. Permit Re-Opener**

This Order may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, receipt of USEPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations 122.62, 122.63, 122.64, and 124.5. The State Water Board may reopen and modify this Order at any time prior to its expiration under any of the following circumstances:

a. Present or future investigations demonstrate that the discharge(s) regulated by this Order may have the potential to cause or contribute to adverse impacts on water quality and/or beneficial uses.
b. New or revised Water Quality Objectives come into effect, or any new TMDL is adopted or revised that assigns a WLA to the Department or that identifies the Department as a responsible party in the TMDL implementation plan. In such cases, effluent limitations and other requirements in this Order may be modified as necessary to reflect the new TMDLs or the new or revised Water Quality Objectives; or
c. TMDL-specific permit requirements for adopted TMDLs are developed by a Regional Water Board for incorporation into this Order.
d. The State Water Board determines, after opportunity for public comment and a public workshop, that revisions are warranted to those provisions of the Order addressing compliance with water quality standards in the receiving water and/or those provisions of the Order establishing an iterative process for implementation of management practices to assure compliance with water quality standards in the receiving water.

**12. Dispute Resolution**

In the event of a disagreement between the Department and a Regional Water Board over the interpretation of any provision of this Order, the Department shall first attempt to resolve the issue with the Executive Officer of the Regional Water Board. If a satisfactory resolution is not obtained at the Regional Water Board level, the Department may submit the issue in writing to the Executive Director of the State Water Board or his designee for resolution, with a copy to the Executive Officer of the Regional Water Board. The issue must be submitted to the Executive Director within ten days of any final determination by the Executive Officer of the Regional Water Board. The Executive Officer of the Regional Water Board will be provided an opportunity to respond.

**13. Order Expiration and Reapplication**

a. This Order expires on June 30, 2018.
b. If a new order is not adopted by June 30, 2018, then the Department shall continue to implement the requirements of this Order until a new one is adopted.
c. In accordance with Title 23, Division 3, Chapter 9 of the California Code of Regulations, the Department shall file a report of waste discharge no later than 180

days before the expiration date of this Order as application for reissuance of this permit and waste discharge requirements. The application shall be accompanied by a SWMP, and a summary of all available water quality data for the discharge and receiving waters, including conventional pollutant data from at least the most recent three years, and toxic pollutant data from at least the most recent five years, in the discharge and receiving water. Additionally, the Discharger shall include the final results of any studies that may have a bearing on the limits and requirements of the next permit.

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

**FACT SHEET**
FOR

ORDER 2012-0011-DWQ

AS AMENDED BY
ORDER WQ 2014-0006-EXEC,
ORDER WQ 2014-0077-DWQ,
ORDER WQ 2015-0036-EXEC, AND
ORDER WQ 2017-0026-EXEC

NPDES NO. CAS000003
**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)**
**STATEWIDE STORM WATER PERMIT**
**WASTE DISCHARGE REQUIREMENTS (WDRS)**
**FOR**
**STATE OF CALIFORNIA**
**DEPARTMENT OF TRANSPORTATION**

This Fact Sheet contains information regarding the waste discharge requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit for the California State Department of Transportation (Department) for discharges of storm water and certain types of non-storm water. This Fact Sheet describes the factual, legal, and methodological basis for the permit conditions, provides supporting documentation, and explains the rationale and assumptions used in deriving the limits and requirements.

## BACKGROUND

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act (CWA)) was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful, unless the discharge is in compliance with an NPDES permit. The 1987 amendments to the Clean Water Act added section 402(p). Section 402(p) establishes that storm water discharges are point source discharges and lays out a framework for regulating municipal and industrial storm water discharges under the NPDES program. On November 16, 1990, the United States Environmental Protection Agency (USEPA) promulgated final regulations that establish the storm water permit requirements.

Pursuant to the 1990 regulations, storm water permits are required for discharges from a municipal separate storm sewer system (MS4) serving a population of 100,000 or more. USEPA defines an MS4 as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) owned or operated by a State (40 Code of Federal Regulations (C.F.R.), § 122.26(b)(8)). The regulations also require storm water permits for 11 categories of industry, including construction activities where the construction activity: (1) disturbs more than

one (1) acre of land; (2) is part of a larger common plan of development; and/or (3) is found to be a significant threat to water quality.

Before July 1999, storm water discharges from Department storm water systems were regulated by individual NPDES permits issued by the Regional Water Quality Control Boards (Regional Water Boards). On July 15, 1999, the State Water Resources Control Board (State Water Board) issued a statewide permit (Order No. 99-06-DWQ), which regulated all storm water discharges from Department owned MS4s, maintenance facilities and construction activities. The existing permit (Order No. 99-06-DWQ) will be superseded by adoption of a new permit.

Industrial activities are covered by two General Permits that have been adopted by the State Water Board. The Department's construction activities are subject to the requirements under the NPDES General Permit for Construction Activities (CGP, NPDES Permit No. CAS000002) for construction activities that are equal to or greater than one (1) acre. The exception to this is in the Lake Tahoe area, where the Lahontan Regional Water Board adopted its own construction general permit (NPDES Permit No. CAG616002). The Department's industrial facility activities are subject to the requirements of the NPDES General Permit for Industrial Activities (IGP, NPDES Permit No. CAS000001).

The Department is responsible for the design, construction, management, and maintenance of the State highway system, including freeways, bridges, tunnels, the Department's facilities, and related properties. The Department's discharges consist of storm water and non-storm water discharges from State owned right-of-way (ROW).

Clean Water Act section 402(p) and 40 Code of Federal Regulations section 122.26 (a)(v) give the State authority to regulate discharges from an MS4 on a system-wide or jurisdiction-wide basis. The State Water Board considers all storm water discharges from all MS4s and activities under the Department's jurisdiction as one system. Therefore, this Order is intended to cover all of the Department's municipal storm water activities.

This Order will be implemented by the Department and enforced by the State Water Board and nine Regional Water Boards.

The Department operates highways and highway-related properties and facilities that cross through local jurisdictions. Some storm water discharges from the Department's MS4 enter the MS4s owned and managed by these local jurisdictions. This Order does not supersede the authority of local agencies to prohibit, restrict, or control storm water discharges and conditionally exempt non-storm water discharges to storm drain systems or other watercourses within their jurisdiction as allowed by State and federal law. The Department is expected to comply with the lawful requirements of municipalities and other local, regional, and/or state agencies regarding discharges of storm water to separate storm sewer systems or other watercourses under the agencies' jurisdictions.

**GENERAL DISCHARGE PROHIBITIONS**

This Order authorizes storm water and conditionally exempt non-storm water discharges from the Department's properties, facilities and activities. This Order prohibits the discharge of material other than storm water, unless specifically authorized in this Order.

The Department owns and operates highway systems that are located adjacent to and discharge into many ASBS. This Order specifies that Department discharges to an ASBS are prohibited except in compliance with the conditions and special protections contained in the General Exception for Storm Water and Non-Point Source Discharges to ASBS, State Water Board Resolution 2012-0012. This State Water Board resolution is hereby incorporated by reference and the Department is required to comply with applicable requirements. Attachment III identifies 77 priority Department ASBS discharge locations. These locations represent sites having significant potential to impact the ASBS that are feasible to retrofit. The following locations are not included in the list:

1. Inland sites discharging indirectly to the ASBS;
2. Sites where the discharge is attenuated through vegetation;
3. Sites where it is infeasible to install a BMP, e.g. an overhanging outfall or where there is insufficient space to install a treatment control; and
4. Sites that would pose a safety hazard to motorists, or that would be unsafe to install or maintain.

Provision E.5 of the Order requires the Department to ensure that structural controls at these locations are operational within six (6) years of the effective date of the General Exception.

**NON-STORM WATER**

Non-storm water discharges are subject to different requirements under the Order depending on whether they are discharged to ASBS.

**Non-storm water discharges outside ASBS:**
Non-storm water discharges must be effectively prohibited unless they are authorized by a separate NPDES permit or are conditionally exempt under provisions of the Order consistent with 40 CFR, §122.26 (d)(2) (iv)(B). Non-storm water discharges that are not specifically or conditionally exempted by this Order are subject to the existing regulations for point source discharges. Conditionally exempt non-storm water discharges that are found to be significant sources of pollution are to be effectively prohibited.

*Discussion of Agricultural Return Flows:*
The Department (2007a) indicated in its Non-Storm Water Report that agricultural irrigation water return flows carrying pollutants pass under the Department's ROW in many locations and enter its MS4. Agricultural return flows are not prohibited or conditionally exempted non-storm water discharges and are not subject to the non-storm water requirements of the Order.

The regulations conditionally exempt MS4s from the requirement to effectively prohibit "irrigation water" discharges to the MS4. The regulations also completely exempt MS4s from addressing non-storm water discharges (also called "illicit discharges") if they are regulated by

an NPDES permit (40 C.F.R., §§ 122.26(b)(2); 122.26(d)(2)(iv)(B)). The term "irrigation water" is not defined and the regulations do not clarify whether that term is intended to encompass agricultural return flows that may run on to the Department's rights of way.

Because agricultural return flows cannot be regulated by an NPDES permit, it is unlikely that they were intended to be treated as "illicit discharges" under the federal MS4 regulations. In discussing illicit non-storm water discharges and the requirement to effectively prohibit such discharges, the preamble of the Phase I final regulations states: "The CWA prohibits the *point source* discharge of non-storm water not subject to an NPDES permit through municipal separate storm sewers to waters of the United States. Thus, classifying such discharges as illicit properly identifies such discharges as being illegal" (55 FR 47996) (emphasis added). Implicit in this statement is that illicit discharges do not include non-point source discharges, including agricultural return flows, which are statutorily excluded from the definition of a point-source discharge (C.W.A., § 502(14)).[13]

Clean Water Act Section 402(l)(1) states that an NPDES permitting agency "shall not require a permit under this section for discharges composed entirely of return flows from irrigated agriculture." Accordingly, agricultural return flows co-mingling with an illicit discharge would be treated as a point source discharge. This fact, however, does not lead the State Water Board to find that agricultural return flows should be subject to the conditional prohibition on non-storm water discharges.

First, the illicit discharge prohibition acts to prevent non-storm water discharges "*into* the storm sewers" (C.W.A., § 402(p)(3)(B)(ii)) (emphasis added). Based on a plain reading of the statutory language,[14] a determination of what constitutes an illicit discharge should be made with reference to the nature of the discharge as it enters the MS4. Unless the agricultural return flow has co-mingled with a point source discharge prior to entering the MS4, it is not subject to the discharge prohibition. Further, since certain point source discharges are conditionally exempted from the requirement for effective prohibition under 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B)(*1*), the fact that the agricultural return flow may have co-mingled with such an exempted dry weather point source discharge prior to entering the MS4 does not render it an illicit discharge subject to the effective prohibition. [15] *See Fishermen Against the Destruction of the Environment, Inc. v. Closter Farms, Inc. (11th Cir. 2002)* 300 F.3d 1294.

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[13] Elsewhere in the preamble, EPA refers to the conditionally exempted non-storm water discharges as "seemingly innocent flows that are characteristic of human existence *in urban environments* and which discharge to municipal separate storm sewers" (55 F.R.48037) (emphasis added). This language further suggests that the term "irrigation water" was not intended to encompass irrigation return flows characteristic of a rural area.

[14] 40 C.F.R. §122.26(d)(2)(iv)(B)(*1*) similarly states that the MS4 is to "prevent illicit discharges *to* the municipal separate storm sewer system." (Emphasis added.)

[15] The Federal Register discussion clarifies that "irrigation return flows are excluded from regulation under the NPDES program," but that "joint discharges," i.e. discharges with a component "from activities unrelated to crop production" may be regulated (55 FR 47996).

Second, even assuming that the agricultural return flow mingling with a point source discharge *after* entering the MS4 would trigger the requirements related to non-storm water discharges, agricultural return flows are not expected to require an effective prohibition. Irrigation of agricultural fields typically occurs in dry weather, not wet weather, and therefore the State Water Board anticipates that irrigation return flows into the Department's MS4 would generally not co-mingle with discharges other than exempt non-storm water discharges.

Further, agricultural return flows entering an MS4, while not regulated by an NPDES permit, are through much of the State regulated under WDRs, waivers, and Basin Plan prohibitions. The regulations exempt MS4s from addressing non-storm water discharges that are regulated by an NPDES permit. Flows to the Department's MS4 regulated through state-law based permits are subject to regulatory oversight analogous to being subject to an NPDES permit. The appropriate regulatory mechanism for these discharges is the non-point source regulatory programs and not a municipal storm water permit.[16]

**Non-Storm Water Discharges to ASBS:**
Non-storm water discharges to ASBS are prohibited except as specified in the General Exception. Certain enumerated non-storm water discharges are allowed under the General Exception if essential for emergency response purposes, structural stability, slope stability, or if occur naturally.

*Discussion of Utility Vault Discharges:*
In addition, an NPDES permitting authority may authorize non-storm water discharges to an MS4 with a direct discharge to an ASBS to the extent the NPDES permitting authority finds that the discharge does not alter natural ocean water quality in the ASBS. This Order allows utility vault discharges to segments of the Department MS4 with a direct discharge to an ASBS, provided the discharge is authorized by the General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Water, NPDES No. CAG 990002. The State Water Board is in the process of reissuing the General NPDES Permit for Utility Vaults. As part of the renewal, the State Water Board will require a study to characterize representative utility vault discharges to an MS4 with a direct discharge to an ASBS and will impose conditions on such discharges to ensure the discharges do not alter natural ocean water quality in the ASBS. Given the limited number of utility vault discharges to MS4s that discharge directly to an ASBS, the State Water Board finds that discharges from utility vaults and underground structures to MS4s with a direct discharge to an ASBS are not expected to result in the MS4 discharge causing a substantial alteration of natural ocean water quality in the ASBS in the interim period while the General NPDES Permit for Discharges from Utility Vaults is renewed and the study is completed. However, if a Regional Water Board determines a specific discharge from a utility vault or underground structure does alter the natural ocean water quality in an ASBS, the Regional Water Board may prohibit the discharge as specified in this Order. It should also be noted that, under the California Ocean Plan Section III.E.2

[16] It should also be noted that the Department has limited control options since up gradient flows such as agricultural runoff must in many cases be allowed to flow under or alongside the roadway so as to not threaten roadway integrity.

(Implementation Provisions for ASBS), limited-term activities that result in temporary and short-term changes in existing water quality in the ASBS may be permitted.

**EFFLUENT LIMITS**

The State of California Nonpoint Source Program Five-Year Implementation Plan (SWRCB, 2003) (the Plan) describes a variety of pollutants in urban storm water and non-storm water that are carried in MS4 discharges to receiving waters. These include oil, sand, de-icing chemicals, litter, bacteria, nutrients, toxic materials and general debris from urban and suburban areas. The Plan identifies construction as a major source of sediment erosion and automobiles as primary sources of petroleum hydrocarbons.

The Natural Resources Defense Council (NRDC) also identified two main causes of storm water pollution in urban areas (NRDC, 1999). Both identified causes are directly related to development in urban and urbanizing areas:

1. Increased volume and velocity of surface runoff. There are three types of human-made impervious cover that increase the volume and velocity of runoff: (i) rooftops, (ii) transportation imperviousness, and (iii) non-porous (impervious) surfaces. As these impervious surfaces increase, infiltration will decrease, forcing more water to run off the surface, picking up speed and pollutants.
2. The concentration of pollutants in the runoff. Certain industrial, commercial, residential and construction activities are large contributors of pollutant concentrations in urban runoff. As human population density increases, it brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc.

   As a result of these two causes, runoff leaving developed urban areas is significantly greater in volume, velocity, and pollutant load than pre-development runoff from the same area.

NPDES storm water permits must meet applicable provisions of sections 301 and 402 of the Clean Water Act. For discharges from an MS4, Clean Water Act section 402(p)(3)(B)(iii) requires control of pollutants to the maximum extent practicable (MEP). A permitting agency also has the discretion to require dischargers to implement more stringent controls, if necessary, to meet water quality standards (*Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1166.), (discussed below under Receiving Water Limitations).

MEP is the technology-based standard established by Congress in Clean Water Act section 402(p)(3)(B)(iii) that municipal dischargers of storm water must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve. MEP is generally achieved by emphasizing pollution prevention and source control BMPs as the first lines of defense in combination with structural and treatment methods where appropriate. The MEP approach is an ever evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling urban runoff continues to evolve, so does that which constitutes MEP.

In a precedential order (State Water Board Order WQ 2000-11 (In the Matter of the petitions of the Cities of Bellflower et al.)), the State Water Board has stated as follows:

> While the standard of MEP is not defined in the storm water regulations or the Clean Water Act, the term has been defined in other federal rules. Probably the most comparable law that uses the term is the Superfund legislation, or CERCLA, at section 121(b). The legislative history of CERCLA indicates that the relevant factors, to determine whether MEP is met in choosing solutions and treatment technologies, include technical feasibility, cost, and state and public acceptance. Another example of a definition of MEP is found in a regulation adopted by the Department of Transportation for onshore oil pipelines. MEP is defined as to "the limits of available technology and the practical and technical limits on a pipeline operator . . . ."
>
> These definitions focus mostly on technical feasibility, but cost is also a relevant factor. There must be a serious attempt to comply, and practical solutions may not be lightly rejected. If, from the list of BMPs, a permittee chooses only a few of the least expensive methods, it is likely that MEP has not been met. On the other hand, if a permittee employs all applicable BMPs except those where it can show that they are not technically feasible in the locality, or whose cost would exceed any benefit to be derived, it would have met the standard. MEP requires permittees to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs would not be technically feasible, or the cost would be prohibitive. Thus while cost is a factor, the Regional Water Board is not required to perform a cost-benefit analysis.

The final determination of whether a municipality has reduced pollutants to the maximum extent practicable can only be made by the permitting agency, and not by the discharger.

Because of the numerous advances in storm water regulation and management and the size of the Department's MS4, this Order does not require the Department to fully incorporate and implement all advances in a single permit term. The Order allows for prioritization of efforts to ensure the most effective use of available funds.

This Order will have an impact on costs to the Department above and beyond the costs from the Department's prior permit. Such costs will be incurred in complying with the post-construction, hydrograph modification, Low Impact Development, and monitoring and reporting requirements of this Order. Additional costs will also be incurred in correcting non-compliant discharges. Recognizing that there are cost increases associated with the Order, the State Water Board has prepared a cost analysis to approximate the anticipated cost associated with implementing this permit. The resulting cost analysis is discussed later in this Fact Sheet under the section on "Cost of Compliance and Other MEP Considerations." The cost analysis has been prepared based on available data and is not a cost-benefit analysis.

The individual and collective activities required by this Order and contained in the Department's Storm Water Management Plan (SWMP) meet the MEP standard.

**RECEIVING WATER LIMITATIONS**

Under federal law, an MS4 permit must include "controls to reduce the discharge of pollutants to the maximum extent practicable . . . and such other provisions as . . . the State determines appropriate for the control of such pollutants." (Clean Water Act §402(p)(3)(B)(iii).) The State Water Board has previously determined that limitations necessary to meet water quality standards are appropriate for the control of pollutants discharged by MS4s and must be included in MS4 permits. (State Water Board Orders WQ 91-03, 98-01, 99-05, 2001-15; see also *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F3d 1159.). The Proposed Order accordingly prohibits discharges that cause or contribute to violations of water quality standards.

The Proposed Order further sets out that, upon determination that a Permittee is causing or contributing to an exceedance of applicable water quality standards, the Permittee must engage in an iterative process of proposing and implementing additional control measures to prevent or reduce the pollutants causing or contributing to the exceedance. This iterative process is modeled on receiving water limitations set out in State Water Board precedential Order WQ 99-05 and required by that Order to be included in all municipal storm water permits.

The Ninth Circuit held in *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2011) 673 F.3d 880 that engagement in the iterative process does not provide a safe harbor from liability for violations of permit terms prohibiting exceedances of water quality standards. The Ninth Circuit holding is consistent with the position of the State Water Board and Regional Water Boards that exceedances of water quality standards in an MS4 permit constitute violations of permit terms subject to enforcement by the Boards or through a citizen suit. While the Boards have generally directed dischargers to achieve compliance by improving control measures through the iterative process, the Board retains the discretion to take other appropriate enforcement and the iterative process does not shield dischargers from citizen suits.

The State Water Board has received multiple comments, from the Department and from other interested parties, expressing confusion and concern about the Order provisions regarding receiving water limitations and the iterative process. The Department has commented that the provisions as currently written do not provide the Department with a viable path to compliance with the proposed Order. Other commenters, including environmental parties, support the current language.

As stated above, the provisions in this Order regarding receiving water limitations and the iterative process are based on precedential Board orders. Accordingly, substantially identical provisions are found in the proposed statewide Phase II MS4 NPES permit, as well as the Phase I NPDES permits issued by the Regional Water Boards. In the context of the proposed Phase II MS4 permit, similar comments have been received. Because of the broad applicability of any policy decisions regarding the receiving water limitations and iterative process provisions, the State Water Board has proposed a public workshop to consider this issue and seek public input.

Rather than delay consideration of adoption of the tentative Order in anticipation of any future changes to the receiving water limitations and iterative process provisions that may result from the public workshop and deliberation, the Board has added a specific reopener clause at Section 11.d. to facilitate any future revisions as necessary.

**NUMERIC EFFLUENT LIMITATIONS AND BLUE RIBBON PANEL OF EXPERTS**

Under 40 Code of Federal Regulations section 122.44(k)(2)&(3); the State Water Board may impose BMPs for control of storm water discharges in lieu of numeric effluent limitations.[17]

In 2005, the State Water Board assembled a blue ribbon panel to address the feasibility of including numeric effluent limits as part of NPDES municipal, industrial, and construction storm water permits. The panel issued a report dated June 19, 2006, which included recommendations as to the feasibility of including numeric limitations in storm water permits, how such limitations should be established, and what data should be required (SWRCB, 2006).

The report concluded that “It is not feasible at this time to set enforceable numeric effluent criteria for municipal BMPs and in particular urban discharges. However, it is possible to select and design them much more rigorously with respect to the physical, chemical and/or biological processes that take place within them, providing more confidence that the estimated mean concentrations of constituents in the effluents will be close to the design target.”

Consistent with the findings of the Blue Ribbon Panel and precedential State Water Board orders (State Water Board Orders Nos. WQ 91-03 and WQ 91-04), this Order allows the Department to implement BMPs to comply with the requirements of the Order.

In 1980, the State Water Resources Control Board adopted concentration-based numeric effluent limitations for total nitrogen, total phosphate, total iron, turbidity, and grease and oil for storm water discharges in the Lake Tahoe Basin. The Lahontan Regional Water Board included revised versions of those limitations in Table 5.6-1 of the Water Quality Control Plan for the Lahontan Region (Basin Plan). The numeric effluent limitations in Table 5.6-1 were included in previous iterations of the Department's MS4 permit. This Order does not include

[17] On November 12, 2010, USEPA issued a revision to a November 22, 2002 memorandum in which it had “affirm[ed] the appropriateness of an iterative, adaptive management best management practices (BMP) approach” for improving storm water management over time. In the revisions, USEPA recommended that, in the case the permitting authority determines that MS4 discharges have the reasonable potential to cause or contribute to a water quality excursion, the permitting authority, where feasible, include numeric effluent limitations as necessary to meet water quality standards. However, the revisions recognized that the permitting authority’s decision as to how to express water quality based effluent limitations (WQBELs), i.e. as numeric effluent limitations or BMPs, would be based on an analysis of the specific facts and circumstances surrounding the permit. USEPA has since invited comment on the revisions to the memorandum and will be making a determination as to whether to “either retain the memorandum without change, to reissue it with revisions, or to withdraw it.” http://www.epa.gov/npdes/pubs/sw_tmdlwla_comments_pdf.

these referenced numeric effluent limitations. The TMDL for sediment and nutrients in Lake Tahoe, approved by USEPA on August 16, 2011, removed statements from the Basin Plan requiring the effluent limitations in Table 5.6-1 to apply to municipal jurisdictions and the Department. The Lake Tahoe TMDL would constitute cause for permit revocation and reissuance in accordance with 40 Code of Federal Regulations section 122.62(a)(3), so the removal of the referenced numeric effluent limitations is consistent with 40 Code of Federal Regulations section 122.44(l)(1). Further, any water quality based effluent limitations in MS4 permits are imposed under section 402(p)(3)(B) of the Clean Water Act rather than under section 301(b)(1)(C), and are accordingly not subject to the antibacksliding requirements of section 402(o). The Order requires compliance with pollutant load reduction requirements established by the Lake Tahoe TMDL for total nitrogen, total phosphorus, and fine sediment particles.

**OTHER PROVISIONS OF THIS ORDER**

**Storm Water Management Plan (SWMP)**

The SWMP describes the procedures and practices that the Department proposes to reduce or eliminate the discharge of pollutants to storm drainage systems and receiving waters. On May 17, 2001, the State Water Board approved a Storm Water Management Plan submitted by the Department. That SWMP was updated in 2003 (Department, 2003c) and the updates were approved by the Executive Director of the State Water Board on February 13, 2003. On January 15, 2004, the Department submitted a proposed Storm Water Management Plan as part of its NPDES permit application to renew its previous statewide storm water permit (Order No. 99-06-DWQ). The State Water Board and Regional Water Board staff and the Department discussed and revised Best Management Practices (BMP) controls and many other components proposed in each section of the SWMP during numerous meetings from January 2004 to 2006. The Department submitted a revised SWMP in June 2007 (Department, 2007c). The 2004 and 2007 SWMPs have not been approved by the State Water Board and the Department has continued to implement the 2003 SWMP. The Department is in the process of revising aspects of the 2003 SWMP to address the Findings of Violation and Order for Compliance issued by USEPA in 2011 (USEPA Docket No. CWA-09-2011-0001).

This Order requires the Department to update, maintain and implement an effective SWMP that describes how the Department will meet requirements of this Order. Within one year of the effective date of the Order, the Department shall submit for Executive Director approval a SWMP consistent with the provisions and requirement of the Order. The SWMP is an integral and enforceable component of this Order and is required to be updated on an annual basis.

In ruling upon the adequacy of federal regulations for discharges from small municipal storm sewer systems, the court in *Environmental Defense Center v. United States EPA* (9th Cir. 2003) 344 F.3d 832 held that NPDES “notices of intent” that required the inclusion of a proposed storm water management program (SWMP) are subject to the public participation requirements of the federal Clean Water Act because they are functionally equivalent to NPDES permit applications and because they contain “substantive information” about how the operator will reduce its discharges to the maximum extent practicable. By implication, the public participation requirements of the Clean Water Act may also apply to proposals to revise

the Department's SWMP. Although the Proposed Order contains significantly more detailed and prescriptive requirements for achievement of MEP than previously adopted orders for the Department, some of the substantive information about how MEP will be achieved is arguably still set out in the SWMP. This Order accordingly provides for public participation in the SWMP revision process. However, because there may be a need for numerous revisions to the SWMP during the term of this Order, a more streamlined approach to SWMP revisions is needed to provide opportunities for public hearings while preserving the State Water Board's ability to effectively administer its NPDES storm water permitting program. (See *Costle v. Pacific Legal Foundation* (1980) 445 U.S. 198, 216-221, *Natural Resources Defense Council v. Costle* (9th Cir. 1977) 568 F.2d 1369, 1382.)

This Order establishes that revisions to the SWMP requiring Executive Director approval will be publicly noticed for thirty days on the State Water Board's website (except as otherwise specified). During the public notice period, a member of the public may submit a written comment or request that a public hearing be conducted. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. Upon review of the request or requests for a public hearing, the Executive Director may, in his or her discretion, schedule a public hearing to take place before approval of the SWMP revision. The Executive Director shall schedule a hearing if there is a significant degree of public interest in the proposed revision. If no public hearing is conducted, the Executive Director may approve the SWMP revision if it meets the conditions set forth in this Order. Any SWMP revision approved by the Executive Director will be posted on the State Water Board's website.

The Department references various policies, manuals, and other guidance related to storm water in the SWMP. These documents are intended to facilitate implementation of the SWMP and must be consistent with all requirements of the Order.

In addition to the annual submittal of the proposed SWMP revisions, this Order also requires the Department to submit workplans that explain how the program will be implemented in each District. The purpose of the workplans is to bring the proposed statewide program of the SWMP to the practical and implementable level at the District, watershed, and water body level.

*Legal Authority*

The Department has submitted a certification of adequate legal authority to implement the program. Through implementation of the storm water program, the Department may find that the legal authority is, in fact, not adequate. This Order requires the Department to reevaluate the legal authority each year and recertify that it is adequate. The Department is required to submit the Certification of the Adequacy of Legal Authority as part of the Annual Report each year. If it becomes clear that the legal authority is not adequate to fully implement the SWMP and the requirements of this Order, the Department must seek the authority necessary for implementation of the program.

**SWMP Implementation Requirements**

*Management and Organization*

The Department must maintain adequate funding to implement an effective storm water program and must submit an analysis of the funding each year. This includes a report on the funding that is dedicated to storm water as well as an estimate of the funding that has been allocated to various program elements that are not included in the storm water program funding. An example of this would be to estimate the funding that has been made available to the Maintenance Program to implement the development of Maintenance Facility Pollution Prevention Plans (FPPP) and to implement the Best Management Practices (BMPs) that are necessary for water quality.

The Department's facilities and rights-of-way may cross or overlap other MS4s. The Department is required to coordinate their activities with other municipalities and local governments that have responsibility for storm water runoff. This Order requires the Department to prepare a Municipal Coordination Plan describing the approach that the Department will take in establishing communication, coordination, cooperation and collaboration with other storm water management programs.

*Discharge Monitoring and Reporting Program*

Since 1998, the Department has conducted monitoring of runoff from representative transportation facilities throughout California. The key objectives of the characterization monitoring were to produce scientifically credible data on runoff from the Department's facilities, and to provide useful information in designing effective storm water management strategies. Between 2000 and 2003, the Department conducted a three-year characterization monitoring study (Department, 2003b). The study generated over 60,000 data points from over 180 monitoring sites. Results were compared with California Toxics Rule (CTR) objectives and other relevant receiving water quality objectives (USEPA, 2000b). Copper, lead, and zinc were estimated to exceed the CTR objectives for dissolved and total fractions in greater than 50 percent of samples. Diazinon and chlorpyrifos were also found to exceed the California Department of Fish and Game recommended chronic criteria in a majority of samples.

The discharge monitoring program has been structured to focus on the highest priority water quality problems in order to ensure the most effective use of limited funds. A tiered approach is established that gives first priority to monitoring in ASBS and TMDL watersheds. Monitoring in these locations must be conducted pursuant to the applicable requirements of the ASBS Special Protections or TMDL, without limitation as to the number of sites. The second monitoring tier requires the Department to examine and prioritize existing monitoring locations where existing data show elevated levels of pollutants. Fifteen percent of the highest priority sites must be scheduled for retrofit, with a maximum of 100 sites per year.

Monitoring constituents were chosen by the State Water Board from the results of the Department's comprehensive, multi-component storm water characterization monitoring program conducted in 2002 and 2003 and various other characterization studies.

Toxicity in storm water discharges from the Department's rights-of-way has been reported in a number of studies. A 2005 report prepared for the Department by the University of California at

Davis "Toxicity of Storm Water from Caltrans Facilities" reported significant occurrences of acute and chronic toxicity (Department, 2005). Toxicity Identification Evaluations showed toxicity from a number of compounds, including heavy metals, organic compounds, pesticides and surfactants. Toxicity testing is required under the Order, and a workplan for conducting Toxicity Reduction Evaluations is required to be included in the SWMP.

Monitoring data must be filed electronically in the Storm Water Multiple Application Report and Tracking System (SMARTS). Receiving water monitoring data must be comparable[18] with the Surface Water Ambient Monitoring Program (SWAMP), (SWAMP, 2010), and must be uploaded to the California Data Exchange Network (CEDEN).

*Incident Reporting - Non-Compliance and Potential/Threatened Non-Compliance*
The Department may at times be out of compliance with the requirements of this Order. Incidents of non-compliance and potential or threatened non-compliance must be reported to the State and Regional Water Boards. This Order identifies the conditions under which non-compliance reporting will be required. This Order distinguishes between emergency, field, and administrative (procedural) incidents that require notification to the State and Regional Water Boards, and requires that a summary of non-compliance incidents and the subsequent actions taken by the Department to reduce, eliminate and prevent the reoccurrence of the non-compliance be included in the Annual Report.

Emergency, field and administrative incidents are defined in Attachment I and have separate reporting requirements. Generally, failure to meet any permit requirement that is local or regional in nature will be reported to the Regional Water Boards. Attachment I outlines the reporting timelines for the three categories. This reporting will be conducted through the Storm Water Multiple Application Report and Tracking System (SMARTS)[19]. Distribution of this report internally between the State Water Board and any Regional Water Boards will be conducted through this system.

*Project Planning and Design*
In Order WQ 2000-11, the State Water Board considered Standard Urban Storm Water Mitigation Plans (SUSMPs) related to new development and redevelopment. The SUSMPs include a list of BMPs for specific development categories, and a numeric design standard for structural or treatment control BMPs. The numeric design standard created objective and measurable criteria for the amount of runoff that must be treated or infiltrated by BMPs. While this Order does not regulate construction activities, it does regulate the post-construction storm water runoff pursuant to municipal storm water regulations. SUSMPs are addressed in this Order through the numeric sizing criteria that apply to treatment BMPs at specified new and

[18] U.S. EPA defines comparability as the measure of confidence with which one data set, element, or method can be considered as similar to another. Functionally, SWAMP comparability is defined as adherence to the SWAMP Quality Assurance Program Plan and the Surface Water Ambient Monitoring Program Information Management Plan.

[19] https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp

redevelopment projects and through requirements to implement Low Impact Development through principles of source control, site design, and storm water treatment and infiltration.

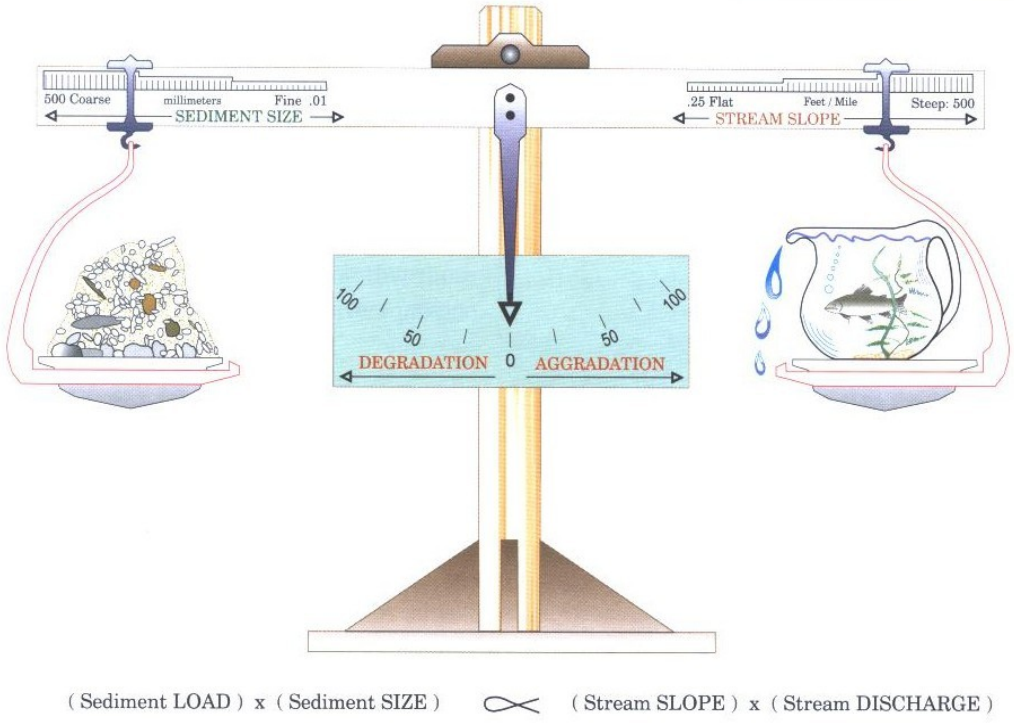
The Order provides the Department with an alternative compliance method for complying with the Treatment Control BMP numeric sizing criteria for projects where on-site treatment is infeasible. Under that method, the Department may propose complying with the requirements by installing and maintaining equivalent treatment BMPs at an offsite location (meaning outside of Project Limits) within the watershed, or by contributing funds to achieve the same amount of treatment at a regional project within the watershed. This compliance method will provide some flexibility to the Department in meeting the treatment control requirements.

*Hydromodification and Channel Protection*

Department development and redevelopment projects have the potential to negatively impact stream channels and downstream receiving waters. The potential impacts of hydromodification by Department projects must be assessed in the project planning and design stage, and measures taken to mitigate them. This section describes the rationale and approach for the hydromodification and channel protection requirements.

A dominant paradigm in fluvial geomorphology holds that streams adjust their channel dimensions (width and depth) in response to long-term changes in sediment supply and bankfull discharge. The bankfull stage corresponds to the discharge at which channel maintenance is the most effective, that is, the discharge at which the moving sediment, forming or removing bars, and forming or changing bends and meanders, are doing work that results in the average morphologic characteristics of channels (Finkenbine, 2000). A.W. Lane showed the generalized relationship between sediment load, sediment size, stream discharge and stream slope, as shown in Figure 1, (Rosgen, 1996). A change in any one of these variables sets up a series of mutual adjustments in the companion variables resulting in a direct change in the physical characteristics of the stream channel.

**Figure 1 - Schematic of the Lane Relationship**



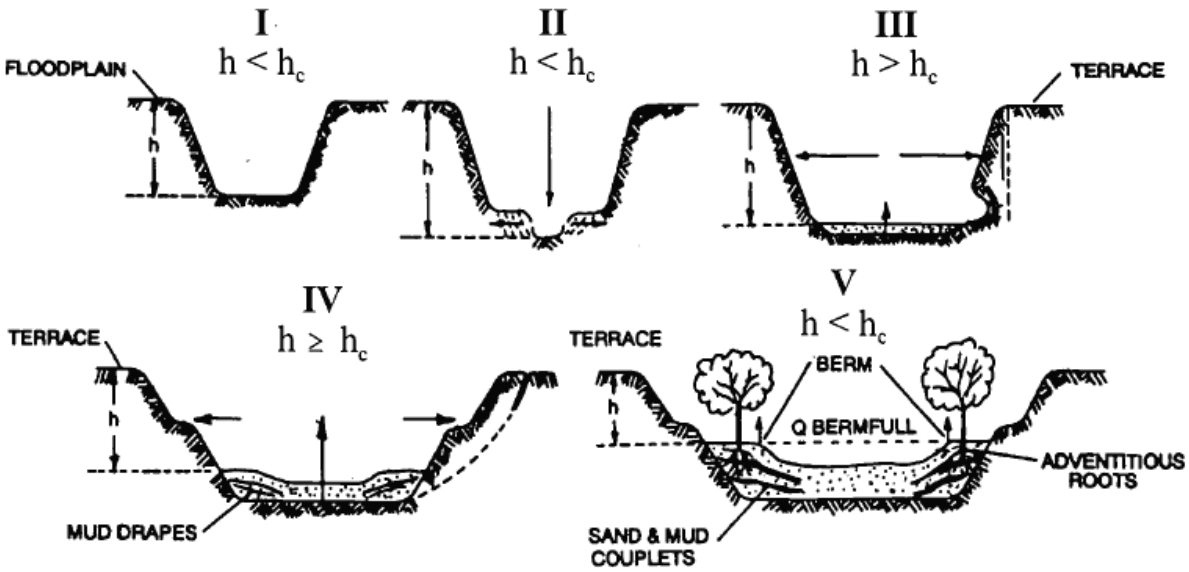

***After Lane (1955) as cited in Rosgen (1996)***

Stream slope times stream discharge (the right side of the scale) is an approximation of stream power, a unifying concept in fluvial geomorphology (Bledsoe, 1999). Urbanization generally increases stream power and affects the resisting forces in a channel (represented as sediment load and sediment size on the left side of the scale).

During construction, sediment loads can increase from 2 to 40,000 times over pre-construction levels (Goldman, 1986). Most of this sediment is delivered to stream channels during large, episodic rain events (Wolman, 2001). This increased sediment load leads to an initial aggradation phase where stream depths may decrease as sediment fills the channel, leading to a decrease in channel capacity and an increase in flooding and overbank deposition. A degradation phase initiates after construction is completed.

Schumm et al (Schumm, 1984) developed a channel evolution model that describes the series of adjustments from initial downcutting, to widening, to establishing new floodplains at lower elevations (Figure 2).

**Figure 2 - Channel Changes Associated with Urbanization**




h = bank height

$h_c$ = critical bank height (the bank is susceptible to failure when bank heights are greater than critical bank height. Stable banks have low angles and heights).

*After Incised Channel Evolution Sequence in Schumm et al. 1984*

Channel incision (Stage II) and widening (Stages III and to a lesser degree, Stage IV) are due to a number of fundamental changes on the landscape. Connected impervious area and compaction of pervious surfaces increase the frequency and volume of bankfull discharges (Stein, 2005; Booth, 1997), resulting in an increase in stream power. Increased drainage density (miles of stream length per square mile of watershed) also affects receiving channels (May, 1998; SCVURPPP, 2002). Increased drainage density and hydraulic efficiency leads to an increase in the frequency and volume of bankfull discharges because the time of concentration is shortened. Flows from engineered pipes and channels are also often "sediment starved" and seek to replenish their sediment supply from the channel.

Encroachment of stream channels can also lead to an increase in stream slope, which leads to an increase in stream power. In addition, watershed sediment loads and sediment size (with size generally represented as the median bed and bank particle size, or $d_{50}$) decrease during urbanization (Finkenbine, 2000; Pizzuto, 2000). This means that even if pre- and post-development stream power are the same, more erosion will occur in the post-development stage because the smaller particles are less resistant.

As shown in Stages II and III, the channel deepens and widens to accommodate the increased stream power (Hammer, 1973; Booth, 1990) and decrease in sediment load and sediment size. Channels may actually narrow as entrained sediment from incision is deposited laterally in the channel (Trimble, 1997). After incised channels begin to migrate laterally (Stage III), bank erosion begins, which leads to general channel widening (Trimble, 1997). At this point, a majority of the sediment that leaves a drainage area comes from within the channel, as opposed to the background and construction related hillslope contribution (Trimble, 1997). Stage IV is characterized by more aggradation and localized bank instability. Stage V represents a new quasi-equilibrium channel morphology in balance with the new flow and sediment supply regime. In other words, stream power is in balance with sediment load and sediment size.

The magnitude of the channel morphology changes discussed above varies along a stream network as well as with the age of development, slope, geology (sand-bedded channels may cycle through the evolution sequence in a matter of decades whereas clay-dominated channels may take much longer), watershed sediment load and size, type of urbanization, and land use history. It is also dependent on a channel's stage in the channel evolution sequence when urbanization occurs. Management strategies must take into account a channel's stage of adjustment and account for future changes in the evolution of channel form (Stein, 2005).

The hydromodification requirements in this Order are based on established Federal Highway Administration procedures for assessing stream stability at highway crossings. These procedures are geomorphically based and have historically been used to inform bridge and culvert design and to ensure that these structures are not impacted by decreased lateral and vertical stability (FHWA, 2001; FHWA, 2006). Maintaining lateral and vertical stability will not only protect highway structures but will serve the broader interest of maintaining stable stream form and function.

These hydromodification requirements are risk based and reflect the concept that stable channels (as determined from a Level 1 rapid analysis) do not have to undergo any further analysis and that hydrology-based design standards are protective.

If stream channels are determined to be laterally and or vertically unstable, the analysis procedures are much more rigorous and the mitigation measures are potentially more extensive. There is support in the literature for the type of tiered, risk-based approach taken in this Order (Booth, 1990; Watson, 2002; Bledsoe, 2002; Bledsoe et al., 2008).

California Senate Bill 857 (2006) amended Article 3.5 of the Streets and Highways Code to require the Department to assess and remediate barriers to passage of anadromous fish at stream crossings along the State Highway System. The bill also requires the Department to, among other things, prepare an annual report to the legislature on the status of the Department's efforts in locating, assessing, and remediating barriers to fish passage. Waters of the State supporting the beneficial use of fish migration could be adversely impacted by improperly designed or maintained stream crossings, or through natural channel evolution processes. Accordingly, this Order requires the Department to also submit the annual report required under SB 857 to the State Water Board.

*Low Impact Development (LID)*

On January 20, 2005, the State Water Board adopted sustainability as a core value for all California Water Boards' activities and programs, and directed State Water Board staff to consider sustainability in all future policies, guidelines, and regulatory actions. Sustainability can be achieved through appropriate implementation of the LID techniques required by this Order.

The proper implementation of LID techniques not only results in water quality protection benefits and a reduction of land development and construction costs, but also enhances property values, and improves habitat, aesthetic amenities, and quality of life (USEPA, 2007). Further, properly implemented LID techniques reduce the volume of runoff leaving a newly developed or re-developed area thereby lowering the peak rate of runoff, and thus minimizing the adverse effects of hydromodification on stream habitat (SWRCB, 2007). The requirements of this Order facilitate the implementation of LID strategies to protect water quality, reduce runoff volume, and to promote sustainability.

Unlike traditional storm water management, which collects and conveys storm water runoff through storm drains, pipes, or other conveyances to a centralized storm water facility, LID takes a different approach by using site design and storm water management to maintain the site's pre-development runoff rates and volumes. The goal of LID is to mimic a site's pre-development hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall. LID has been a proven approach in other parts of the country and is seen in California as an alternative to conventional storm water management.

LID is a tool that can be used to better manage natural resources and limit the pollution delivered to waterways. To achieve optimal benefits, LID needs to be integrated with watershed planning and appropriate land use programs. LID by itself will not deliver all the water quality outcomes desired; however, it does provide enhanced storm water treatment and mitigates increased volume and flow rates (SWRCB, 2007).

This Order approaches LID through source control design principles, site design principles and storm water treatment and infiltration principles. Source control and site design principles are required as applicable to provide enough flexibility such that projects are not forced to include inappropriate or impractical measures. Not all of the storm water treatment and infiltration principles identified in the Order are required to be implemented but are listed in order of preference with the most environmentally protective and effective alternatives listed first.

*BMP Development and Implementation*

The Department has developed a BMP program for control of pollutants from existing facilities and for new and reconstructed facilities. This BMP program includes development, construction, maintenance and evaluation of BMPs, and investigation of new BMPs. The goal of BMP implementation is to control the discharge of pollutants to the applicable standards.

While erosion control BMPs are typically used on construction sites, some are used as permanent, post-construction BMPs. Typical erosion control BMPs involve use of straw or fiber rolls and mats. These rolls and mats are often held together by synthetic mesh or netting.

Synthetic materials are persistent in the environment and have been found to be a source of pollutants, trash (Brzozowski, 2009), and hazard to wildlife through entrapment (Brzozowski, 2009; Barton and Kinkead, 2005; Walley et al, 2005; Stuart et al, 2001). For erosion control products used as permanent, post-construction BMPs, this Order requires the use of biodegradable materials, and the removal of any temporary erosion control products containing synthetic materials when they are no longer needed. Biodegradable materials are required in erosion control products used by the Departments of Transportation in the states of Delaware and Iowa (Brzozowski, 2009). Use of synthetic (plastic) materials is also prohibited through a Standard Condition in Streambed Alteration Agreements by the California Department of Fish and Game, Region 1 (Van Hattem, personal communication, 2009).

*Potential Unintended Public Health Concerns Associated with Structural BMPs*
The Department worked collaboratively with the California Department of Public Health (CDPH) on a comprehensive, multi-component monitoring program of more than 120 structural BMPs for mosquito production (Department, 2004). The data revealed that certain BMPs may unintentionally create habitat suitable for mosquitoes and other vectors. The California Health and Safety Code prohibits landowners from knowingly providing habitat for or allowing the production of mosquitoes and other vectors, and gives local vector control agencies broad inspection and abatement powers. This Order requires the Department to comply with applicable provisions of the Health and Safety Code and to cooperate and coordinate with CDPH and local mosquito and vector control agencies on vector control issues in the Department's MS4.

*Construction*
The Department's construction activities were previously regulated under the MS4 permit (Order 99-06-DWQ), which required the Department to comply with the substantive provisions of the CGP but not the requirement to file separate notices of intent for each construction project. Some Regional Water Boards have had difficulty enforcing the provisions of the CGP when enrollment under that permit is not required. This Order requires the Department to file for separate coverage for each construction project under the CGP. This change is expected to increase the Department's accountability for discharges from construction sites and improve the ability of the Regional Water Boards to take enforcement actions as necessary.

Though discharges from construction activities are not regulated under this Order, any discharges from a site occurring after completion of construction (i.e. post-construction discharges) are fully subject to the requirements of this Order.

Some Department construction-related activities such as roadway and parking lot repaving and resurfacing may mobilize pollutants, even though they may not trigger coverage under the CGP. Such activity may discharge pollutants to the environment, however. BMPs for the control of such discharges are specified in the Department's Project Planning and Design Guide and Construction Site BMP Field Manual and Trouble Shooting Guide, and in the California Stormwater Quality Association (CASQA) California Stormwater BMP Handbook (Department, 2010; Department, 2003a); (CASQA, 2009). The Department is required to implement BMPs to control such discharges.

Because some Department construction projects may not involve grading or land disturbance of one acre or more, these smaller projects do not trigger requirements to enroll under the Construction General Permit. This Order requires the Department to implement BMPs to control discharges from such projects to the MEP. Failure to implement appropriate BMPs is a violation of this Order.

*Maintenance Program Activities*

Preservation of vegetation is an effective method for the control of pollutants in runoff; however the Department must control vegetation in its rights-of-way for purposes of traffic safety and nuisance. The Department currently implements a vegetation control program with a stated purpose of minimizing the use of agricultural chemicals and maximizing the use of appropriate native and adapted vegetation for erosion control, filtering of runoff, and velocity control.

Notwithstanding the Department's commitment to reduce the use of agricultural chemicals, the Department reported a total amount of 208,549 pounds of herbicide used in the 2008-2009 Storm Water Management Program Annual Report (Department (2010a); CTSW-RT-10-182-32.1). Reported reasons for increased herbicide usage included:

1. Local weather conditions, such as increased rainfall, leading to increased weed production.
2. The need to address new mandates for fire suppression (fuel abatement) adjacent to roadways.
3. Requests from local cities and counties.
4. Increase in or outbreaks of noxious weeds in areas adjacent to farmland.

This Order contains detailed requirements for the control of vegetation and reporting requirements for the use of agricultural chemicals.

The Department's maintenance facilities discharge pollutants to the MS4. This Order requires the Department to prepare Facility Pollution Prevention Plans (FPPPs) for all maintenance facilities. The Department is also required to implement BMP programs at each facility as necessary and periodically inspect each facility.

Spill cleanup is part of the Department's maintenance program. This Order requires the Department to ensure that spills on its rights-of-way are fully and appropriately cleaned up, and to provide appropriate notifications to local municipalities which may be affected by the spill. The Department is also required to notify the appropriate Regional Water Board of any spill with the potential to impact receiving waters.

This Order requires the Department to monitor and clean storm drain inlets when they have reached 50 percent capacity. The Department must initiate procedures contained in an Illegal Connection/Illicit Discharge (IC/ID) and Illegal Dumping Response Plan where storm water structures are found to contain excessive material resulting from illegal dumping, and it must determine if enhanced BMPs are needed at the site.

This Order requires the Department to implement the BMPs and other requirements of the SWMP and this Order to reduce and eliminate IC/IDs. It also requires the Department to prepare a Storm Drain System Survey Plan and an Illegal Dumping Response Plan.

*Facilities Operations*
There is potential for the discharge of pollutants from Department facilities during rain events. The discharge of pollutants from facilities not covered by the IGP will be reduced to the MEP through the appropriate implementation of BMPs.

This Order requires the Department to file an NOI for coverage under the IGP for industrial facilities as specified in Attachment 1 of the IGP. This requirement is expected to increase the Department's accountability for discharges from industrial facilities and improve the ability of the Regional Water Boards to take enforcement actions as necessary.

*Department Activities Outside the Department's Right-of-Way*
Facilities and operations outside the Department's ROW may support various Department activities. Facilities may include concrete or asphalt batch plants, staging areas, concrete slurry processing or other material recycling operations, equipment and material storage yards, material borrow areas, and access roads. Facilities may be operated by the Department or by a third party. The Department is required to include provisions in its contracts that require the contractor to obtain and comply with applicable permits for facilities and operations outside the Department's ROW when these facilities are active for the primary purpose of accommodating Department activities.

*Non-Department Projects and Activities*
Non-Department projects and activities include construction projects or other activities conducted by a third party within the Department's ROW. The Department is responsible for runoff from all non-Department projects and activities in its rights-of-way unless a separate permit is issued to the other entity. At times, local municipalities or private developers may undertake construction projects or other activities within the Department's ROW. The Department may exercise control or oversight over these third party projects or activities through encroachment permits or other means. This Order sets project planning and design requirements for non-Department projects.

*Management Activities for Non-Storm Water Discharges*
Non-storm water discharges are dry weather flows that do not originate from precipitation events. Non-storm water discharges are illicit discharges and are prohibited by the federal regulations (40 C.F.R., § 122.26 (d)(2)(iv)(B)(*1*)) unless exempted or separately permitted. Procedures for prohibiting illicit discharges and illegal connections, and for responding to illegal dumping and spills are needed to prevent environmental damage and must be described in the SWMP.

*Training and Public Education*
Education is an important element of municipal storm water runoff management programs. USEPA (2005) finds that "An informed and knowledgeable community is crucial to the success of a storm water management program since it helps ensure the following: Greater support for the program as the public gains a greater understanding of the reasons why it is necessary and important, [and] greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters."

USEPA also states “The public education program should use a mix of appropriate local strategies to address the viewpoints and concerns of a variety of audiences and communities, including minority and disadvantaged communities, as well as children.”

This Order requires the Department to implement a Training and Public Education program. The Training and Public Education program focuses on three audiences: Department employees, Department contractors, and the general public. The Department must implement programs for all three audiences. The Training and Public Education program is considered a BMP and an analysis of its effectiveness is needed.

*Program Evaluation*

This Order requires the Department to evaluate the effectiveness and adequacy of the storm water program on an annual basis. This includes both water quality monitoring and a self-audit of the program. The audit is intended to determine the effectiveness of the storm water and non-storm water programs through the evaluation of factors and program components such as:

1. Storm water and non-storm water discharges, including pollutant concentrations from locations representative of the Department’s properties, facilities, and activities;
2. Maintenance activity control measures;
3. Facility pollution prevention plans;
4. Permanent control measures; and
5. Highway operation control measures.

In addition to water quality monitoring and the self-audit, the Department must perform an Overall Program Effectiveness Evaluation each year to determine the effectiveness of the program in achieving environmental and water quality objectives. The scope of the evaluation is expected to increase each year in response to the continuing collection of environmental monitoring data.

*Reporting*

Comprehensive reporting is needed to determine compliance with this Order and to track the effectiveness of the Department’s storm water program over time. A summary of the reports required from the Department is presented in Attachment IX of the Order. The State Water Board and Regional Water Boards have the authority under various sections of the California Water Code to request additional information as needed.

The Department must track, assess and report on program implementation to ensure its effectiveness. In addition to the individual reports referenced above, the Department is required to submit an annual report to the State Water Board by October 1 of each year. The Annual Report must evaluate compliance with permit conditions, evaluate and assess the effectiveness of BMPs, summarize the results of the monitoring program, summarize the activities planned for the next reporting cycle, and, if necessary, propose changes to the SWMP.

**Total Maximum Daily Loads (TMDL)**

Section 303(d) of the Clean Water Act requires States to identify waters (“impaired” water bodies) that do not meet water quality standards after applying certain required technology-based effluent limits. States are required to compile this information in a list and submit the list

to the USEPA for review and approval. This list is known as the Section 303(d) list of impaired waters.

As part of the listing process, States are required to prioritize waters/watersheds for future development of TMDLs. A TMDL is defined as the sum of the individual waste load allocations (WLAs) for point sources of pollution, plus the load allocations (LAs) for nonpoint sources of pollution, plus the contribution from background sources of pollution and a margin of safety. The State Water Board and Regional Water Boards have ongoing efforts to monitor and assess water quality, to prepare the Section 303(d) list, and to subsequently develop TMDLs.

TMDLs are developed by either the Regional Water Boards or USEPA in response to Section 303(d) listings. TMDLs developed by Regional Water Boards include implementation provisions and can be incorporated as Basin Plan amendments. TMDLs developed by USEPA typically contain the total load and load allocations required by Section 303(d), but do not contain comprehensive implementation provisions. Subsequent steps after Regional Water Board TMDL development are: approval by the State Water Board, approval by the Office of Administrative Law, and ultimately, approval by USEPA.

The Department has been assigned mass based and concentration based WLAs for constituents contributing to a TMDL in specific regions. The Department is subject to TMDLs in the North Coast, San Francisco Bay, Central Coast, Los Angeles, Central Valley, Lahontan, Colorado River, Santa Ana, and San Diego Regions. These TMDLs are summarized in Table 1 of this Fact Sheet below, and Table IV.2 of Attachment IV of this Order.

## Table 1. Department Statewide TMDLs

Note*: USEPA Established TMDL.
Note**: OAL Approved, USEPA Approval Pending.

| Water Body | Pollutant | USEPA Approved/Established |
|---|---|---|
| ***North Coast Region*** | | |
| Albion River * | Sediment | December 2001 |
| Big River * | Sediment | December 2001 |
| Lower Eel River * | Temperature & Sediment | December 18, 2007 |
| Middle Fork Eel River * | Temperature & Sediment | December 2003 |
| South Fork Eel River * | Sediment & Temperature | December 16, 1999 |
| Upper Main Eel River and Tributaries (including Tomki Creek, Outlet Creek and Lake Pillsbury) * | Sediment & Temperature | December 29, 2004 |
| Garcia River | Sediment | March 16, 1998 |
| Gualala River * | Sediment | November 29, 2004 |
| Klamath River | Temperature, Dissolved Oxygen, Nutrient, & Microcystin | December 28, 2010 |
| Lost River | Nitrogen and Biochemical Oxygen Demand | December 30, 2008 |
| Mad River * | Sediment & Turbidity | December 21, 2007 |
| Navarro River * | Temperature & Sediment | December 27, 2000 |
| Noyo River * | Sediment | December 16, 1999 |
| Redwood Creek * | Sediment | December 30, 1998 |
| Scott River | Sediment and Temperature | August 11, 2006 |
| Shasta River | Dissolved Oxygen & Temperature | January 26, 2007 |
| Ten Mile River * | Sediment | December 2000 |
| Trinity River * | Sediment | December 20, 2001 |
| South Fork Trinity River and Hayfork Creek * | Sediment | December 1998 |
| Van Duzen River & Yager Creek * | Sediment | December 16, 1999 |

| Water Body | Pollutant | USEPA Approved/Established |
|---|---|---|
| ***San Francisco Bay Region*** | | |
| Napa River | Sediment | January 20, 2011 |
| Richardson Bay | Pathogens | December 18, 2009 |
| San Francisco Bay | PCBs | March 29, 2010 |
| San Francisco Bay | Mercury | February 12, 2008 |
| San Pedro and Pacifica State Beach | Bacteria | August 1, 2013 |
| San Francisco Bay Urban Creeks | Diazinon & Pesticide-Related Toxicity | May 16, 2007 |
| Sonoma Creek | Sediment | September 8, 2010 |
| ***Central Coast Region*** | | |
| San Lorenzo River (*includes Carbonera Lompico, Shingle Mill Creeks)* | Sediment | February 19, 2004 |
| Morro Bay *(includes Chorro Creek, Los Osos Creek, and the Morro Bay Estuary)* | Sediment | January 20, 2004 |
| ***Los Angeles Region*** | | |
| Ballona Creek | Metals (Ag, Cd, Cu, Pb, & Zn) and Selenium | December 22, 2005 and reaffirmed on October 29, 2008 |
| Ballona Creek | Trash | August 1, 2002 and February 8, 2005 |
| Ballona Creek Estuary | Toxic Pollutants (Ag, Cd, Cu, Pb, Zn, Chlordane, DDTs, Total PCBs, and Total PAHs) | December 22, 2005 |
| Ballona Creek, Ballona Estuary and Sepulveda Channel | Bacteria | March 26, 2007 |
| Ballona Creek Wetlands * | Sediment and Invasive Exotic Vegetation | March 26, 2012 |
| Calleguas Creek and its Tributaries and Mugu Lagoon | Metals and Selenium | March 26, 2007 |
| Calleguas Creek its Tributaries and Mugu Lagoon | Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation | March 14, 2006 |

| Water Body | Pollutant | USEPA Approved/Established |
|---|---|---|
| Colorado Lagoon | Organochlorine Pesticides, Polychlorinated Biphenyls, Sediment Toxicity, Polycyclic Aromatic Hydrocarbons, and Metals | June 14, 2011 |
| Dominguez Channel, Greater Los Angeles and Long Beach Harbor Waters | Toxic Pollutants: Metals (Cu, Pb, Zn), DDT, PAHs, and PCBs | March 23, 2012 |
| Legg Lake | Trash | February 27, 2008 |
| Long Beach City Beaches and Los Angeles & Long Beach Harbor Waters * | Indicator Bacteria | March 26, 2012 |
| Los Angeles Area (Echo Park Lake) * | Nitrogen, Phosphorus, Chlordane, Dieldrin, PCBs, and Trash | March 26, 2012 |
| Los Angeles Area (Lake Sherwood) * | Mercury | March 26, 2012 |
| Los Angeles Area (North, Center, and Legg Lakes) * | Nitrogen and Phosphorus | March 26, 2012 |
| Los Angeles Area (Peck Road Park Lake) * | Nitrogen, Phosphorus, Chlordane, DDT, Dieldrin, PCBs, and Trash | March 26, 2012 |
| Los Angeles Area (Puddingstone Reservoir) * | Nitrogen, Phosphorus, Chlordane, DDT, PCBs, Hg, and Dieldrin | March 26, 2012 |
| Los Angeles River and Tributaries | Metals | December 22, 2005 and October 29, 2008 & Reopened and Modified on November 3, 2011 |
| Los Angeles River | Trash | July 24, 2008 |
| Los Angeles River Watershed | Bacteria | March 23, 2012 |
| Los Cerritos * | Metals | March 17, 2010 |
| Machado Lake | Pesticides and Polychlorinated Biphenyls | March 20, 2012 |
| Machado Lake | Trash | February 27, 2008 |
| Machado Lake | Eutrophic, Algae, Ammonia, and Odors (Nutrient) | March 11, 2009 |

| Water Body | Pollutant | USEPA Approved/Established |
|---|---|---|
| Malibu Creek Watershed | Bacteria | January 10, 2006, Revised November 8, 2013** |
| Malibu Creek and Lagoon * | Sedimentation and Nutrients to Address Benthic Community Impairments | July 2, 2013 |
| Malibu Creek Watershed | Trash | June 26, 2009 |
| Marina del Rey Harbor | Toxic Pollutants | March 16, 2006 |
| Marina del Rey, Harbor Back Basins, Mothers' Beach | Bacteria | March 18, 2004, Revised November 7, 2013** |
| Revolon Slough and Beardsley Wash | Trash | August 1, 2002 and February 8, 2005 |
| San Gabriel River * | Metals (Cu, Pb, & Zn) and Selenium | March 26, 2007 |
| Santa Clara River Estuary and Reaches 3, 5, 6, and 7 | Coliform | January 13, 2012 |
| Santa Clara River Reach 3 * | Chloride | June 18, 2003 |
| Santa Monica Bay * | DDTs and PCBs | March 26, 2012 |
| Santa Monica Bay Nearshore & Offshore | Debris (trash & plastic pellets) | March 20, 2012 |
| Santa Monica Bay Beaches | Bacteria | June 19, 2003, Revised November 7, 2013** |
| Upper Santa Clara River | Chloride | April 6, 2010 |
| Ventura River Estuary | Trash | February 27, 2008 |
| Ventura River and its Tributaries | Algae, Eutrophic Conditions, and Nutrients | June 28, 2013 |
| ***Central Valley Region*** | | |
| Cache Creek, Bear Creek, Sulphur Creek and Harley Gulch | Mercury | February 7, 2007 |
| Clear Lake | Nutrients | September 21, 2007 |
| Sacramento – San Joaquin Delta | Methylmercury | October 20, 2011 |

| Water Body | Pollutant | USEPA Approved/Established |
|---|---|---|
| ***Lahontan Region*** | | |
| Lake Tahoe | Sediment and Nutrients | August 16, 2011 |
| Truckee River | Sediment | September 16, 2009 |
| ***Colorado River Region*** | | |
| Coachella Valley Storm Water Channel | Bacterial Indicators | April 27, 2012 |
| ***Santa Ana Region*** | | |
| Big Bear Lake | Nutrients for Hydrological Conditions | September 25, 2007 |
| Lake Elsinore and Canyon Lake | Nutrients | September 30, 2005 |
| Rhine Channel Area of the Lower Newport Bay * | Chromium and Mercury | June 14, 2002 |
| San Diego Creek and New Port Bay, including the Rhine Channel * | Metals (Cadmium, Copper, Lead, & Zinc) | June 14, 2002 |
| San Diego Creek and Upper Newport * | Cadmium | June 14, 2002 |
| San Diego Creek Watershed | Organochlorine Compounds (DDT, Chlordane, PCBs, and Toxaphene) | November 12, 2013 |
| Upper & Lower Newport Bay | Organochlorine Compounds (DDT, Chlordane, & PCBs) | November 12, 2013 |
| ***San Diego Region*** | | |
| Chollas Creek | Diazinon | November 3, 2003 |
| Chollas Creek | Dissolved Copper, Lead, and Zinc | December 18, 2008 |
| Rainbow Creek | Total Nitrogen and Total Phosphorus | March 22, 2006 |
| Project 1 – Revised Twenty Beaches and Creek in the San Diego Region (Including Tecolote Creek) | Indicator Bacteria | June 22, 2011 |

The TMDL-based requirements of this Order are not limited to the maximum extent practical (MEP) standard. The TMDL-based requirements have been imposed in accordance with 40 Code of Federal Regulations section 122.44(d)(1)(vii)(B). Pursuant to 40 Code of Federal Regulations section 122.44(d)(1)(vii)(B), the effluent limitations for NPDES permits must be

consistent with the assumptions and requirements of any available WLA for the discharge prepared by the state and approved by EPA, or established by EPA. In addition, Water Code section 13263, subdivision (a), requires that waste discharge requirements implement any relevant water quality control plans (basin plans), including TMDL requirements that have been incorporated into the basin plans.

Effluent limitations for NPDES-regulated storm water discharges that implement WLAs in TMDLs may be expressed in the form of best management practices (BMPs). (See 33 U.S.C. §1342(p)(3)(B)(iii); 40 C.F.R. §122.44(k)(2)&(3).) Where effluent limitations are expressed as BMPs, there should be adequate demonstration in the administrative record of the permit, including in the Fact Sheet, that the BMPs will be sufficient to comply with the WLAs. [20] (See 40 C.F.R. §§ 124.8, 124.9 & 124.18.) The NPDES permit must also specify the monitoring necessary to determine compliance with permit limitations. (See 40 C.F.R. § 122.44(i).) Where effluent limitations are specified as BMPs, the permit should also specify the monitoring necessary to assess if the expected load reductions attributed to BMP implementation are achieved (e.g., BMP performance data). The permit should additionally provide a mechanism to make adjustments to the required BMPs as necessary to ensure their adequate performance[21].

As detailed below, this Order establishes BMP-based requirements for TMDL implementation that are consistent with the requirements and assumptions of the relevant WLAs. This Order further requires implemented BMPs to be monitored for effectiveness and to be adaptively managed for modifications as necessary to achieve WLAs.

***Overview***

The State Water Board and Regional Water Boards have reviewed the WLAs, implementation requirements, and monitoring requirements specified in the adopted and approved Regional Water Board Basin Plans or in USEPA-established TMDLs applicable to the Department. In most of the relevant TMDLs, the Department's contribution to impairment is a small portion of the overall contribution from multiple sources (less than five percent). While the Department is generally a small contributor to impairment, the statewide reach of its highway system means that it is a contributor in numerous impaired watersheds. The Department must comply with applicable TMDLs across the state.

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[20] Establishing Total Maximum Daily Load Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs," Memorandum, USEPA, November 22, 2002. On November 12, 2010, USEPA issued a revision to the November 22, 2002, memorandum, recommending that "where the TMDL includes WLAs for storm water sources that provide numeric pollutant load or numeric surrogate pollutant parameter objectives, the WLA should, where feasible, be translated into numeric WQBELs in the applicable storm water permits." The revision further stated, however, that the permitting authority's decision as to how to express water quality based effluent limitations (WQBELs), i.e. as numeric effluent limitations or BMPs, would be based on an analysis of the specific facts and circumstances surrounding the permit.

[21] *Ibid.*

The fact that one discharger – the Department – must implement requirements for over 84 TMDLs administered by nine Regional Water Boards poses a unique challenge in permitting. Many of the TMDLs are designed to address the same pollutants causing impairment, and progress in achievement of the WLA for these pollutant categories requires implementation of similar control measures coupled with monitoring and adaptive management. In past regulatory actions, however, the Department has been directed to comply with the TMDL requirements by reference to the sections of the relevant basin plan and through coordination with the relevant Regional Water Board. As a result, the Department has devoted significant effort to coordination and exercises to determine the next steps, with limited progress in installing on-the-ground control measures to achieve actual water quality improvements. This Order provides a focused and streamlined process for TMDL compliance so that the Department may proceed as quickly as possible to installation of control measures and monitoring, and adaptive management of those control measures to result in water quality improvements. The Order's TMDL requirements provide consistency in determining compliance requirements, where appropriate. To allow for consistency, with resulting time and cost-efficiency, in achieving compliance with the TMDL requirements applicable to the Department, the State Water Board has developed a set of pollutant category requirements to be implemented by the Department.

The pollutant categories are as follows:

1. Sediment/Nutrients/Mercury/Siltation/Turbidity TMDLs
2. Metals/Toxics/Pesticides TMDLs
3. Trash TMDLs
4. Bacteria TMDLs
5. Diazinon TMDLs
6. Selenium TMDLs
7. Temperature TMDLs
8. Chloride TMDLs

Table IV.2 of Attachment IV of this Order lists all TMDLs applicable to the Department. For each TMDL, Table IV.2 cross-references one or more pollutant category. The Department must implement the cross-referenced pollutant category requirements to achieve compliance with the TMDL provisions of the Order. Where TMDL-specific, rather than, or in addition to, pollutant category-specific permit requirements are appropriate (because of the unique local conditions or specific requirements in the TMDL), those requirements are also noted in Table IV.2. In addition, Table IV.2 cross-references the monitoring, reporting and adaptive management requirements applicable to all pollutant categories.

Attachment IV of this Order recognizes that, because the Department must comply with numerous TMDLs, the Department must phase in implementation requirements for TMDLs over several years. To achieve the highest water quality benefit as quickly as feasible in the permit term, this phase-in must be accomplished in a manner that addresses discharges with the highest impact on water quality first. Accordingly, Attachment IV requires the Department, by October 1, 2014, to prepare and submit an inventory of all impaired reaches subject to TMDLs to which the Department discharges with prioritized implementation of controls for these reaches based on a set of qualitative criteria. In preparing the initial prioritization, the

Department must consider the degree of impairment of the water body, measured by the percent pollution reduction needed to achieve the WLA, the contributing drainage area from the Department's right of way (ROW) relative to the watershed draining to the reach, and the relative proximity of the ROW to the receiving water.

The State Water Board will allow a 30-day public comment period on the Department's initial prioritization and will work with the Department and the Regional Water Boards to compile a final prioritization to be approved by the State Water Board Executive Director. Criteria for final prioritization to be considered by the Department, the State Water Board and Regional Water Boards include:

a. Opportunities for synergistic benefits with existing or anticipated projects or activities within the reach, e.g., cooperative efforts with other dischargers or projects within an ASBS.
b. Multiple TMDLs that can be addressed by a single BMP within a reach.
c. TMDL deadlines specified in a Basin Plan.
d. Regional Water Board and State Water Board priorities.
e. Accessibility for construction and/or maintenance (i.e. safety considerations).
f. Multi-benefit projects that provide benefits in addition to water quality improvement, such as groundwater recharge or habitat enhancement.

In finalizing the prioritization, the State Water Board and Regional Water Boards will consider the compliance date for attainment of the WLAs established in the Basin Plans and may adjust the prioritization accordingly. It is the intent of the State Water Board to have the Department meet listed TMDL deadlines where feasible.

Upon State Water Board Executive Director approval of final prioritization, the Department must implement control measures to achieve 1650 Compliance Units (CUs) per year. One CU is equivalent to one acre of the Department's ROW, from which the runoff is retained, treated, or otherwise controlled prior to discharge to the relevant reach. BMPs installed during construction activities in TMDL watersheds may receive CU credit for that portion of the treatment volume that exceeds the baseline treatment control requirements specified in the Order. A CU may be claimed when the BMP retrofit project enters the Project Initiation Document (PID) phase of implementation per the requirements of the Order. If a BMP retrofit project is not completed within the approved time schedule, the CU(s) will be revoked unless the Executive Director approves a delay.

The determination of the number of CUs the Department must complete each year is based on the objective of addressing every TMDL in Attachment IV within 20 years. A primary factor considered in the determination of the number of CUs to be completed each year is the compliance due date for the final WLA for many of the relevant TMDLs. The State Water Board considered two approaches in determining the annual number of CUs.

The first approach is based on a simple calculation of the number of acres of ROW that must be treated to ensure that all TMDL watersheds are addressed over a 20 year time frame. Data submitted by the Department indicate that there are 68,000 acres of ROW within TMDL watersheds.

It is not possible or necessary to treat 100 percent of the runoff from TMDL watersheds. In evaluating monitoring sites for discharges into ASBS, staff found that approximately 64 percent of the sites considered could not be addressed, either due to access limitations or safety considerations. Similar conditions are expected to exist in TMDL watersheds, although the percentage will not be as high because the terrain found along most of California's coastline is more difficult and rugged than the terrain that typically exists in the rest of the state. Accordingly, for purposes of this calculation based on the Department's preliminary estimates, the percentage of inaccessible/unsafe sites is reduced by one-half for TMDL watersheds, or 32 percent, translating into approximately 22,000 fewer acres (68,000 × 32 percent = 22,000) that must be treated. Therefore, the Department will have to address approximately 46,000 acres of ROW to comply with the TMDL requirements of Attachment IV. With the objective of addressing all TMDLs in Attachment IV within 20 years, the Department must treat or otherwise address 2300 acres per year (46,000 ÷ 20 = 2300) throughout the state within the TMDL watersheds listed in Attachment IV.

The second approach for determination of CUs considered by the State Water Board is based on the Department's updated estimates of ROWs that must be treated. This proposal provided by the Department segregates the TMDLs into eight pollutant categories, similar to those presented in Attachment IV, including sediments, metals, trash and bacteria. The Department proposed annual CU commitments based upon the individual categories, with 600 CUs for sediments, a combined 710 CUs for metals and trash, and 340 CUs for bacteria, for an annual total of 1650 CUs. The proposal does not include other pollutant categories in which the acreage and controls for sediments, metals, trash, and bacteria would overlap with the acreage and controls for these other pollutants. This overlap of coverage was identified for the above categorical annual commitments so that the total ROW acreage requiring treatment equates to 33,000 acres.

Though the two approaches produce similar results, the State Water Board confirms that the second approach is sufficient for TMDL-implementation planning at the current stage of TMDL implementation; therefore the second compliance unit determination approach described above is implemented in this Order. The State Water Board believes that 1650 CUs represent a reasonable balance of resources and environmental protection, and will be sufficient to address the TMDLs in Attachment IV in the foreseeable future. The Department is ultimately responsible for demonstrating that it has complied with the TMDLs in Attachment IV by meeting the WLAs and other TMDL performance criteria, independent of its annual obligation to receive credit for compliance units. 1650 CUs per year may be more or less than is needed to comply with the TMDLs in Attachment IV within 20 years. This permit expires in 2018; therefore Attachment IV of this Order requires the Department to present to the State Water Board, at a public meeting to be scheduled approximately 180 days prior to the expiration of the Order, a TMDL Progress Report containing an evaluation of the progress achieved during this permit term. The State Water Board will then evaluate the compliance unit approach and the Department's progress in meeting the 20 year objective before consideration of subsequent requirements in a subsequently renewed permit.

Using an average cost $176,000 per BMP/acre[22], the proposed annual cost to meet this requirement relying solely on retrofits is approximately $290,000,000. The Department's contribution to impairment in any given TMDL is generally a small portion of the overall contribution from multiple sources. In many cases, synergistic effects can be achieved and water quality improvements are better served through coordinated efforts with other parties to the TMDL. To encourage collaborative implementation, Attachment IV of this Order allows CUs for collaborative efforts based on the amount of financial participation made by the Department. To determine an appropriate financial equivalence staff used the cost data submitted by the Department of $176,000 per BMP/acre or per CU. However, to encourage collaborative efforts, staff proposes a 50 percent discount for participation in these types of agreements. Attachment IV accordingly sets the CU equivalent at $88,000. Based on the same approach described above, and relying solely on contributions to collaborative efforts, the annual cost to the Department is approximately $145,000,000.

Attachment IV allows for two types of collaborative implementation: Cooperative Implementation Agreements between the Department and other responsible parties to conduct work to comply with a TMDL, and a Cooperative Implementation Grant Program funded by the Department and administered by the State Water Board. The grant program will be used to fund capital projects in impaired watersheds in which the Department has been assigned a WLA or otherwise has responsibility for implementation of the TMDL. Cooperative implementation will satisfy some or all of the Department's obligations under a TMDL, whether or not discharges from the Department's ROW are controlled or treated.

Cooperative implementation has the following advantages:

- Allows for retrofit projects off the ROW, at locations that may otherwise have space, access, or safety limitations within the ROW;
- Provides for the involvement of local watershed partners who have an interest and expertise in the best way to protect, manage, and enhance water quality in the watershed;
- Allows for implementation of BMPs and other creative solutions not typically available to the Department;
- Allows for larger watershed scale projects; and
- Leverages resources from other entities.

In addition, the Cooperative Implementation Grant Program eliminates the Department's complex budgeting and project approval process to expedite the implementation of BMPs in impaired watersheds.

If the Department elects to fund a Cooperative Implementation Grant Program, the Department and the State Water Board will enter into a formal agreement to specify the terms of the grant program and the commitments and responsibilities of the parties. The agreement will specify the following:

[22] Construction capital cost based on information provided by Department staff.

- The Department will pay all State Water Board costs in administering the grant program. No credit for compliance units will be given for administrative costs paid to the State Water Board.
- The Department will track and report on the projects funded under the grant program.
- Grantees will be responsible for the long term management, operation, and maintenance of BMPs.
- Grants are limited to other responsible parties named in the TMDL.
- Projects shall address storm water runoff and treat or control the same Pollutants of Concern that the Department is responsible for.
- Priority is given to projects that address impairments in the highest priority reaches identified in the prioritization process specified in Attachment IV, Section I.A.
- If the grant program is discontinued, any unexpended funds will be returned to the Department and the corresponding compliance units will be revoked and added to subsequent annual compliance unit totals.

Attachment IV reflects the State Water Board's commitment to streamlining TMDL compliance for the Department to proceed as quickly as feasible to implement on-the-ground control measures and obtain measurable improvement in water quality. In the prioritization process, the Department and the Water Boards will consider the final compliance deadlines under the TMDLs; however, the State Water Board recognizes that the requirements in Attachment IV do not mirror all specific interim deadlines for studies, reports, and pollutant reductions in the TMDLs included to demonstrate progress toward meeting the WLAs. The requirements in Attachment IV are general yet consistent with specific planning, study, and reporting requirements in the TMDLs.

The Department is required annually to include in the TMDL Status Review Report its proposal for reaches to be addressed in the upcoming year, with selected control measures and projected schedule for implementation. The Department is also required to report a set of information that encompasses updates on cooperative and individual implementation activities completed, as well as an analysis of the effectiveness of existing BMPs and activities in meeting the WLAs. This information will be reviewed by the State Water Board and will be publicly available. Control measures and implementation schedules proposed for the upcoming year are subject to the approval of the Executive Director, or designee.

Attachment IV does not list the final required WLAs for each TMDL. With few exceptions, the WLAs are to be achieved jointly by a number of storm water dischargers and accordingly are of limited use in determining and enforcing the Department's specific responsibilities under the TMDL. The State Water Board finds that effective implementation and enforcement of Attachment IV is better achieved through clear requirements for implementation of controls, and monitoring and adaptive management of such controls, than by implementation of joint WLAs into the permit requirements.

Nevertheless, the WLAs, both Department-specific and joint with other dischargers, are discussed in the sections below. While the WLAs are not incorporated into Attachment IV as permit requirements, the discussion establishes that Attachment IV is consistent with the requirements and assumptions of the WLAs. In general, the Department is a relatively small

contributor to the impairment to be addressed by the relevant TMDLs.[23] Attachment IV requires a focused effort to address the priority discharges through measurable and streamlined progress in implementation of controls, effectively addressing the relatively small contribution from the Department. The Department must verify progress through reporting of subsequent monitoring and adaptive management activities.

As an additional step in determining compliance toward achievement of WLAs, the Department must submit a TMDL Progress Report with its application for permit reissuance in January of 2018, analyzing the effectiveness of the control measures installed for each reach and whether the control measures have been or will be sufficient to achieve WLAs and other performance standards by the final TMDL compliance deadlines. The TMDL Progress Report will be subject to public review and comment and will inform the State Water Board as it considers subsequent requirements in a subsequently reissued permit.

### A. General Requirements for all TMDLs: Comprehensive TMDL Monitoring, Reporting, and Adaptive Management

As previously discussed, an NPDES permit must specify the monitoring necessary to determine compliance with effluent limitations. Where effluent limitations are specified as BMPs, the permit should specify the monitoring necessary to assess if the expected load reductions attributed to BMP implementation are achieved. The permit should additionally provide a mechanism to make adjustments to the required BMPs as necessary to ensure their adequate performance. Attachment IV requires continuation of existing monitoring plans as approved by the Regional Water Board Executive Officer. Where there is no approved monitoring plan in place for a TMDL, the Department is required to submit a plan to the State Water Board by January 1, 2015, with a time schedule to implement the plan. The submitted plan must be designed to assess the effectiveness of implemented BMPs and to inform BMP selection. The Department shall use the monitoring data to conduct an on-going assessment of the performance and effectiveness of BMPs and shall use the assessment to inform modifications to control measures to achieve WLAs and other applicable performance standards.

BMP effectiveness monitoring and the adaptive management strategy related to BMP implementation allows for flexibility in source control methods until the most appropriate BMPs are identified and installed for the control of a pollutant. The Department will evaluate the effectiveness of the controls that were implemented each year and submit the results of the evaluation in the TMDL Status Review Report, which is submitted as part of the Annual Report. If the controls implemented are shown to be ineffective, then the Department must either re-design the BMP or implement a new type of control measure to address the inadequacies of the current design. The process of assessing the performance and effectiveness of BMPs and using that assessment to modify or replace inadequate BMPs

[23] In the few instances where the Department's contribution is a relatively high percentage of the total contribution from identified sources, as identified in this Fact Sheet, the State Water Board would expect the Department to prioritize addressing such discharges and evaluating the performance and effectiveness of the selected BMPs.

ensures that the Department will make progress toward achieving the requirements of the TMDLs within the permit term.

The Department must also prepare and submit a TMDL Progress Report to the State Water Board as part of its permit reissuance application. That report must include: (1) a summary of the effectiveness of the control measures installed for each reach that has been addressed, as a result of BMP effectiveness assessment, (2) a determination as to whether the control measures have been or will be sufficient to achieve WLAs and other performance standards by the final compliance deadlines, (3) where the control measures are determined not to be sufficient to achieve WLAs or other performance standards by the final compliance deadlines, a proposal for improved control measures to address the relevant pollutants, and (4) a summary of the estimated amount of pollutants that were prevented from entering into the receiving waters. The TMDL Progress Report will be subject to public review and comment and will inform the requirements of the reissued permit.

**B. Sediments/Nutrients/Mercury/Siltation/Turbidity Pollutant Category**

**General Description of Pollutant Category**
The TMDLs in this pollutant category identify sediment from roads as a significant or primary source of these pollutants. Excessive sediment loads have resulted in the non-attainment of water quality objectives for sediment, suspended material, and settleable material. Excess sediment delivery to stream channels is associated with several natural processes as well as anthropogenic sources.

**Sources of Pollutant and How Pollutants Enters the Waterway**
Natural sources include geologically unstable areas that are subject to landslides, as well as smaller sediment sources such as gullies and stream-bank failures. Anthropogenic sources include road-related stream crossing failures, gullies, fill failures, and landslides precipitated by road-related surface erosion and cut bank failures. Road-related activities which can increase sediment discharge to a waterway include the construction and maintenance of paved and unpaved roadways, watercourse crossing construction, reconstruction, maintenance, use, and obliteration, and many activities conducted on unstable slopes. Unstable areas are areas with a naturally high risk of erosion and areas or sites that will not reasonably respond to efforts to prevent, restore or mitigate sediment discharges. Unstable areas are characterized by slide areas, gullies, eroding stream banks, or unstable soils that are capable of delivering sediment to a watercourse. Slide areas include shallow and deep seated landslides, debris flows, debris slides, debris torrents, earthflows, headwall swales, inner gorges and hummocky ground. Unstable soils include unconsolidated, non-cohesive soils and colluvial debris.

Mercury is negatively impacting the beneficial uses of many waters of the state. As of 2010, more than 180 water bodies are designated as impaired by mercury, and fish in these waters can have mercury concentrations that pose a health risk for humans and wildlife that eat the fish, including threatened and endangered species. The beneficial uses impacted by mercury include, but may not be limited to, COMM, WILD, and RARE beneficial uses. Also REC-1 has been used for many waters to indicate fish consumption as part of fishing. Sources of mercury include gold and mercury mines, naturally mercury enriched soils, atmospheric deposition,

improper disposal of mercury containing items, such as batteries and dental amalgam. Mercury from many of these sources can end up in storm water and industrial and municipal wastewater.

**Watershed Contribution**
The Department is a relatively minor source of pollutants and small percentage of the watershed. The Department will address the highest problem areas and therefore, addressing the problem at the appropriate level for the Sediment, Nutrients, Mercury, Siltation and Turbidity TMDLs.

**Control Measures**
Attachment IV requires the Department to implement control measures to prevent erosion and sediment discharge. The measures that control the discharge of sediment can be effective in controlling releases of nutrients and mercury. This can be achieved by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.

In addition to TMDL requirements, the Department has developed a BMP program for control of pollutants from existing facilities and for new and reconstructed facilities. This BMP program includes implementation, maintenance and evaluation of BMPs, and the investigation of new BMPs. The goal of BMP implementation is to control the discharge of pollutants to achieve the applicable standards. Erosion control BMPs are typically used on construction sites, although some are also used as permanent, post-construction BMPs.

**Department's Contribution**
The Department's discharge contribution is discussed under the individual TMDLs below. The TMDLs in this pollutant category attribute most anthropogenic sediment related beneficial use impairments to logging activities and, to a lesser degree, some agricultural activities. Logging activities routinely include extensive construction and maintenance of unpaved roads which range over large areas, whereas the Department maintains a network of paved highways which account for a small fraction of the total area devoted to all paved roadways within the boundaries of these TMDLs.

The requirements in Attachment IV are generally sufficient to address the sediment TMDLs that originate from a comparatively minor pollutant source, and this is accomplished by focusing on the most problematic areas and activities within this relatively low-volume subset of anthropogenic discharges for this pollutant category.

## NORTH COAST REGION SEDIMENT TMDLS

As discussed under individual TMDLs below, the TMDLs in this pollutant category attribute most anthropogenic sediment-related beneficial use impairments to logging activities and, to a lesser degree, some agricultural activities. Logging activities in the North Coast region routinely include extensive construction and maintenance of unpaved roads which range over large areas of the Coast Range's vertical topography, whereas the Department maintains a

network of paved highways which accounts for a small fraction of the total area devoted to all paved roadways within the boundaries of these TMDLs.

**WLAs**

The North Coast Regional Water Board has adopted the "Total Maximum Daily Load Implementation Policy Statement for Sediment-Impaired Receiving Waters in the North Coast Region" on November 29, 2004. The goals of the Policy are to control sediment waste discharges to impaired water bodies so that the TMDLs are met, sediment water quality objectives are attained, and beneficial uses are no longer adversely affected by sediment. This policy requires the use of NPDES permits and waste discharge requirements to achieve compliance with sediment-related water quality standards.

The sediment control requirements in Attachment IV (TMDL Requirements) of this Order are intended to reduce the adverse impacts of excessive sediment discharges to sediment-impaired waters, including impacts to the cold water salmonid fishery and the COLD, COMM, RARE, SPWN, and MIGR beneficial uses. The beneficial uses associated with the cold water salmonids fishery are often the most sensitive to sediment discharges. The North Coast Regional Water Board's basin plan has the following narrative water quality objectives which apply to sediment-related discharges to receiving waterbodies:

| Parameter | Water Quality Objectives |
|---|---|
| **Suspended Material** | Waters shall not contain suspended material in concentrations that cause nuisance or adversely affects beneficial uses. |
| **Settleable Material** | Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses. |
| **Sediment** | The suspended sediment load and suspended sediment discharge rate of surface water shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses. |
| **Turbidity** | Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof. |

**Department's Contribution:**

The Department's specific discharge contribution is discussed under the individual TMDLs below.

***Albion River Sediment TMDL, December 2001***

**Final WLA**

USEPA states that there are no significant individual point sources of sediment in the Albion River watershed.

**Final WLA Specific to the Department**
USEPA states that there are no significant individual point sources of sediment in the Albion River watershed. As a consequence, its wasteload allocation is set to zero.

**Final Deadlines**
USEPA did not specify deadlines for implementation.

**Department's Contribution** (relative contribution to pollutant loading)
Approximately five percent of the total miles of roads within the watershed are paved, whereas logging road construction, logging road usage, and other activities associated with logging operations constitute the majority of anthropogenic sediment discharges. The Department's paved roadways thus constitute some undetermined fraction of the total paved road mileage: its wasteload allocation is set to zero.

***Big River Sediment TMDL, December 2001***
**Final WLA**
USEPA states that there are no significant individual point sources of sediment in the Big River watershed, so the wasteload allocation is zero.

**Final WLA Specific to the Department**
USEPA states that there are no significant individual point sources of sediment in the Big River watershed.

**Final Deadlines**
USEPA did not specify deadlines for implementation.

**Department's Contribution (**relative contribution to pollutant loading**)**
Approximately three (3) percent of the miles of roadways within the watershed are paved, whereas logging road construction, logging road usage, and other activities associated with logging operations constitute the majority of anthropogenic sediment discharges. The Department is not listed as a source of point source discharges of sediment.

***Lower Eel River Sediment & Temperature TMDL, December 18, 2007***

**Final Sediment WLA**

For the Department's facilities, construction sites, and municipalities, the wasteload allocation is expressed as equivalent to the load allocations, as specified in the following table:

| Sediment Source | Average Daily (tons/mi$^2$/yr) | | Average Daily (tons/mi$^2$/yr) | | Percent Reduction 1955 – 2003 |
|---|---|---|---|---|---|
| | 1955 – 2003 Loading | Load Allocation | 1955 – 2003 Loading | Load Allocation | |
| **Natural Load Allocation** | 718 | 718 | 2.0 | 2.0 | 0% |
| **Episodic Roads** | 43 | 9 | 0.1 | 0.02 | 80% |
| **Chronic Roads** | 115 | 17 | 0.3 | 0.05 | 85% |
| **Timber Harvest** | 590 | 147 | 1.6 | 0.4 | 75% |
| **Skid Trail** | 7 | 1 | 0.02 | 0.5 | 90% |
| **Bank Erosion** | 21 | 6 | 0.1 | 0.03 | 70% |
| **Total Human-related Load Allocation** | 775 | 180 | 2.1 | 0.5 | 77% |
| **Total Load Allocations Natural and Human-Related Sources** | 1,493 | 898 | 4.1 | 2.5 | |

**Final WLA Specific to the Department**

As stated above, USEPA's wasteload allocation for the temperature TMDL assigned to the Department and other point source dischargers is zero net increase in receiving water temperature.

**Final Deadlines**

As noted above, USEPA did not set a specific sediment WLA for the Department.

**Department's Contribution** (relative contribution to pollutant loading)

The Department's relative sediment contribution is not known.

***Eel River (Middle-Fork) Eden Valley and Round Valley HSAs Temperature and Sediment TMDL, December 2003***

**Final Sediment WLA**

USEPA states that because discharge from point sources cannot be readily determined, and because possible loading from point sources is not distinguished from general management-related loading in the source analysis, USEPA considers the rates set as load allocations (i.e., for nonpoint sources) to also represent wasteload allocations (i.e., for those point sources that would be covered by general NPDES permits).

**Table 7: Sediment TMDLs and Allocation (t/mi$^2$/yr)**

| Source | Black Butte | Elk Creek | Round Valley | Upper MF | Williams Thatcher | Basinwide Load |
|---|---|---|---|---|---|---|
| TOTAL Natural | 724 | 1,059 | 374 | 410 | 417 | 574 |
| Percent Reduction over current | 0% | 0% | 0% | 0% | 0% | 0% |
| Subtotals Landslides | 9 | 12 | 10 | 2 | 2 | 6 |
| Percent Reduction over current | 0% | 5% | 5% | 0% | 5% | 5% |
| Subtotal Small Management Sources | 7 | 41 | 9 | 8 | 19 | 23 |
| Percent Reduction over current | 0% | 32% | 95% | 0% | 89% | 70% |
| Total Management-Related | 16 | 53 | 19 | 10 | 21 | 29 |
| Percent Reduction over current | 0% | 27% | 91% | 0% | 88% | 65% |
| TMDL – ALL SOURCES | 740 | 1,112 | 393 | 420 | 438 | 603 |
| Percent Reduction over current | 0% | 2% | 32% | 0% | 26% | 8% |
| Percent Natural | 98% | 95% | 95% | 98% | 95% | 95% |
| Percent Management | 2% | 5% | 5% | 2% | 5% | 5% |

**Final Sediment WLA Specific to the Department**

As discussed above, USEPA did not assign a specific sediment WLA to the Department.

**Final Sediment Deadlines**

USEPA did not specify deadlines for implementation.

**Department's Sediment Contribution** (relative contribution to pollutant loading)
USEPA states that the Department's discharges of sediment, like other point sources of anthropogenic sediment discharges in this TMDL, are comparatively minor sources of this pollutant.

***South Fork Eel River Temperature & Sediment TMDL, December 16, 1999***
USEPA's source analysis indicates that the sediment loading due to nonpoint erosion from roads and other anthropogenic activities accounts for a substantial portion of the total sediment loading in this watershed.

The waste load allocation for point sources are for sediment only, i.e., they are not directly related to the temperature portion of the TMDL, nor does USEPA set a waste load allocation for point sources under the temperature portion of the TMDL. However, USEPA also states that any improvements in stream temperature from reduced sedimentation contribute to the cumulative benefits of both sediment and temperature load reductions, and this assumption is accommodated in USEPA's calculations for the margin of safety in this TMDL.

**Final Sediment WLA**
USEPA set the wasteload allocation to zero because it found that there are no point sources of sediment in this watershed.

**Final Sediment WLA Specific to the Department**
As stated above, USEPA states that there are no point source discharges of sediment within this TMDL, so the Department's wasteload allocation is set to zero.

**Final Sediment Deadlines**
USEPA did not specify deadlines for implementation.

**Department's Sediment Contribution** (relative contribution to pollutant loading)
USEPA states that there are no discharges from point sources within this TMDL, and because of this finding, the Department's potential contribution to anthropogenic sediment loading is insignificant.

***Upper Main Eel River Temperature & Sediment TMDL, December 29, 2004***
**Final Sediment WLA**
For the sediment TMDL, USEPA states that point sources are not significant, and sets the waste load allocation to zero.

**Final Sediment WLA Specific to the Department**
USEPA views point source contributions to sediment loading in this TMDL, so the Department's wasteload allocation is set to zero.

**Final Deadlines**
USEPA did not specify deadlines for implementation.

**Department's Sediment Contribution** (relative contribution to pollutant loading)
USEPA considers all point sources of anthropogenic sediment loading to be insignificant for purposes of this TMDL.

***Garcia River Sediment & Temperature TMDL, March 16, 1998***

**Final Sediment WLA**
The wasteload allocation is effectively set to zero for "controllable" anthropogenic discharges of sediment, including those associated with roads, since all controllable discharges of sediment from roadways are prohibited.

**Final Sediment WLA Specific to the Department**
Although not specifically included in this TMDL, the wasteload allocation for all "controllable" anthropogenic discharges of sediment from roadways is effectively set to zero.

**Final Sediment Deadlines**
The structure of this 2002 TMDL requires responsible parties to choose an option for controlling 'sediment delivery', and some 'due dates' have already passed, e.g., January 2005 was the deadline for the Long Term Road System Plan- it is unclear which option, if any, has been selected by the Department.

**Department's Sediment Contribution** (relative contribution to pollutant loading)
The Department's relative sediment pollutant loading is not known.

***Gualala River Sediment &Temperature TMDL, November 29, 2004***

**Final Sediment WLA**
USEPA set the wasteload allocation for sediment discharges to zero, noting that point sources of sediment pollution are insignificant within the area described in this TMDL.

**Final Sediment WLA Specific to the Department**
There is no wasteload allocation specifically assigned to the Department, but as mentioned above, USEPA set these to zero because of their comparative insignificance as sources.

**Final Sediment Deadlines**
USEPA did not specify deadlines for implementation.

**Department's Sediment Contribution** (relative contribution to pollutant loading)
Approximately three percent of the miles of roadways included within this TMDL are paved. The Department's potential contribution to pollutant loading is some unspecified fraction of the former, whereas logging road construction, logging road usage, and other activities associated with logging operations constitute the majority of anthropogenic sediment discharges. Due to its relative insignificance as a source of sediment pollution the Department's wasteload allocation is set to zero.

***Klamath River in California Temperature, Dissolved Oxygen, Nutrients, and Microcystin TMDL, December 28, 2010***

**Final Nutrients WLA**

Daily mass-based nutrient (total phosphorus and total nitrogen) and organic matter load allocations are assigned to segments of the Klamath River and its tributaries.

| Source Area | Daily TP Load Allocations (lbs/day) | Daily TN Load Allocations (lbs/day) |
|---|---|---|
| Stateline | 245+ | 3,139+ |
| Upstream of Copco 1 Reservoir | (61)+ | (330)+ |
| Stateline to Iron Gate Dam inputs | 22+ | 339+ |
| Δ Iron Gate Hatchery | 0+ | 0+ |
| Tributaries between Iron Gate Dam and the Shasta River | 49+ | 317+ |
| Shasta River | 75+ | 220+ |
| Tributaries between Shasta River and Scott River | 17+ | 97+ |
| Scott River | 87+ | 1,279+ |
| Tributaries between Scott River and Salmon River | 187+ | 1,050+ |
| Salmon River | 193+ | 1,583+ |
| Tributaries between Salmon River and Trinity River | 90+ | 504+ |
| Trinity River | 762+ | 5,783+ |
| Tributaries between Trinity River and Turwar Creek | 179+ | 1,004+ |
| **Total Maximum Daily Load** | **1,845** | **14,985** |

**Final Nutrients WLA Specific to the Department**

There are no WLAs that are assigned specifically to the Department. The Department is expected to address nutrient inputs into the Klamath River watershed through control of sediment from its road and highway facilities.

**Final Nutrients Deadlines**

There are no final deadlines for achievement of WLAs. However, the Department shall submit annual reports to the North Coast Regional Water Board documenting progress in implementing.

**Department's Nutrients Contribution** (relative contribution to pollutant loading)

The Department's relative contribution to the nutrient pollutant loading is not known.

***Lost River Nitrogen Biochemical Oxygen Demand to address Dissolved Oxygen and pH Impairments December 30, 2008***

The Lower Lost River TMDL was developed by the North Coast Regional Water Quality Control Board and approved by U.S. Environmental Protection Agency (USEPA) (regional board resolution number R1-2010-0026). It established TMDLs for Nitrogen and Biochemical Oxygen Demand to address Dissolved Oxygen and pH Impairments. The Lower Lost River TMDLs implementation plan which was established by USEPA is included in the Klamath River TMDL. Both the Klamath River TMDL and the Lower Lost River TMDL were both approved on December 28, 2010.

**Final Nitrogen WLAs** (average kg/day)

| Segment | Total Dissolved Inorganic Nitrogen WLA | Total Carbonaceous Biochemical Oxygen Demand (CBOD) |
|---|---|---|
| Lost River from Border of Tule Lake Refuge | 79.5 | 197.0 |
| Tule Lake Refuge TMDLs | 181.5 | 90.10 |
| Lower Klamath Refuge TMDLs | 76.2 | 889.9 |

**Final Nitrogen WLAs Specific to the Department** (average kg/day)

| Segment | Dissolved inorganic nitrogen | Carbonaceous Biochemical Oxygen Demand (CBOD) |
|---|---|---|
| Lost River from border of Tule Lake Refuge | 0.3 | 0.5 |
| Tule Lake Refuge TMDLs | 0.3 | 0.5 |
| Lower Klamath Refuge TMDLs | 0.3 | 0.5 |

**Final Nitrogen Deadlines**

There are no deadlines associated with these TMDLs.

**Department's Nitrogen Contribution** (relative contribution to pollutant loading)

| Segment | Percentage of Total Dissolved Inorganic Nitrogen WLA | Percentage of Total Carbonaceous Biochemical Oxygen Demand (CBOD) WLA |
|---|---|---|
| Lost River from border of Tule Lake Refuge | 100 | 100 |
| Tule Lake Refuge TMDLs | 3.0 | 10.1 |
| Lower Klamath Refuge TMDLs | 100 | 100 |

***Mad River Sediment and Turbidity TMDL, December 21, 2007***

USEPA states that almost all sources of sediment in the Mad River watershed are from diffuse, nonpoint sources, including runoff from roads, timber operations, and natural background. In the Mad River basin, individual point sources are negligible sources of sediment and suspended sediment. To ensure protection of the cold water beneficial use, EPA has determined that it is appropriate to consider the rates set forth in these TMDLs as load allocations to also represent wasteload allocations for the *diffuse* discharges in the watershed that are subject to NPDES permits, as discussed below.

**Final WLAs for Sediment and Turbidity**

Wasteload allocations for diffuse, permitted point sources function similarly to and are represented by the nonpoint source load allocations, and wasteload allocations for permitted point sources are provided concentration-based wasteload allocations equivalent to what is included in the permits in order to account for incidental sediment and suspended sediment discharges. The TMDLs for sediment and turbidity include separate but identical load allocations for nonpoint sources and wasteload allocations for the diffuse point sources for each subarea. These WLAs are equivalent to and represented by the LAs, and the LAs are expressed on a unit loading basis (tons/mi$^2$/year); therefore, they are not added to the LAs in the TMDL equation.

### Table 20. Total Sediment Load Allocations Summary for the Mad River Watershed

Note: values have been rounded.

| Sediment Source | Average Annual (tons/mi$^2$/yr) | | Average Daily (tons/mi$^2$/yr) | | Percent Reduction over 1976 – 2006 Period |
|---|---|---|---|---|---|
| | 1976 – 2006 Loading | Load Allocation | 1976 – 2006 Loading | Load Allocation | |
| Natural Load Allocation | 894 | 894 | 2.4 | 2.4 | 0% |
| Roads — Landslides | 1,298 | | | | |
| Roads — Surface | 242 | | | | |
| Roads Subtotal | 1,540 | 174 | 4.2 | 0.5 | 89% |
| Harvest — Landslide | 38 | | | | |
| Harvest — Surface | 2 | | | | |
| Harvest Subtotal | 40 | 5 | 0.1 | 0.01 | 89% |

| Sediment Source | Average Annual (tons/mi²/yr) | | Average Daily (tons/mi²/yr) | | Percent Reduction over 1976 – 2006 Period |
|---|---|---|---|---|---|
| | 1976 – 2006 Loading | Load Allocation | 1976 – 2006 Loading | Load Allocation | |
| Total Human-related Load | 1,580 | 179 | 4.3 | 0.5 | 89% |
| **Total Load: All Sources** | 2,474 | 1,073 | 6.8 | 2.9 | 57% |

Suspended sediment is estimated as a proportion of total sediment load, and the reductions for the suspended sediment load are shown in Table 21 (below). The reductions reflect similar priorities as for the total sediment load. Suspended sediment is estimated as a proportion of total sediment load, and the reductions for the suspended sediment load are shown in Table 21. The reductions reflect similar priorities as for the total sediment load.

**Table 21. Suspended Sediment Load Allocations Summary for the Mad River Watershed**

| Sediment Source | Average Annual (tons/mi²/yr) | | Average Daily (tons/mi²/yr) | | Percent Reduction over 1976 – 2006 Period |
|---|---|---|---|---|---|
| | 1976 – 2006 Loading | Load Allocation | 1976 – 2006 Loading | Load Allocation | |
| Natural Load Allocation | 809 | 809 | 2.2 | 2.2 | 0% |
| Road — Landslides | 1,174 | | | | |
| Road — Surface | 219 | | | | |
| Roads Subtotal | 1,393 | 158 | 3.8 | 0.4 | 89% |
| Harvest — Landslides | 34 | | | | |
| Harvest — Surface | 2 | | | | |
| Harvest Subtotal | 36 | 4 | 0.1 | 0.01 | 89% |
| Total Human-related Load | 1,430 | 162 | 3.9 | 0.4 | 89% |
| **Total Load: All Sources** | 2,238 | 971 | 6.1 | 2.7 | 57% |

**Final WLAs for Sediment and Turbidity Specific to the Department**
USEPA grouped the Department's discharges under its NPDES municipal storm water permit with other "diffuse" NPDES-permitted storm water discharges occurring in this TMDL. USEPA's source analysis did not distinguish between land areas subject to NPDES regulation and nonpoint sources of sediment and turbidity. USEPA's TMDLs thus include separate but identical load allocations (LAs) for nonpoint sources and wasteload allocations (WLAs) for the "diffuse" point sources for each subarea. These WLAs are equivalent to and represented by the LAs, and the LAs are expressed on a unit loading basis (tons/mi2/year); therefore, they are not added to the LAs in the TMDL equation.

For the diffuse permitted sources such as the Department's discharges under its municipal storm water permit, the waste load allocation is expressed as equivalent to the load allocation for (all) roads. The load allocations for roads are listed in the tables given above.

USEPA also states that the Regional Water Board may wish to refine these TMDLs and allocations further in the future.

**Final Sediment and Turbidity Deadlines**
USEPA did not specify deadlines for implementation.

**Department's Sediment and Turbidity Contribution**
USEPA states that non-NPDES nonpoint sources are responsible for nearly all sediment loading in the watershed, but does not estimate the Department's potential contribution to sediment and turbidity waste loading in this TMDL. Only six percent of the roads in this watershed are paved, and some unspecified portions of the latter are State highways.

***Navarro River Sediment and Temperature TMDL, December 27, 2000***

**Final Sediment WLA**
The Navarro River TMDLs for temperature and sediment are based on separate analyses. Reduced sediment loads could be expected to lead to increased frequency and depth of pools, and to reduced wetted channel width/depth ratios.

**Final Sediment WLA Specific to the Department**
The Department is not specifically mentioned as a source of pollutant loading for temperature and sediment, nor are any other point sources of these pollutants. The wasteload allocation for the Department is therefore presumed to be set to zero.

**Final Sediment Deadlines**
USEPA did not specify deadlines for implementation of this TMDL.

**Department's Sediment Contribution**
As mentioned above, neither Department nor other point sources are identified as sources of pollutant loading for temperature or sediment, so USEPA has determined that these potential sources are insignificant in this TMDL.

***Noyo River Sediment TMDL, December 16, 1999***

**Final Sediment WLA**

USEPA apportioned the total load among several non-point sources of sediment, after accounting for background load. As a consequence, this TMDL does not include wasteload allocations for point sources.

**Final Sediment WLA Specific to the Department**

USEPA did not specify deadlines for implementation of this TMDL.

**Department's Sediment Contribution** (relative to pollutant loading)

As stated above, USEPA did not establish wasteload allocations for point sources of sediment.

***Redwood Creek Sediment TMDL, USEPA Established December 30, 1998***

**Final Sediment WLA**

USEPA did not establish wasteload allocations for point sources in this TMDL.

**Final WLA**

USEPA established this TMDL on December 30, 1998 and it became effective immediately.

**Final WLA Specific to the Department and the Department's Contribution**

As stated above, USEPA did not establish wasteload allocations for point sources of sediment.

**Final Deadlines**

USEPA did not specify deadlines for implementation of this TMDL.

**Department's Contribution** (relative to pollutant loading)

The Department's contribution relative sediment pollutant loading is not known.

***Scott River Sediment and Temperature TMDL, August 11, 2006***

**Final Sediment WLA**

USEPA states that there are no point sources of sediment and/or temperature related discharges within the area encompassed by this TMDL, so the wasteload allocation is set to zero.

**Final Sediment WLA Specific to the Department**

None.

**Final Sediment Deadlines**

USEPA directed Regional Water Board staff to evaluate the Department's state-wide NPDES permit in the North Coast Region by September 8, 2008. The purpose of the evaluation was to determine the adequacy and effectiveness of the Department's storm water program in preventing and reducing elevated water temperatures in the North Coast Region, including the Scott River watershed.

**Department's Sediment Contribution** (relative to pollutant loading)
As noted above, USEPA did not establish specific wasteload allocations for point sources, so the wasteload allocations are set to zero. The Department's point source contribution is therefore judged to be insignificant.

***Ten Mile River Sediment TMDL, December 2000***

**Final Sediment WLA**
USEPA states that there are no point sources of sediment discharges within the area included within this TMDL: wasteload allocations are therefore set to zero.

**Final Sediment WLA Specific to the Department**
As stated above, USEPA did not establish wasteload allocations for point sources such as the Department in this TMDL, so the wasteload allocations are set to zero.

**Final Sediment Deadlines**
USEPA did not specify deadlines for implementation of this TMDL.

**Department's Sediment Contribution** (relative pollutant loading)
The Department's relative sediment contribution is judged to be insignificant.

***Trinity River Sediment TMDL, December 20, 2001***

**Final Sediment WLA**
USEPA did not subdivide waste load and load allocations into specific sources such as roads and timber harvest, unlike several of its other sediment-related TMDLs in Region 1. USEPA divided the basin into subareas because of the wide range of sediment delivery rates within each of the several subareas. USEPA further states that although nonpoint sources are responsible for most sediment loading in the watershed, point sources also discharge some sediment.

The TMDL identified wasteload allocations for point sources and load allocations for nonpoint sources as pollutant loading rates (tons/square mile/year) for subareas within the Trinity Basin. The source analysis supporting these allocations evaluated sediment loading at a subarea scale, and did not attempt to distinguish sediment loading at the scale of specific land ownership, nor did the source analysis specifically distinguish between land areas subject to NPDES regulation and land areas not subject to NPDES regulation. As a consequence, the TMDL includes separate but identical load allocations for nonpoint sources and wasteload allocations for point sources for each subarea. The joint LA/WLA's for each subarea are given in the following tables:

**Table 5-2. TMDL and Allocations by Source Category for Upper Area**

Note A: Stuarts Fork, Swift Creek, Coffee Creek
Note B: Stuart Arm Area, Stoney Creek, Mule Creek, East Fork Stuart Fork, West Side Trinity Lake, Hatchet Creek, Buckeye Creek;
Note C: Upper Trinity River, Tangle Blue, Sunflower, Graves, Bear Upper Trinity Mainstem Area, Ramshorn Creek, Ripple Creek, Minnehaha Creek, Snowslide Gulch Area, Scorpion Creek
Note D: East Fork Trinity, Cedar Creek, Squirrel Gulch Area
Note E: East Side Tributaries, Trinity Lake
TMDL = 1.25 × Background.
Total Management Allocation = TMDL -Background.

| Source Categories | Subareas within the Upper Assessment Area | | | | |
|---|---|---|---|---|---|
| | Reference Subwatersheds Note A | Westside Tributaries Note B | Upper Trinity Note C | East Fork Tributaries Note D | East Side Tributaries Note E |
| **Current Sediment Delivery Rate** | | | | | |
| Background (non-management) | 1,125 | 421 | 2,759 | 258 | 241 |
| Management — Roads | 129 | 101 | 162 | 319 | 48 |
| Management — Timber Harvest | 240 | 31 | 1,084 | 46 | 22 |
| Management — Legacy (Roads, Mining) | 7 | 25 | 21 | 26 | 96 |
| Total Management | 376 | 157 | 1,267 | 391 | 96 |
| Total Sediment Delivery | 1,051 | 578 | 4,026 | 649 | 337 |
| Total as percent of background | 133% | 137% | 146% | 252% | 140% |
| **Loading Capacity (TMDL) and Allocations (tons/mi$^2$/yr)** | | | | | |
| TMDL | 1,406 | 526 | 3,449 | 323 | 301 |
| Background Allocation | 1,125 | 421 | 2,759 | 258 | 241 |
| Total Management Allocation | 281 | 105 | 690 | 65 | 60 |
| Percent reduction needed in management to attain TMDL | 25% | 33% | 46% | 83% | 37% |

**Table 5.3 TMDL and Allocations by Source Category for Upper Middle Area**

Note A: The rates in Grass Valley Creek do not account for the amount of sediment trapped by Buckhorn Dam and Hamilton Ponds.
TMDL equals 1.25 times Background.
Total Management Allocation equals TMDL minus Background.

| Source Categories | Subareas within the Upper Assessment Area | | | | | |
|---|---|---|---|---|---|---|
| | Weaver and Rush Creeks (72 $mi^2$) | Deadwood Creek, Hoadley Gulch and Poker Bar Area (47 $mi^2$) | Lewiston Lake Area (25 $mi^2$) | Grass Valley Creek Note A (37 $mi^2$) | Indian Creek (34 $mi^{2)}$ | Reading and Brown Creek (104 $mi^2$) |
| **Current Sediment Delivery Rates (tons/$mi^2$/yr)** | | | | | | |
| Background (non-management) | 675 | 273 | 195 | 175 | 324 | 263 |
| Management — Roads | 144 | 220 | 83 | 287 | 1.570 | 125 |
| Management — Timber Harvest | 61 | 280 | 37 | 1,136 | 330 | 204 |
| Management — Legacy (Roads, Mining) | 81 | 62 | 69 | 65 | 68 | 42 |
| Total Management | 286 | 562 | 189 | 1,488 | 1,968 | 372 |
| Total Sediment Delivery | 961 | 835 | 384 | 1,663 | 2,292 | 635 |
| Total as percent of background | 142% | 305% | 197% | 950% | 707% | 241% |
| **Loading Capacity (TMDL) and Allocations (tons/$mi^2$/yr)** | | | | | | |
| TMDL | 844 | 341 | 244 | 219 | 405 | 329 |
| Background Allocation | 675 | 273 | 195 | 175 | 324 | 263 |
| Total Management Allocation | 169 | 68 | 49 | 44 | 81 | 66 |
| Percent reduction needed in management to attain TMDL | 41% | 88% | 74% | 97% | 96% | 82% |

**Table 5.4 TMDL and Allocations by Source Category for Lower Middle Assessment Area**

Note A: New River, Big French, Manzanita, North Fork, East Fork North Fork.
Note B: Dutch, Soldier, Oregon Gulch, Conner Creek Area.
Note C: Big Bar Area, Prairie Creek, Little French Creek.
Note D: Swede, Italian, Canadian, Cedar Flat, Mill, McDonald, Hennessy, Quinby Creek Area, Hawkins, Sharber.
TMDL equals 1.25 times Background.
Total Management Allocation equals TMDL minus Background.

| Source Categories | Subareas within the Lower Middle Assessment Area | | | | |
|---|---|---|---|---|---|
| | Reference Subwatersheds Note A (434 $mi^2$) | Canyon Creek (64 $mi^2$) | Upper Tributaries Note B (72 $mi^2$) | Middle Tributaries Note C (54 $mi^2$) | Lower Tributaries Note B (96 $mi^2$) |
| **Current Sediment Delivery Rates (tons/$mi^2$/yr)** | | | | | |
| Background (non-management) | 1,568 | 1,302 | 268 | 210 | 221 |
| Management — Roads | 11 | 2,482 | 60 | 37 | 41 |
| Management — Timber Harvest | 4 | 4 | 29 | 16 | 20 |
| Management — Legacy (Roads, mining) | 9 | 17 | 46 | 28 | 29 |
| Total Management | 24 | 2,503 | 135 | 81 | 90 |
| Total Sediment Delivery | 1,592 | 3,805 | 403 | 291 | 311 |
| Total as percent of background | 102% | 292% | 150% | 139% | 141% |
| **Loading Capacity (TMDL) and Allocations (tons/$mi^2$/yr)** | | | | | |
| TMDL | 1,592 | 1,628 | 335 | 263 | 276 |
| Background Allocation | 1,568 | 1,302 | 268 | 210 | 221 |
| Total Management Allocation | 24 | 326 | 67 | 53 | 55 |
| Percent reduction needed in management to attain TMDL | 0 | 87% | 50% | 35% | 39% |

**Table 5.5. TMDL and Allocations by Source Category for Lower Assessment Area**

Note: Since Background rates for Lower Mainstem Area and Coon Creek were not available from GMA (2001), USEPA used the same rate as was calculated for the Quinby Creek Area is comparable in size and underlain by the same geology type (Galice Formation).
TMDL = 1.25 × Background.
Total Management Allocation = TMDL minus Background.

| Source Categories | Subareas within the Lower Assessment Area. Outside of Hoopa Valley Tribe Reservation Boundaries | | | | |
|---|---|---|---|---|---|
| | Reference Subwatersheds Horse Linto Creek (64 $mi^2$) | Mill Creek and Tish Tang (39 $mi^2$) | Willow Creek (43 $mi^2$) | Campbell Creek and Supply Creek (11 $mi^2$) | Lower Mainstem Area and Coon Creek (32$mi^2$) |
| **Current Sediment Delivery Rates (tons/$mi^2$/yr)** | | | | | |
| Background (non-management) | 2,110 | 839 | 374 | 7,845 | 252 |
| Management — Roads | 483 | 703 | 854 | 14,349 | 76 |
| Management — Timber Harvest | 87 | 83 | 201 | 785 | 15 |
| Management — Legacy (Roads, Mining) | 26 | 26 | 26 | 26 | 22 |
| Total Management | 596 | 812 | 1,081 | 15,160 | 113 |
| Total Sediment Delivery | 2,706 | 1,651 | 1,455 | 23,005 | 365 |
| Total as percent of background | 128% | 197% | 389% | 293% | 145% |
| **Loading Capacity (TMDL) and Allocations (tons/$mi^2$/yr)** | | | | | |
| TMDL | 2,638 | 1,049 | 468 | 9,806 | 315 |
| Background Allocation | 2,110 | 839 | 374 | 7,845 | 245 |
| Total Management Allocation | 528 | 210 | 94 | 1,961 | 63 |
| Percent reduction needed in management to attain TMDL | 11% | 74% | 91% | 87% | 44% |

**Final Sediment Deadlines**
USEPA did not specify deadlines for implementation.

**Final Sediment WLA Specific to the Department**
USEPA issued joint LAs and WLA's, as noted above, so source-specific wasteload allocations were not developed for this TMDL.

**Department's Sediment Contribution** (relative pollutant loading)
It is not possible to estimate the Department's point source contribution from the source analysis developed by USEPA.

***South Fork Trinity River Watershed Sediment Total Maximum Daily Load (USEPA, 1998)***

**Final Sediment WLA**
USEPA states that there are no point source discharges, and set the waste load allocation to zero.

**Final Sediment WLA Specific to the Department**
There is no waste load allocation for the Department's discharges. In keeping with USEPA's rationale, this means that the waste load allocation for the Department's sediment discharges is zero.

**Final Deadlines**
No deadlines were specified.

**Department's Pollutant Contribution**
The Department is mentioned as a possible source of sediment discharges, but the relative contribution of its potential discharges were not measured or estimated. The State highways it mentions in the geographic area included in the TMDL are portions of Highways 36 and 101.

***Van Duzen River Watershed Sediment Total Maximum Daily Load (USEPA, 1999)***

**Final Sediment WLA**
USEPA states that there are no point source discharges, and set the waste load allocation to zero.

**Final Sediment WLA Specific to the Department**
There is no waste load allocation for the Department's discharges. In keeping with USEPA's rationale, this means that the waste load allocation for the Department's sediment discharges is zero.

**Final Sediment TMDL Deadlines**
No deadlines were specified.

**Department's Pollutant Contribution**
The Department is mentioned as a possible source of sediment discharges, but the relative contribution of its potential discharges were not measured or estimated. The State highways it mentions in the geographic area included in the TMDL are portions of Highways 3, 36, and 299.

***Napa River Sediment TMDL, January 20, 2011***

**Final Sediment WLA**

The wasteload allocations are listed in the following table:

Note a: For wastewater treatment plant discharges, compliance with existing permit effluent limit of 30 mg/L of TSS is consistent with these wasteload allocations.

Below estimates for loads, percent reductions, and allocations are rounded to two significant figures. Units for Metric column are Tons/year.

| Point Source Category | Current Load | | Reduction Needed (percentage) | Wasteload Allocations | |
|---|---|---|---|---|---|
| | Metric | Percentage of Natural Background | | Metric | Percent of Natural Background |
| Construction Storm Water Order No. 99-08-DWQ | 500 | 0.3 | 0 | 500 | .03 |
| Municipal Storm Water NPDES Permit No. CAS000001 | 800 | 0.5 | 0 | 800 | 0.5 |
| Industrial Storm Water NPDES Permit No. CAS000001 | 500 | 0.3 | 0 | 500 | 0.3 |
| Department Storm Water-Order No. 99-06-DWQ | 600 | 0.4 | 0 | 600 | 0.4 |
| **Wastewater Treatment Plant Discharges** Note a | | | | | |
| City of St. Helena NPDES Permit No. CA0038016 | 30 | <0.1 | 0 | 30 | <0.1 |
| Town of Yountville/CA Veteran's Home NPDES Permit No. CA0038121 | 30 | <0.1 | 0 | 30 | <0.1 |
| City of Calistoga NPDES Permit No. CA0037966 | 40 | <0.1 | 0 | 40 | <0.1 |
| **TOTAL** | 2,500 | 2 | | 2,500 | 2 |

**Final Sediment WLA Specific to the Department**

The Department's wasteload allocation is 600 metric tons/year.

**Final Sediment Deadlines**
The Department is deemed to be implementing appropriate control measures if it discharges in compliance with its municipal storm water permit, and if it conducts the monitoring program included in its storm water permit.

**Department's Sediment Contribution** (relative to pollutant loading)
The Regional Water Board indicates that the Department is a fairly minor anthropogenic source of sediment discharges, and attributes its current discharges to only 0.4% of natural background loading. As a consequence, the Regional Water Board has determined that compliance with its NPDES permit will enable the Department to meet its sediment wasteload allocation.

***Sonoma Creek Sediment TMDL, September 8, 2010***

**Final WLA**
Although roadways are cited as a major source of sediment loading in the Sonoma Creek watershed, the Regional Water Board has determined that compliance with its NPDES permit for storm water will enable the Department to meet its wasteload allocation for sediment.

**Final Sediment WLA Specific to the Department**
The Department's wasteload allocation is 100 tons/year, which is its current (2005) estimated annual discharge of sediment within the area encompassed by this TMDL.

**Final Sediment Deadlines**
In collaboration with stakeholders in the watershed, Water Board staff will develop a detailed monitoring program to assess progress of TMDL attainment and provide a basis for reviewing and revising TMDL elements or implementation actions. As an initial milestone, by fall 2011, the Regional Water Board and watershed partners were required to complete monitoring plans to evaluate: a) attainment of water quality targets; and b) suspended sediment and turbidity conditions. Initial data collection, based on the protocols established in these monitoring plans was anticipated to begin in the winter of 2011-2012.

**Department's Sediment Contribution** (relative to pollutant loading)
The Regional Water Board estimates that the Department's point source discharges of sediment constitute approximately 8% of total point sources discharges of sediment.

***San Francisco Bay Mercury TMDL, February 12, 2008***

The San Francisco Bay Mercury TMDL was adopted by the San Francisco Bay Regional Water Quality Control Board as Resolution Number R2-2006-0052 on August 9, 2006. It was approved by USEPA on February 12, 2008.

**Final Mercury WLA**
There are no WLAs specific to the Department. Instead, the Department's WLA is an unspecified portion of the WLA assigned to the city or municipal NPDES permit in which the Department's roads or facilities reside.

**Final Mercury WLA Specific to the Department**
No deadlines specified.

**Final Mercury Deadlines**
The WLAs must be attained by February 12, 2028.

**Department's Mercury Contribution** (relative contribution to pollutant loading)
The Department's contribution is unknown.

## CENTRAL COAST SEDIMENT TMDLS

Although roadways are cited as a major source of sediment loading in some Central Coast watersheds, the Central Coast Regional Water Board has determined that compliance with the Department's NPDES permit will meet the Department's wasteload allocation.

***San Lorenzo River (includes Carbonera Lompico, and Shingle Mill Creeks) Sediment TMDL, February 19, 2004***

**Final Sediment WLA**
The sediment load to the San Lorenzo River derives from both nonpoint sources and point sources. The TMDL combines nonpoint source LAs and point source WLAs for each segment of this TMDL, as specified in the following table:

Note X: The term "TMDL" is used here for familiarity.

The allowable loads for the San Lorenzo River and its tributaries are actually expressed as a Total Annual Loads (tons/year). This expression of load accounts for seasonal variation in sediment loads explained by the seasonality of rainfall in this region of the Central Coast.

| Sediment Source Category | Allocation (tons/year) | | | |
|---|---|---|---|---|
| | Shingle Mill Creek | Carbonera Creek | Lompico Creek | San Lorenzo River |
| Upland Timber Harvest Plan (THP) Roads | 0 | 419 | 362 | 25,215 |
| Streamside THP Roads on Steep Slopes | 0 | 182 | 164 | 10,949 |
| Upland Public/ Private Roads | 146 | 1,235 | 367 | 13,835 |
| Streamside Public/Private Roads on Steep Slopes | 77 | 135 | 239 | 6,178 |
| THP Land | 0 | 23 | 16 | 1,057 |
| Other Urban and Rural Land | 310 | 2,622 | 965 | 43,368 |
| Mass Wasting | 0 | 4,082 | 6,440 | 157,388 |
| Channel/Bank Erosion | 324 | 3,030 | 989 | 48,149 |
| Total Allocation = TMDL [Note X] | 857 | 11,728 | 9,542 | 306,139 |

**Final Sediment WLA Specific to the Department**
As stated above, no specific waste load allocation was assigned to the Department.

**Final Sediment Deadlines**
Compliance with its municipal storm water permit is deemed to be sufficient to meet the Department's waste load allocation for sediment.

**Department's Sediment Contribution** (relative contribution to pollutant loading)
This TMDL does not estimate the relative contribution of the Department's roadways/facilities to sediment discharges, but this source appears to be moderate based on this TMDL's source analysis.

***Morro Bay (includes Chorro Creek, Los Osos Creek, and the Morro Bay Estuary) Sediment TMDL, January 20, 2004***

**Final WLA**
The sediment load to Morro Bay, Los Osos Creek and Chorro Creek derives from both nonpoint sources and point sources. The TMDL combines nonpoint source LAs and point source WLAs for each segment of this TMDL, as specified in the following table:

**Final Sediment WLA Specific to the Department**

**Loading Allocations (TMDL expressed as annual load)**

| Watershed | Total (Tons/Yr) Rounded to the nearest ton |
|---|---|
| Chorro Creek at Reservoir | 6,541 |
| Dairy Creek | 440 |
| Pennington Creek | 966 |
| San Luisito Creek | 7,315 |
| San Bernardo Creek | 10,269 |
| Minor Tributaries | 4,489 |
| Chorro Creek (Subtotal) | 30,020 |
| Los Osos Creek | 3,052 |
| Warden Creek and Tributaries | 1,812 |
| Los Osos Creek (Subtotal) | 4,864 |
| **Morro Bay Watershed (Total)** | **34,885** |

**Final Sediment WLA Specific to the Department**
Although no specific wasteload allocation was assigned to the Department, this TMDL states that discharges which are in compliance with their respective storm water (and other) NPDES permits are meeting their portion of shared responsibility for achieving sediment load reduction.

**Final Sediment Deadlines**
Implementation will rely on the State's Plan for NPS pollution control (CWC §13369) and continued implementation of existing regulatory controls as appropriate for point sources,

including storm water pursuant to NPDES surface water discharge regulations and Waste Discharge Requirements under Porter-Cologne. Final compliance with sediment load reductions is scheduled to be achieved by 2054 (50 years from the adoption of the TMDL).

**Department's Sediment Contribution** (relative contribution to pollutant loading)
The Department's contribution to sediment loading was not estimated in this TMDL.

## LOS ANGELES REGION SEDIMENT/NUTRIENTS/MERCURY TMDLS

**Department's Pollution Contribution:**
Although roadways are cited as a major source of sediment loading in some watersheds**,** for purposes of current sediment-related TMDLs, the Los Angeles Regional Water Board has determined that compliance with its NPDES permit will meet the Department's wasteload allocations for sediment.

***Ballona Creek Wetlands Sediment and Invasive Exotic Vegetation TMDLs, March 26, 2012***

**Final Sediment WLA**
USEPA established wasteload allocations (WLAs) for sediment to address the impairments identified for the Ballona Creek Wetlands. WLAs are assigned to the Los Angeles County MS4 and their co-permittees, and the Department, who are responsible for the loading of sediment into Ballona Creek Wetlands. The WLAs are the total allowable sediment load that can be discharged into Ballona Creek Wetlands. This total sediment load includes both suspended sediment and sediment bed load that are transported from Ballona Creek Watershed into Ballona Creek Wetlands. Invasive exotic vegetation listed on the California Noxious Weed list are given a WLA and LA of zero.

Since the current existing discharge of sediment load is not contributing to the listed impairments or otherwise causing a negative impact to Ballona Creek Wetlands, this TMDL establishes joint WLAs based on existing conditions. The allowable WLA is set at 58,354 $yd^3/yr$ (or 44,615 $m^3/yr$). The joint wasteload allocation is as follows:

| Responsible Jurisdiction | Input | Sediment Wasteload Allocation[1] ($yd^3/yr$) | Existing Total Sediment Load ($yd^3/yr$) |
|---|---|---|---|
| Los Angeles County MS4, Co-Permittees & Department | Ballona Creek Watershed | 58,354 | 58,354 |

**Final Sediment WLA Specific to the Department**
As stated above, there is no WLA specific to the Department. The joint point source WLA is 58,354 cubic yards of sediment per year, which is equivalent to the current estimated total sediment loading contributed by these sources.

**Final Sediment Deadlines**
USEPA did not specify deadlines for implementation of this TMDL.

**Department's Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to anthropogenic sediment loading is not estimated or quantified in this TMDL. However, the joint WLAs are set to the current estimated sediment discharges, which the Department can meet through compliance with its NPDES municipal storm water permit.

***Calleguas Creek and its Tributaries & Mugu Lagoon Metals (including Mercury) and Selenium TMDL, March 26, 2007***

**Final Mercury WLA**
The Department shares group mass-based WLAs for mercury for Calleguas Creek and Revolon Slough with other Permitted Storm water Dischargers (PSDs). Final WLAs are mass-based and are dependent upon annual flow ranges.

*Final Mass-based WLAs for Annual Flow Ranges, Mercury in Suspended Sediment*

| Flow Range, Millions of Gallons per Year | Calleguas Creek (lbs/yr) | Revolon Slough (lbs/yr) |
|---|---|---|
| 0 – 15,000 MGY | 0.4 | 0.1 |
| 15,000 – 25,000 MGY | 1.6 | 0.7 |
| Above 25,000 MGY | 9.3 | 1.8 |

**Final Mercury WLA Specific to the Department**
There is no specific allocation for the Department.

**Final Mercury Deadlines**
The final WLAs must be achieved within 15 years after the effective date of the amendment, or March 26, 2022.

**Department's Mercury Contribution** (relative contribution to pollutant loading)
The Department's areal proportion of the watershed is not known.

**The Los Angeles Area Lakes and Reservoir**

TMDLs specific to the Department include targets for the following lakes:

- Echo Park Lake: nitrogen phosphorus, chlordane, dieldrin, PCBs, and trash
- Lake Sherwood: mercury
- Legg Lakes (North, Center and Legg): nitrogen and phosphorus
- Peck Road Park Lake: nitrogen and phosphorus
- Puddingstone Reservoir: nitrogen, phosphorus, chlordane, DDT, PCBs, Hg, and Dieldrin

Wasteload allocations were assigned to responsible jurisdictions based on existing loading of nitrogen and phosphorus to each lake. To allow flexibility in implementing the nutrient TMDLs, responsible jurisdictions receiving required reductions have the option to submit a request to the Regional Board for alternative concentration-based wasteload allocations. These

jurisdictions can receive alternative concentration-based wasteload allocations not to exceed 1.0 and 0.1 milligrams per liter total nitrogen and total phosphorus, respectively.

During wet weather, runoff from industrial sites has the potential to contribute pollutant loadings. During dry weather, the potential contribution of pollutant loadings from industrial storm water is low because non-storm water discharges are prohibited or authorized by the permit only under the following circumstances: when they do not contain significant quantities of pollutants, where Best Management Practices are in place to minimize contact with significant materials and reduce flow, and when they are in compliance with Regional Board and local agency requirements.

***Los Angeles Area (Echo Park Lake) Total Nitrogen, Total Phosphorus, Chlordane, Dieldrin, PCBs, and Trash TMDLs, March 26, 2012)***

**Final Nutrient WLAs**

| | Total Phosphorus, (lbs/year) | Total Nitrogen, (lbs/year) |
|---|---|---|
| TOTAL | 83.3 | 682 |

**Final Nutrient WLAs Specific to the Department**

| Subwatershed | Total Phosphorus, (lbs/year) | Total Nitrogen, (lbs/year) |
|---|---|---|
| Northern | 0.608 | 4.77 |
| Southern | 0.051 | 0.403 |

**Final Nutrient Deadlines**

There are no final deadlines specified for the Department.

**Department's Nutrient Contributions** (relative contribution to pollutant loading)

| Subwatershed | Percentage of the Total Phosphorus Load | Percentage of the Total Nitrogen Load |
|---|---|---|
| Northern | 0.6% | 0.7% |
| Southern | 0.05% | 0.06% |

***Los Angeles Area (North, Center & Legg Lakes) Nitrogen and Phosphorus, TMDLs, March 26, 2012***

**Final Nutrient WLA Nitrogen & Phosphorous TMDLs**

| | Total Phosphorus (lbs/year) | Total Nitrogen (lbs/year) |
|---|---|---|
| TOTAL | 1,541 | 9,135 |

**Final WLAs Specific to the Department**

| Subwatershed | Total Phosphorus, (lbs/year) | Total Nitrogen, (lbs/year) |
|---|---|---|
| Direct to Center Lake | 4.6 | 15.5 |
| Direct to Legg Lake | 1.2 | 4.0 |
| Direct to North Lake | 19.1 | 64.1 |
| Northwestern | 9.4 | 29.3 |
| Northeastern | 10.9 | 34.0 |

Alternative concentration-based WLAs are available to the Department if it satisfies certain criteria as detailed in the TMDL. Those WLAs are:

| Subwatershed | Maximum Allowable WLA for Total Phosphorus (mg/L) | Maximum Allowable WLA for Total Nitrogen (mg/L) |
|---|---|---|
| Direct to Center Lake | 0.1 | 1.0 |
| Direct to Legg Lake | 0.1 | 1.0 |
| Direct to North Lake | 0.1 | 1.0 |
| Northwestern | 0.1 | 1.0 |
| Northeastern | 0.1 | 1.0 |

**Final Nutrient Deadlines**

There are no final deadlines specified for the Department.

**Department's Nutrient Contribution** (relative contribution to pollutant loading)

| Subwatershed | Percentage of the Total Phosphorus Load | Percentage of the Total Nitrogen Load |
|---|---|---|
| Direct to Center Lake | 0.2 % | 0.2 % |
| Direct to Legg Lake | 0.1 % | <0.1 % |
| Direct to North Lake | 1.0 % | 0.6 % |
| Northwestern | 0.5 % | 0.3 % |
| Northeastern | 0.6 % | 0.3 % |

***Los Angeles Area (Peck Road Park Lake) Nitrogen, Phosphorus, Chlordane, DDT, Dieldrin, PCBs, and Trash TMDLs, March 26, 2012***

**Final Nutrient WLAs**

| | Total Phosphorus (lbs/year) | Total Nitrogen (lbs/year) |
|---|---|---|
| TOTAL | 19,319 | 186,845 |

**Final Nitrogen & Phosphorus WLA Specific to the Department**

| Subwatershed | Total Phosphorus (lbs/year) | Total Nitrogen (lbs/year) |
|---|---|---|
| Eastern | 158 | 1,165 |
| Western | 34.2 | 251 |

**Final Nutrient Deadlines**

There are no final deadlines specified for the Department.

**Department's Nutrient Contribution** (relative contribution to pollutant loading)

| Subwatershed | Percentage of the Total Phosphorus Load | Percentage of the Total Nitrogen Load |
|---|---|---|
| Eastern | 0.8 % | 0.6 % |
| Western | 0.2 % | 0.1 % |

***Los Angeles Area (Puddingstone Reservoir) Nitrogen, Phosphorus, Chlordane, DDT, PCBs, Mercury, and Dieldrin TMDLs, March 26, 2012***

**Final Nutrient WLAs for Puddingstone Reservoir**

*Final Nitrogen and Phosphorus WLAs*

| | Total Phosphorus (lbs/year) | Total Nitrogen (lbs/year) |
|---|---|---|
| TOTAL | 4,226 | 18,756 |

**Final Nitrogen, Phosphorus WLAs Specific to the Department**

| Subwatershed | Total Phosphorus (lbs/year) | Total Nitrogen (lbs/year) |
|---|---|---|
| Northern | 167 | 745 |
| Southern | 14.8 | 68.2 |

Alternative concentration-based WLAs are available to the Department if it satisfies certain criteria as detailed in the TMDL. Those WLAs are:

| Subwatershed | Maximum Allowable WLA for Total Phosphorus (mg/L) | Maximum Allowable WLA for Total Nitrogen (mg/L) |
|---|---|---|
| Northern | 0.1 | 1.0 |
| Direct Southern | 0.1 | 1.0 |

**Final Nutrient Deadlines**
There are no final deadlines specified for the Department.

**Department's Nutrient Contribution** (relative contribution to pollutant loading)

| Subwatershed | Percentage of the Total Phosphorus Load | Percentage of the Total Nitrogen Load |
|---|---|---|
| Northern | 3.6 % | 3.4 % |
| Southern | 0.3 % | 0.3 % |

**Final Mercury WLA for Puddingstone Reservoir**
Final Waste Load Allocations are assigned to the Department for sub-watersheds for Puddingstone Reservoir, and must be met at the Department's discharge points.

**Final Mercury WLA for Puddingstone Reservoir Specific to the Department**

*Mercury WLAs for Puddingstone Reservoir*

| Subwatershed | Area (ac) | Existing Annual Hg Load (g/yr) | Percent of Load | Final Wasteload Allocation (g/yr) |
|---|---|---|---|---|
| Puddingstone-Northern | 110 | 1.32 | 1.85 | 0.702 |
| Puddingstone-Southern | 11.6 | 0.0960 | 0.13 | 0.051 |

Fish Harbor is impaired for mercury in sediment. The Department is named as a responsible party for WLAs to Fish Harbor. The final concentration-based WLA for sediment in Fish Harbor is 0.15 mg per kilogram of dry sediment.

**Final Mercury Deadlines for Puddingstone Reservoir**
The Department is subject to the prescribed point source interim WLAs which are effective as of March 23, 2012. Compliance with all final WLAs is required by March 23, 2032.

**Department's Mercury Contribution for Puddingstone Reservoir** (relative contribution to pollutant loading)

| Subwatershed | Annual Hg Load (g/yr) | Percent of Total Load |
|---|---|---|
| Northern | 1.32 | 1.85 |
| Southern | 0.096 | 0.13 |
| Total | 1.42 | 1.99 |

***Los Angeles Area (Lake Sherwood) Mercury TMDL, March 26, 2012***

**Final Mercury WLA**

Final waste load allocations are assigned to the Department for one sub-watershed, Lake Sherwood, and must be met at the Department's discharge points.

**Final Mercury WLA Specific to the Department**

Mercury WLAs for Lake Sherwood

| Subwatershed | Area (ac) | Existing Annual Hg Load (g/yr) | Percent of Load | Final Wasteload Allocation (g/yr) |
|---|---|---|---|---|
| Carlisle Canyon | 2.75 | 0.049 | 0.12 | 0.014 |

**Final Mercury Deadlines**

There are no final deadlines specified for the Department.

**Department's Mercury Contribution** (relative contribution to pollutant loading)

| Subwatershed | Annual Hg Load (g/yr) | Percent of Total Load |
|---|---|---|
| Carlisle Canyon | 0.049 | 0.12 |
| Entire Watershed | 0.049 | 0.001 |

***Machado Lake Eutrophic, Algae, Ammonia, and Odors (Nutrients), March 11, 2009***

**Final Nutrients WLA**

Final concentration-based Waste Load Allocations are established for total phosphorus and total nitrogen (defined as the sum of the concentrations of Total Kjeldhal Nitrogen, Nitrate as N, and Nitrite as N). For most storm water permittees, the final WLA for total phosphorus is 0.1 mg/L. For total nitrogen, the final WLA is 1.0 mg/L.

Final Nutrients WLA Specific to the Department

For the Department, the final WLA for total phosphorus is 0.1 mg/L. For total nitrogen, the final WLA is 1.0 mg/L.

Final Nutrients Deadlines

The Department must achieve its final WLAs by September 11, 2018.

**Department's Nutrients Contribution** (relative contribution to pollutant loading)

The Department's contribution to the overall loading is not defined in the TMDL. The draft Machado Lake Nutrients TMDL Implementation Plan, submitted on March 11, 2011 by the Department states that the Department's roadways and facilities comprise approximately 1.2 percent of the Machado Lake Watershed.

***Malibu Creek & Lagoon TMDL for Sedimentation and Nutrients, July 2, 2013***

Sediment loading into Malibu Lagoon is much higher than naturally expected. The excess sediment accumulates in the Lagoon tidal channels and carries greater nutrient loads and cause algae blooms with likely adverse impacts on benthic macroinvertebrates.

**Final Sedimentation WLA**

Allocations for Sedimentation as listed in Table 10-2. (Based on SCAG 2008 land use and Jurisdictional maps provided by MS4 Co-permittees.)

| Type of Allocation | Responsible Party | Impervious Area (total acres) | Pervious Area (acres) | Allocation Fraction | Sedimentation Allocation (tons/yr) |
|---|---|---|---|---|---|
| WLA | WLA Los Angeles Co. below | 887 | 10.612 | 17.4% | 1,012 |
| WLA | Department below Malibou Lake | 60 | 61 | 0.8% | 44 |
| LA | Unincorporated area draining to Las Virgenes Creek** | 8 | 267 | 0.3% | 16 |
| LA | Protected land below Malibou Lake* | 253 | 16,820 | 13.7 | 796 |
| LA | Load Allocation at outlet of Malibou Lake | 3,669 | 37,550 | 67.9% | 3,950 |
| Total | Total | 4,878 | 65,310 | 100.0% | 5,817 |

**Final Sedimentation WLA Specific to the Department**

See Table 10-2 above for the Department's below Malibou Lake.

**Final Sedimentation Deadlines**

USEPA did not develop final deadlines for this TMDL.

**Department's Sedimentation Contribution** (relative contribution to pollutant loading)

See the Department's Nutrients Contribution below.

**Final Nutrients WLA**

There are no total final WLAs for Malibu Creek and Lagoon. Below are the concentration-based numeric targets as listed in Table 10-4 of this TMDL.

| Season | Total Nitrogen (mg/l) | Total Phosphorus (mg/l) |
|---|---|---|
| Summer (Apr 15 – Nov 15) | 0.65 | 0.1 |
| Winter (Nov 16 - Apr 14) | 1.0 | 0.2 |

**Final Nutrients WLA Specific to the Department**
Final WLAs are established Total Nitrogen (TN) and Total Phosphorus (TP) for summer and winter as listed in Table 10-4 of this TMDL.

| Summer TN, mg/l (Apr 15 – Nov 15) | Winter TN, mg/l (Nov 16 – Apr 14) | Summer TP, mg/l (Apr 15 – Nov 15) | Winter TP, mg/l (Nov 16 – Apr 14) |
|---|---|---|---|
| 1.0 | 4.0 | 0.1 | 0.2 |

**Final Nutrients Deadlines**
EPA did not develop final deadlines for this TMDL.

**Department's Nutrients Contribution** (relative contribution to pollutant loading)
The Department's total area within the watershed is 206 acres, of a total of 65,310 acres or 0.317% of the total watershed.

The Department's contribution to the nutrient loads is not specified in the TMDL, but it can be assumed that the contribution is nearly the same as the allocation fraction for sediment in Table 10-2, at 0.8%. Multiplying the monthly watershed loads for winter and summer from Tables 5-3 and 5-4, respectively, by the Department's allocation fraction provides an approximation of the Department's total contribution to the monthly load.

| Source | Summer TN Load kg/mo Apr 15 – Nov 15 | Winter TN Load kg/mo Nov 16 – Apr 14 | Summer TP Load kg/mo Apr 15 – Nov 15 | Winter TP Load kg/mo Nov 16 – Apr 14 |
|---|---|---|---|---|
| Total Load | 789 | 20,442 | 140 | 2,842 |
| Department Runoff (estimate based on area) | 6.31 | 164 | 1.12 | 22.7 |

***Ventura River and its Tributaries Algae, Eutrophic Conditions, and Nutrients TMDL, June 28, 2013***

This TMDL establishes dry-weather and wet-weather WLAs for nitrogen and a dry-weather TMDL for phosphorus.

**Final Nutrients WLA**
The final dry-weather Total Nitrogen and Total Phosphorus loads are not explicitly stated in the TMDL.

**Final Nutrients WLA Specific to the Department**
The final total dry-weather total nitrogen WLA for the Department is 1.1 pound/day. The final dry-weather total phosphorus WLA for the Department is 0.11 pound/day.

Wet-weather allocations for “nitrogen”, defined as the sum of Nitrate-N and Nitrite-N, are the same for all storm water dischargers and are site-specific to the reaches of the watershed:

| Reach | Nitrate-N + Nitrite-N (mg/L) |
|---|---|
| Estuary | 7.4 |
| Reach 1 | 7.4 |
| Reach 2 | 10 |
| Cañada Larga | 10 |
| Reach 3 | 5 |
| San Antonio Creek | 5 |
| Reach 4 | 5 |
| Reach 5 | 5 |

**Final Nutrients Deadlines**
Wet-weather WLAs for the Department apply on the effective date of the TMDL. Dry-weather WLAs for the Department must be achieved by June 28, 2019.

**Department’s Nutrients Contribution**
The Department’s proportional contributions to the final WLAs are estimated to be approximately 1 percent each.

## CENTRAL VALLEY REGION NUTRIENTS AND MERCURY TMDLS

***Clear Lake Nutrients TMDL, September 21, 2007***

**Final Nutrients WLA**
The final WLA for phosphorus for Clear Lake is 2100 kg per year.

**Final Nutrients WLA Specific to the Department**
The Department is given a final WLA for phosphorus of 100 kg per year.

**Final Nutrients Deadlines**
The Department shall achieve its WLAs by September 21, 2017.

**Department’s Nutrients Contribution (**relative contribution to pollutant loading**)**
The Department contributes 4.8 percent to the final phosphorus WLA.

***Cache Creek, Bear Creek, Sulphur Creek and Harley Gulch Mercury TMDL, February 7, 2011***

**Final Methylmercury WLA**

*Implementation Summary Cache Creek and Bear Creek Methylmercury Allocations*

| Source | Acceptable Annual Load (g/yr) |
|---|---|
| Cache Creek (Clear Lake to North Fork Confluence | 11 |
| North Fork Cache Creek | 12.4 |
| Harley Gulch | 0.04 |
| Davis Creek | 0.7 |
| Bear Creek @ Highway 20 | 3 |
| In-channel production and un-gauged tributaries | 32 |
| Bear Creek @ Bear Valley Road | 0.9 |
| Sulphur Creek | 0.8 |
| In-channel production and un-gauged tributaries | 1 |

**Final Mercury WLA Specific to the Department**
No specific WLA assigned to the Department.

**Final Mercury Deadlines**
None specified.

**Department's Mercury Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to pollutant loading is not known.

***Sacramento-San Joaquin River Delta Estuary Methylmercury TMDL, October 20, 2011***

**Final Methylmercury WLA**

*Delta Methylmercury Allocations*

| Permittee | NPDES Permit | Waste Load Allocation (g/yr) |
|---|---|---|
| **Central Delta** | | |
| County of Contra Costa | CAS083313 | 0.75 |
| City of Lodi | CAS000004 | 0.053 |
| Port of Stockton MS4 | CAS084077 | 0.39 |
| County of San Joaquin | CAS000004 | 0.57 |
| Stockton Area MS4 | CAS083470 | 3.6 |
| ***SUBTOTAL*** | | ***5.4*** |
| **Marsh Creek** | | |
| County of Contra Costa | CAS083313 | 0.30 |
| ***SUBTOTAL*** | | ***0.30*** |
| **Mokelumne River** | | |
| County of San Joaquin | CAS000004 | 0.016 |
| ***SUBTOTAL*** | | ***0.016*** |

| Permittee | NPDES Permit | Waste Load Allocation (g/yr) |
|---|---|---|
| **Sacramento River** | | |
| City of Rio Vista | CAS000004 | 0.0078 |
| Sacramento Area MS4 | CAS082597 | 1.0 |
| County of San Joaquin | CAS000004 | 0.11 |
| County of Solano | CAS000004 | 0.041 |
| City of West Sacramento | CAS000004 | 0.36 |
| County of Yolo | CAS000004 | 0.041 |
| ***SUBTOTAL*** | | ***1.6*** |
| **San Joaquin River** | | |
| City of Lathrop | CAS000004 | 0.097 |
| Port of Stockton MS4 | CAS084077 | 0.0036 |
| County of San Joaquin | CAS000004 | 0.79 |
| Stockton Area MS4 | CAS083470 | 0.18 |
| City of Tracy | CAS000004 | 0.65 |
| ***SUBTOTAL*** | | ***1.7*** |
| **West Delta** | | |
| County of Contra Costa | CAS083313 | 3.2 |
| ***SUBTOTAL*** | | ***3.2*** |
| **Yolo Bypass** | | |
| County of Solano | CAS00004 | 0.021 |
| City of West Sacramento | CAS00004 | 0.28 |
| County of Yolo | CAS00004 | 0.083 |
| ***SUBTOTAL*** | | ***0.38*** |
| **TOTAL** | | ***12.596*** |

**Final Methylmercury WLA Specific to the Department**
There are no WLAs specific to the Department. However, allocations for each of the defined municipal entities in the above table include all current and future permitted dischargers within the geographic boundaries of these municipalities and unincorporated areas, including the Department.

**Final Methylmercury Deadlines**
The final WLAs for dischargers in the Delta and Yolo bypass shall be met as soon as possible, but no later than January 1st, 2030.

**Department's Methylmercury Contribution** (relative contribution to pollutant loading)
The Department's contribution to the methylmercury load is not known.

***Lake Tahoe Sediment and Nutrients TMDL, August 16, 2011***

Attachment IV incorporates TMDL-specific permit requirements for the sediments and nutrients TMDL for Lake Tahoe. The TMDL requires the Department to meet pollutant load reduction requirements and to develop and implement a comprehensive Pollutant Load Reduction Plan (PLRP).

**Final Sediment WLA**

The pollutant load reduction requires the Department to reduce fine sediment particle (FSP), total phosphorus (TP), and total nitrogen (TN) loads by ten percent, seven percent and eight percent respectively by September 30, 2016. The Department shall prepare a Pollutant Load Reduction Plan (PLRP) describing how it expects to meet the pollutant load reductions.

**Final Sediment Deadlines**

This plan is to be submitted no later than July 15, 2013. By July 15, 2014, the Department shall submit a Progress Report documenting pollutant load reductions accomplished between May 1, 2004 (baseline year) and October 15, 2011. The Department shall also prepare and submit a Storm Water Monitoring Plan for review and approval by the Regional Board by July 15, 2013 and implement the approved plan.

Final deadlines for both nitrogen and phosphorus WLAs are for 65 years after the effective date of the TMDL (August 16, 2076).

**Department's Sediment Contribution** (relative contribution to pollutant loading)

*Final Nutrient WLA*

| Constituent | Basin-Wide Load (MT/yr) | Urban Upland Load | Final Urban Upland Reduction % | Final WLA, (MT/yr) |
|---|---|---|---|---|
| Nitrogen | 345 | 63 | 50 | 31.5 |
| Phosphorus | 38 | 18 | 46 | 8.28 |

**Final Nutrient WLA Specific to the Department**

The Department's specific contributions to the loads are not defined. The Department is part of a group of Urban Upland (storm water) dischargers. The Department was required to submit a 2004 baseline load estimate specific to its jurisdiction by August 16, 2013.

**Final Nutrient Deadlines**

Final deadlines for both nitrogen and phosphorus WLAs are for 65 years after the effective date of the TMDL (August 16, 2076).

**Department's Nutrient Contribution** (relative contribution to pollutant loading)

The Department's relative contribution to pollutant loading is not known.

***Truckee River Sediment TMDL, September 16, 2009***

TMDL attainment will be evaluated through the TMDL targets: these targets express desired conditions in the watershed, rather than sediment mass reductions. This was deemed to be appropriate because sediment mass reductions are not a practical indication of beneficial use protection due to the inherent natural variability of sediment delivery and the uncertainties associated with accurately measuring sediment loads and reductions.

**Final Sediment WLA**
For the most part, point source dischargers' compliance with their respective NPDES permits are deemed to be evidence of compliance with their respective responsibilities to help achieve desired watershed conditions, as described above.

**Final Sediment WLA Specific to the Department**
The Department's compliance with its storm water permit is deemed to be evidence of compliance with its responsibility to help achieve desired watershed conditions, as described above.

**Final Sediment TMDL Deadlines**
The Truckee River instream sediment targets are currently being met and will be further evaluated for TMDL attainment.

**Department's Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to sediment pollutant loading is not known.

## SANTA ANA REGION NUTRIENTS AND MERCURY TMDLS

***Big Bear Lake Nutrients for Dry Hydrological Conditions TMDL, September 25, 2007***
This TMDL contains waste load allocations for phosphorus loads under dry hydrological conditions, defined as an average tributary inflow to Big Bear Lake ranging from 0 to 3,049 acre-feet, average lake levels ranging from 6,671 to 6,735 feet and annual precipitation ranging from 0 to 23 inches.

**Final Nutrients WLA**
The total Waste Load Allocation is 475 pounds/year.

**Final Nutrients WLA Specific to the Department**
There is no WLA specific to the Department.

**Final Nutrients Deadlines**
The WLA must be achieved by December 31, 2015.

**Department's Nutrients Contribution** (relative contribution to pollutant loading**)**
The Department's relative contribution to nutrient pollutant loading is not known.

***Lake Elsinore and Canyon Lake Nutrients TMDL, September 30, 2005***

The Department has already committed to cooperative implementation actions, monitoring actions, special studies and implementation actions jointly with other responsible agencies as an active paying member of the Lake Elsinore/Canyon Lake TMDL Task Force. If the Department doesn't fulfill its Lake Elsinore/Canyon Lake Task Force obligations or if the Department chooses to opt out of the cooperative approach with the TMDL Task Force for implementation actions, monitoring actions, and/or special studies then the Department will have to implement the requirements listed in Table IV.2. of Attachment IV.

**Final Nutrients WLA**

| Waterbody | Final Total Phosphorus Waste Load Allocation (kg/year) | Final Total Nitrogen Waste Load Allocation (kg/year) |
|---|---|---|
| Canyon Lake | 487 | 6,248 |
| Lake Elsinore | 3,845 | 7,791 |

**Final Nutrients WLA Specific to the Department**

There are no WLAs specific to the Department.

**Final Nutrients Deadlines**

Final allocation compliance is to be achieved by December 31, 2020.

**Department's Nutrient Contribution** (relative contribution to pollutant loading)

The Department's relative contribution to the nutrient pollutant loading is not available.

***Rhine Channel Area of Lower Newport Bay Chromium and Mercury, USEPA Established on June 14, 2002***

**Mercury Final WLA**

A WLA for mercury to Rhine Channel is 0.225 kilograms/year.

**Mercury Final WLA Specific to the Department**

The final mass-based Mercury WLA for the Department is 0.0027 kilograms/year.

**Mercury Final Deadlines**

The Santa Ana Regional Water Quality Control Board anticipated a Basin Plan Amendment addressing implementation of the above TMDLs in 2007; these amendments have not yet been completed

**Department's Mercury Contribution** (relative contribution to pollutant loading)

The Department's relative contribution to the mercury loading is approximately three percent. This WLA was developed by taking the available load and dividing it roughly in proportion to the land areas associated with the remaining source categories (including the Department).

Historical loading of sediment to some coastal wetlands within Region 9 has resulted in impacts to natural wetland functions. The excess deposition and movement of sediment within remaining coastal wetlands has greatly altered the natural conditions. Urbanized development of the watershed and the channel straightening has modified both the sediment supply and the ability of flows to transport sediments. Additionally, channelization of streams has cut off the banks and floodplains of natural rivers within these watersheds. Sediments carried in flows are not stored within the banks but are rather transported to the outlet of coastal estuaries where they are deposited. Recurring dredging operations in coastal areas also affect sediment transport and deposition patterns in these watersheds. Wetland and estuarine habitats tend to be fragmented by existing roads, infrastructure, and surrounding urbanized development.

In some Region 9 watersheds, natural processes of erosion have been accelerated due to anthropogenic watershed disturbances, resulting in impairment of additional principally biological resources, but also recreational uses, including: RARE, MIGR, SPWN, WILD, EST, MAR, BIOL, REC1, REC2, NAV.

***Rainbow Creek Total Nitrogen and Total Phosphorus TMDL, March 22, 2006***

**Final Nutrient WLA**

The final WLA for nitrogen is 82 kilograms/year. The final WLA for phosphorus is eight kilograms/year.

**Final Nutrient WLA Specific to the Department**

The final WLA for nitrogen for the Department is 49 kilograms/year. The final WLA for phosphorus for the Department is five kilograms/year.

**Final Nutrient Deadlines**

The Department shall achieve the final WLA by December 31, 2021.

**Department's Nutrient Contribution** (relative contribution to pollutant loading)

The Department's contribution to the nitrogen and phosphorus WLAs is three percent of the total.

**C. Metals/Toxics/Pesticides TMDL Pollutant Category**

**General Description of Pollutant Category**

Toxic pollutants, including but not limited to Pesticides, Polycyclic Aromatic Hydrocarbons (PAHs) and Polychlorinated Biphenyls (PCBs), cause several impairments to California's water quality.

**Sources of Pollutant & How it Enters the Waterway**

The main transport mechanism for these pollutants is through fine sediment. Once the contaminated fine sediments wash of the roadways and into storm drains or nearby receiving waters they re-suspend in the water column and become bioavailable.

Metals including copper, zinc, lead, cadmium, nickel and chromium are toxic to aquatic life and cause impairments to California's waterbodies. Toxic metals are present in water as both dissolved and total recoverable fractions. During times of high precipitation (storm events), the primary transport mechanism for metals, especially in the total recoverable fraction, is again the mobilization of fine sediment. Accumulated contaminated fine sediment washes off roadways and into storm drains or nearby receiving waters. Metals in the sediment become bioavailable while suspended in the water column. During times of low precipitation, flows that reach storm drains or discharge points are typically insufficient to mobilize fine sediment, but dissolved metal ions are still bioavailable and reach discharge points.

Mechanical components of automobiles, especially those that are subjected to frictional stresses are either known or supposed sources of these metals (i.e., copper from brake pads and zinc from synthetic rubber tires). Some toxic metals are also present in petroleum-based lubricants and in gasoline and diesel fuel (i.e. cadmium).

**Watershed Contribution**

The Department is identified in many TMDLs as a source of toxic pollutants because they own and operate the roadways which act as conveyance systems of fine sediments. However, in most cases the Department makes up a relatively minor load for toxic pollutants because the models used to develop TMDLs rely on the percentage of land use to determine WLAs.

The Department is named in the TMDLs below as a source of metals in storm water because it owns, operates and maintains roadways and facilities present in these watersheds. As with toxics, in most cases, the Department is assigned a relatively minor proportion of the entire storm water WLA for each metal because its roadways and facilities comprise a small proportion of the total watershed area.

**Control Measures**

The requirements in Part C of Attachment IV of this permit address both dissolved and sediment-bound sources of toxics and metals. Section C.1 addresses treatment of the fine sediment fraction of toxics and metals and requires that the Department implement structural controls/BMPs.

Dissolved fraction metal impairments require an inventory of outfalls/discharge points to waterbodies within each prioritized reach impaired by dissolved fraction metals and to propose and implement appropriate controls consistent with the report.

The Reach Prioritization and Implementation Requirements in Section I.A. and I.B. of Attachment IV place a priority on identifying and addressing the highest source generating areas. This strategy will control the largest sources of fine sediment for a minor pollutant source and allow for attainment of the applicable WLAs consistent with the Toxic Pollutants and Metals TMDLs identified in Table IV.2 of Attachment IV.

In Section III.C.1, the options for controlling sediment-bound toxics and metals are essentially the same. The types of BMPs expected to be implemented to address fine sediment discharges under C.1 are those expected to be implemented to address sediment discharges for the sediment TMDLs discussed above.

Section III.C.2 explains that Dissolved Fraction Metals levels in storm water are reduced when contaminated sediment is removed or mitigated, but additional structural and non-structural BMPs may still be necessary to achieve compliance. In some cases, this may require building or instituting BMPs in addition to those used for metals in fine sediments for the same discharge points. Structural BMPS might include Infiltration or detention basins/trenches, filtration using metal-absorbing media, etc.

Section III.C.3. Pesticides. The Department is to comply with the Vegetation Control provision that specifies practices for the safe handling and use of pesticides, including compliance with federal, state and local regulations, and label directions.

## SAN FRANCISCO BAY REGION TOXIC TMDLS

***San Francisco Bay PCBs TMDL, March 29, 2010***

The TMDL identifies storm water runoff as a major source for PCB transport and includes the Department's roadways, non-roadway facilities, and rights-of-way.

**Final PCBs WLA**

The total WLA for all storm water runoff sources is two kilograms/year.

**Final PCBs WLA Specific to the Department**

All storm water runoff sources share a two kilograms/year WLA.

**Final PCBs Deadlines**

The WLA of two kilograms/year is broken up by county and is to be achieved within 20 years or March 29, 2030.

**Department's PCBs Contribution (**relative contribution to pollutant loading**)**

The TMDL also directs the storm water sources to implement this TMDL through the applicable NPDES permits.

***San Francisco Bay Urban Creeks Diazinon and Pesticide Toxicity, May 16, 2007***

**Final Pesticide Toxicity WLA**

The TMDL states that most urban runoff flows through storm drains operated by all storm water entities including the Department. The WLA for each storm water entity is 1 $TUC_a$ ($TUC_a$ = 100/No Observed Adverse Effect Concentration) and one $TUC_c$ ($TUC_c$ = 100/No Observed Effect Concentration) in water and sediment.

**Final Pesticide Toxicity WLA Specific to the Department**

The Department's level of responsibility is not identified.

**Final Pesticide Toxicity Deadlines**

The TMDL specifies that all NPDES permits for runoff management agencies, including the Department, require implementation of best management practices and control measures that reduce pesticides in urban runoff to the maximum extent practicable. No final compliance date

is specified, however, the Regional Water Board may require additional control measures if the Department fails to meet the TMDL targets.

**Department's Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to pesticide toxicity pollutant loading is not known.

## LOS ANGELES REGION METALS AND TOXICITY TMDLS

### *Ballona Creek Metals & Selenium TMDL, December 22, 2005 and reaffirmed on December 29, 2008*

The TMDL identifies storm water as a significant contributor to loadings of copper, lead and zinc (and selenium) to Ballona Creek and Sepulveda Canyon Channel in both dry weather and wet weather.

**Final Metals WLA**
Storm water allocations are divided among the MS4 and general permits named in the TMDL based on an areal weighting approach.

**Final Metals WLA Specific to the Department**
The Department is assigned separate dry-weather and wet-weather Waste Load Allocations (WLAs). Dry-weather conditions apply to days when the maximum daily flow in Ballona Creek is less than 40 cubic feet per second (cfs), and wet-weather conditions apply to days when the maximum daily flow in Ballona Creek is equal to or greater than 40 cfs. Both dry-weather and wet-weather WLAs are mass-based, although alternate concentration-based dry-weather WLAs are allowed due to the expense of obtaining accurate flow measurements.

*Dry-weather WLAs g/day, Total Recoverable Metal:*

| Waterbody | Copper | Lead | Zinc |
|---|---|---|---|
| Ballona Creek | 11.2 | 6.0 | 143.1 |
| Sepulveda Channel | 5.1 | 2.7 | 64.7 |

*Wet-weather WLAs, g/day, Total Recoverable Metal; V is daily flow volume in liters:*

| Waterbody | Copper | Lead | Zinc |
|---|---|---|---|
| All | 2.37 × V ÷ 1 E 07 | 7.78 × V ÷ 1 E 07 | 1.57 × V ÷ 1 E 06 |

*Alternate dry-weather WLAs, µg/L, Total Recoverable Metal:*

| Waterbody | Copper | Lead | Zinc |
|---|---|---|---|
| All | 24 | 13 | 304 |

**Final Metals Deadlines**
The Department is responsible for meeting its assigned mass-based WLAs, but has the option to work with the other MS4 permittees. Each municipality and permittee is required to meet the

storm water waste load allocation at designated TMDL effectiveness monitoring points. The MS4 permittees including the Department may use a combination of structural and non-structural BMPs to achieve compliance with the storm water WLAs. Total compliance is to be achieved by January 11, 2021.

**Department's Metals Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to metals pollutant loading is not known.

***Ballona Creek Estuary Toxic Pollutants TMDL, December 22, 2005***

**Final OC-Compounds & PAHs WLA**

The storm water WLAs are apportioned between the MS4 permittees, the Department, the general construction, and the general industrial storm water permits based on an areal weighting approach.

**Final WLA Specific to the Department**

The Department is assigned the following WLAs based on the 1.3 percent land area associated with the Department:

*Metals Storm Water WLAs Apportioned between Permits*

| Cadmium (kg/yr) | Copper (kg/yr) | Lead (kg/yr) | Silver (kg/yr) | Zinc (kg/yr) |
|---|---|---|---|---|
| 0.11 | 3.2 | 4.4 | 0.09 | 14 |

*Organics Storm Water WLAs Apportioned between Permits*

| Total Chlordane (g/yr) | Total DDTs (g/yr) | Total PCBs (g/yr) | Total PAHs (g/yr) |
|---|---|---|---|
| 0.05 | 0.15 | 2 | 400 |

**Final WLA Deadlines**

The implementation schedule for the MS4 and the Department permittees consists of a phased approach, with compliance to be achieved in prescribed percentages of the watershed with total compliance to be achieved within 15 years of the TMDL effective date or December 22, 2020.

**Department's WLA Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to the pollutant loading is unknown.

***Calleguas Creek OC Pesticides, PCBs, and Siltation TMDL, March 14, 2006***

**Final OC Pesticides & PCBs WLA**

In accordance with current USEPA practice, a group concentration-based WLA has been developed for MS4s, including the Department's MS4. The grouped allocation will apply to all NPDES-regulated municipal storm water discharges in the Calleguas Creek Watershed. Storm water WLAs will be incorporated into the NPDES permit as receiving water limits measured at

the downstream points of each subwatershed and are expected to be achieved through the implementation of BMPs as outlined in the implementation plan.

**Interim WLAs as an In-stream Annual Average (ng/g)**

| Pollutant | Mugu Lagoon | Calleguas Creek | Revolon Slough | Arroyo Las Posas | Arroyo Simi | Conejo Creek |
|---|---|---|---|---|---|---|
| Total Chlordane | 25.0 | 17.0 | 48.0 | 3.3 | 3.3 | 3.4 |
| 4,4-DDD | 69.0 | 66.0 | 400.0 | 290.0 | 14.0 | 5.3 |
| 4,4-DDE | 300.0 | 470.0 | 1,600.0 | 950.0 | 170.0 | 20.0 |
| 4,4-DDT | 39.0 | 110.0 | 690.0 | 670.0 | 25.0 | 2.0 |
| Dieldrin | 19.0 | 3.0 | 5.7 | 1.1 | 1.1 | 3.0 |
| Total PCBs | 180.0 | 3,800.0 | 7,600.0 | 25,700.0 | 25,700.0 | 3,800.0 |
| Toxaphene | 22,900.0 | 260.0 | 790.0 | 230.0 | 230.0 | 260.0 |

**Final WLAs as an In-stream Annual Average**

| Pollutant | Mugu Lagoon (ng/g) | Calleguas Creek (ng/g) | Revolon Slough (ng/g) | Arroyo Las Posas (ng/g) | Arroyo Simi (ng/g) | Conejo Creek (ng/g) |
|---|---|---|---|---|---|---|
| Total Chlordane | 3.3 | 3.3 | 0.9 | 3.3 | 3.3 | 3.3 |
| 4,4-DDD | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 4,4-DDE | 2.2 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| 4,4-DDT | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Dieldrin | 4.3 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 |
| Total PCBs | 180.0 | 120.0 | 130.0 | 120.0 | 120.0 | 120.0 |
| Toxaphene | 360.0 | 0.6 | 1.0 | 0.6 | 0.6 | 0.6 |

**Final OC Pesticides & PCBs WLA Specific to the Department**

See Tables above.

**Final OC Pesticides & PCBs Deadlines**

The above Final WLAs (ng/g) as an in-stream annual average are to be achieved by March 24, 2026, but the schedule and allocations can be altered based on the results of several special studies required in the TMDL implementation plan.

**Department's OC Pesticides & PCBs Contribution** (relative contribution to pollutant loading)

The Department's relative pesticide and PCB contribution is not known.

***Calleguas Creek and its Tributaries & Mugu Lagoon Metals and Selenium TMDL, March 26, 2007***

**Final Metals WLAs**

Urban storm water runoff was identified as a source for metals pollution in the TMDL. The Department shares group WLAs for nickel, copper and selenium with other Permitted Storm water Dischargers (PSDs). Concentration-based interim limits for nickel, copper and selenium are effective from the date of the TMDL for all PSDs. Final WLAs are mass-based. There are final WLAs for both dry-weather and wet-weather conditions. The dry-weather WLAs apply to days when flows in the stream are less than the 86$^{th}$ percentile flow rate for each reach. The wet-weather WLAs apply to days when flows in the stream exceed the 86$^{th}$ percentile flow rate for each reach. Dry weather limits are based on chronic California Toxics Rule (CTR) criteria. Wet weather limits are based on acute CTR criteria.

*Interim Concentration-based Wet and Dry Weather Limits*

Note: Units in µg/L
*The current loads do not exceed the TMDL under wet conditions: interim limits not required

| Metal | Calleguas and Conejo Creek | | | Revolon Slough | | |
|---|---|---|---|---|---|---|
| | Dry CMC | Dry CCC | Wet CMC | Dry CMC | Dry CCC | Wet CMC |
| Copper | 23 | 19 | 204 | 23 | 19 | 204 |
| Nickel | 15 | 13 | * | 15 | 13 | * |

*Final Mass-based Dry-weather WLAs, lbs/day, Total Recoverable Metal in Water Column*

| Metal | Calleguas and Conejo Creek | | | Revolon Slough | | |
|---|---|---|---|---|---|---|
| | Low | Average | Elevated | Low | Average | Elevated |
| Copper (lbs/day) | 0.04 × WER -0.02 | 0.12 × WER -0.02 | 0.18 × WER -0.03 | 0.03 × WER -0.01 | 0.06 × WER -0.03 | 0.13 × WER -0.02 |
| Nickel (lbs/day) | 0.100 | 0.120 | 0.440 | 0.050 | 0.069 | 0.116 |

*Final Mass-based Wet-weather WLAs, lbs/day, total recoverable metal in water column*

Calleguas Creek

Copper: $(0.00054 \times Q^2 \times 0.032 \times Q - 0.17) \times WER - 0.06$

Nickel: $0.014 \times Q^2 + 0.82 \times Q$

Revolon Slough

Copper: $(0.0002 \times Q^2 + 0.0005 \times Q) \times WER$

Nickel: $0.027 \times Q^2 + 0.47 \times Q$

A WER is applied to final numeric targets for copper for the Mugu Lagoon, Calleguas Creek 2, and Revolon/Beardsley reaches; the WER defaults to a value of one (1) unless a site-specific study is approved. The mass-based WLAs apply to the Permitted Storm water Dischargers as a group, and the Department has no specific proportional WLA.

**Final Metals WLA Specific to the Department**
The WLAs above apply to all permitted storm water dischargers, including the Department. The Department has no specific final WLAs.

**Final Metals Deadlines**
All PSDs have required interim reductions of 25 percent and 50 percent by March 26, 2012 and March 26, 2017, respectively. The final WLAs must be achieved within 15 years after the effective date of the amendment (March 26, 2022). Implementation shall be achieved through BMPs. The Department was originally tasked with submitting an Urban Water Quality Control Plan by March 26, 2012. Implementation is meant to be achieved using BMPs. The Department was required to conduct a source control study and submit an Urban Water Quality Management Program for copper, nickel, selenium and mercury by March 26, 2009.

**Department's Metals Contribution (**relative contribution to pollutant loading**)**
The Department's contribution to the metal loads is unknown.

***Colorado Lagoon OC Pesticides, PCBs, Sediment Toxicity, PAHs and Metals TMDL, June 14, 2011***

The TMDL identifies the point sources of OC pesticides, PCBs, PAHs, and metals discharged to Colorado Lagoon are urban runoff and storm water discharges from the MS4 and the Department. The Colorado Lagoon watershed is divided into five sub-basins that discharge storm water and urban dry weather runoff to Colorado Lagoon. Each of the sub-basins is served by a major storm sewer trunk line and supporting appurtenances that collect and transport storm water and urban dry weather runoff to Colorado Lagoon.

**Final WLAS for OC Pesticides, PCBs, and PAHs**
The Department and the City of Long Beach shall each be responsible for achieving the following final mass-based WLAs assigned to the Line I Storm Drain as it conveys storm water from both the Department's facilities and the City of Long Beach:

*Final Mass-based WLA for MS4 Discharges*

| Total Chlordane | Dieldrin (mg/yr) | Total PAHs (mg/yr) | Total PCBs (mg/yr) | Total DDTs (mg/yr) |
|---|---|---|---|---|
| 3.65 | 0.15 | 29,321.50 | 165.49 | 11.52 |

In addition, concentration-based WLAs for sediment are assigned to MS4 permittees including the City of Long Beach, LACFCD, and the Department. Concentration-based WLAs for sediment are applied as average monthly limits. Compliance with the concentration-based WLAs for sediment shall be determined by pollutant concentrations in the sediment in the lagoon at points in the West Arm, North Arm, and Central Arm that represent the cumulative

inputs from the MS4 drainage system to the lagoon. Concentration-based interim WLAs for sediment are set to allow time for removal of contaminated sediment through proposed implementation actions. Interim WLAs are based on the 95th percentile value of sediment data collected from 2000-2008. The following interim and final WLAs will be included in MS4 permits in accordance with NPDES guidance and requirements:

*Concentration-based WLAs*

| Pollutants | Interim WLAs (µg/dry kg) | Final WLAs (µg/dry kg) |
|---|---|---|
| Total Chlordane | 129.65 | 0.50 |
| Dieldrin | 26.20 | 0.02 |
| Total PAHs | 4,022 | 4,022 |
| Total PCBs | 89.90 | 22.7 |
| Total DDTs | 149.80 | 1.58 |

**Final WLAs for Metals**

The Department is jointly responsible with the City of Long Beach in attaining final mass-based WLAs for lead and zinc in sediment and storm water conveyed to Colorado Lagoon via the Line I Storm Drain. In addition, concentration-based interim limits are established for all storm water dischargers, including the Department.

*Interim Concentration-based WLAs for Metals in Sediment*

| Metal | Average Monthly Sediment | |
|---|---|---|
| | Interim WLA (µg/kg) | Final WLA (µg/kg) |
| Lead | 399,500 | 46,700 |
| Zinc | 565,000 | 150,000 |

*Final Mass-based WLAs for Metals in Line I Storm Drain*

Proposed BMPs that may apply to the Line I Storm Drain include:
Low-flow diversion, trash separation devices, vegetated bioswales, cleaning of existing culverts, or direct removal of accumulated sediment

| Metal | mg/yr |
|---|---|
| Lead | 340,455.99 |
| Zinc | 1,093,541.72 |

**Final OC Pesticides, PCBs & PAHs WLA Specific to the Department**

See tables above.

**Final OC Pesticides, PCBs & PAHs Deadlines**

The Department is subject to the prescribed point source interim WLAs which are effective as of July 28, 2011. Compliance with all final WLAs is required by July 28, 2018.

**The Department's OC Pesticides, PCBs & PAHs Contribution** (relative contribution to pollutant loading)

The Department's relative contribution to the OC Pesticides, PCBs, and PAHs pollutant loading is not known.

***Dominguez Channel and Greater Los Angeles and Long Beach Harbor Toxic Pollutants TMDL, March 23, 2012***

The toxic pollutants included in this TMDL include Copper, lead, zinc, DDT, PAHs, and PCBs.

**Final WLAs for OC Pesticides PCBs, and PAHs**

Interim and final WLA are assigned to storm water discharges including those from the Department's MS4. Dominguez Channel freshwater allocations are set for wet weather only because exceedances have only been observed in wet weather. Mass-based allocations have been set where sufficient data was available to calculate mass-based allocations; otherwise, concentration-based allocations have been set. Interim and final WLAs shall be included in permits in accordance with state and federal regulations and guidance.

An interim freshwater toxicity allocation of two chronic toxicity units (TUc) applies to all point sources to Dominguez Channel during wet weather including the Department. A final freshwater toxicity allocation of one (1) TUc applies to all point sources to Dominguez Channel during wet weather including the Department.

Interim sediment allocations for Dominguez Channel Estuary and greater Los Angeles and Long Beach Harbor waters are assigned to storm water discharges based on the 95$^{th}$ percentile of sediment data collected from 1998-2006. The final mass-based allocations for PAHs expressed as an annual loading (kilograms/year) of pollutants in the sediment deposited to the Dominguez Channel Estuary, Los Angeles River Estuary, and the Greater Los Angeles and Long beach Harbor Waters. The final mass-based allocations for Total DDT and Total PCBs, expressed annual loading (grams/year) of pollutants in the sediment deposited to the Dominguez Channel Estuary, Los Angeles River Estuary, and the Greater Los Angeles and Long Beach Harbor Waters.

*OC Pesticides PCBs, and PAHs Interim and Final WLAs*

***Interim Concentration-Based Sediment Allocations***

| Waterbody | Total PAHs (mg/kg) | Total DDTs (mg/kg) | Total PCBs (mg/kg) |
|---|---|---|---|
| Dominguez Channel Estuary | 31.60 | 1.727 | 1.490 |
| Long Beach Inner Harbor | 4.58 | 0.070 | 0.060 |
| Los Angeles Inner Harbor | 90.30 | 0.341 | 2.107 |
| Long Beach Outer Harbor | 4,022 | 0.075 | 0.248 |
| Los Angeles Outer Harbor | 4,022 | 0.097 | 0.310 |
| Los Angeles River Estuary | 4.36 | 0.254 | 0.683 |
| San Pedro Bay | 4,022 | 0.057 | 0.193 |

| Waterbody | Total PAHs (mg/kg) | Total DDTs (mg/kg) | Total PCBs (mg/kg) |
|---|---|---|---|
| Cabrillo Marina | 36.12 | 0.186 | 0.199 |
| Consolidated Slop | 386.00 | 1.724 | 1.920 |
| Cabrillo Beach Area | 4,022 | 0.145 | 0.033 |
| Fish Harbor | 2102.7 | 40.5 | 36.6 |

***Final Mass-Based Sediment Allocations for the Department***

| Waterbody | Total PAHs (kg/yr) | Total DDTs (g/yr) | Total PCBs (g/yr) |
|---|---|---|---|
| Dominguez Channel Estuary | 0.0023 | 0.004 | 0.004 |
| Consolidated Slip | 0.00009 | 0.00014 | 0.00006 |
| Inner Harbor | 0.0017 | 0.0010 | 0.0011 |
| Outer Harbor | 0.00021 | 0.000010 | 0.00004 |
| Fish Harbor | 0.000021 | 0.0000010 | 0.000006 |
| Cabrillo Marina | 0.0000016 | 0.00000028 | 0.00000024 |
| San Pedro Bay | 0.077 | 0.002 | 0.019 |
| LA River Estuary | 0.333 | 0.014 | 0.047 |

**Final Concentration-based Sediment WLAs for Other Bioaccumulative Compounds (dry sediment)**

| Total Chlordane (µg/kg) | Dieldrin (µg/kg) | Toxaphene (µg/kg) |
|---|---|---|
| 0.5 | 0.02 | 0.10 |

**Final OC Pesticides PCBs, and PAHs WLAs for Metals**

Interim and final WLAs for copper, lead and zinc are assigned to storm water discharges including those from the Department's MS4. Freshwater allocations for Dominguez Channel are set for wet weather only because exceedances have only been observed in wet weather. Wet weather conditions in Dominguez Channel and all of its upstream tributaries apply to any day when the maximum daily flow is greater than 62.7 cfs at any point in Dominguez Channel. Mass-based allocations have been set where sufficient data were available to calculate mass-based allocations; otherwise, WLAs are concentration-based.

Interim allocations for Dominguez Channel and Torrance Lateral are assigned to storm water dischargers, including the Department, and are based on the 95$^{th}$ percentile of total metals data collected from January 2006 to January 2010 using a log-normal distribution. Interim sediment allocations for Dominguez Channel Estuary and greater Los Angeles and Long Beach Harbor waters are assigned to storm water discharges based on the 95$^{th}$ percentile of sediment data collected from 1998-2006.

*Interim Concentration-Based WLAs for Dominguez Channel and Torrance Lateral*

| Total Copper (µg/L) | Total Lead (µg/L) | Total Zinc (µg/L) |
|---|---|---|
| 207.51 | 122.88 | 898.87 |

*Interim Concentration-Based Sediment Allocations (mg/kg sediment)*

| Waterbody | Copper (mg/kg) | Lead (mg/kg) | Zinc (mg/kg) |
|---|---|---|---|
| Dominguez Channel Estuary | 220.0 | 510.0 | 789.0 |
| Long Beach Inner Harbor | 142.3 | 50.4 | 240.6 |
| Los Angeles Inner Harbor | 154.1 | 145.5 | 362.0 |
| Long Beach Outer Harbor | 67.3 | 46.7 | 150 |
| Los Angeles Outer Harbor | 104.1 | 46.7 | 150 |
| Los Angeles River Estuary | 53.0 | 46.7 | 183.5 |
| San Pedro Bay | 76.9 | 66.6 | 263.1 |
| Cabrillo Marina | 367.6 | 72.6 | 281.8 |
| Consolidated Slip | 1470.0 | 1100.0 | 1705.0 |
| Cabrillo Beach Area | 129.7 | 46.7 | 163.1 |
| Fish Harbor | 558.6 | 116.5 | 430.5 |

Wet-weather freshwater metals allocations are assigned to Dominguez Channel and all of its upstream reaches and tributaries above Vermont Avenue. Mass-based (grams/day) WLAs are divided between the Department and other MS4 permittees by subtracting the other storm water or NPDES WLAs, air deposition and margin of safety from the total loading capacity. Metals targets used to calculate these WLAs were based on an assumed hardness of 50 mg/L and 90$^{th}$ percentile annual flow rates for Dominguez Channel (62.7 cfs).

*The Department's Final mass-based water WLAs for Dominguez Channel*

| Total Copper | Total Lead | Total Zinc |
|---|---|---|
| 32.3 *(g/day)* | 142.6 *(g/day)* | 232.6 *(g/day)* |

For the Torrance Lateral subwatershed, concentration-based freshwater WLAs for both water and sediment are assigned to all dischargers, including the Department. Metals targets used to calculate these WLAs were based on an assumed hardness of 50 mg/L and 90$^{th}$ percentile annual flow rates.

*The Department's Final concentration-based WLAs for Torrance Lateral*

| Media (units) | Total Copper | Total Lead | Total Zinc |
|---|---|---|---|
| Water (µg/L, unfiltered) | 9.7 | 42.7 | 69.7 |
| Sediment (mg/kg, dry) | 31.6 | 35.8 | 121 |

The final mass-based allocations for metals are expressed as an annual loading (kilograms/year) of pollutants in the sediment deposited to the Dominguez Channel Estuary, Los Angeles River Estuary, and the Greater Los Angeles and Long Beach Harbor Waters. The Interim and Final WLAs are:

| Reach | Total Copper (kg/yr) | Total Lead (kg/yr) | Total Zinc (kg/yr) |
|---|---|---|---|
| Dominguez Channel Estuary | 0.384 | 0.93 | 4.7 |
| Consolidated Slip | 0.043 | 0.058 | 0.5 |
| Inner Harbor | 0.032 | 0.641 | 2.18 |
| Outer Harbor | 0.0018 | 0.052 | 0.162 |
| Fish Harbor | 0.0000005 | 0.00175 | 0.0053 |
| Cabrillo Marina | 0.00019 | 0.0028 | 0.007 |
| San Pedro Bay | 0.88 | 2.39 | 9.29 |
| LA River Estuary | 5.1 | 9.5 | 34.8 |

In addition to the above, Fish Harbor is impaired for mercury in sediments, Consolidated Slip is impaired for mercury, cadmium and chromium in sediments and Dominguez Channel Estuary is impaired for cadmium in sediments. These waterbodies are assigned no interim WLAs but are assigned final concentration-based WLAs. The Department is NOT named as a responsible party for WLAs to Consolidated Slip.

*Final concentration-based sediment WLAs for other metals, dry sediment*

Note: The Department is NOT specifically named as a responsible party for implementation actions to Dominguez Channel proper in the 1st Phase of implementation to reduce the amount of sediment transport from point sources that directly or indirectly discharge to the Dominquez Channel and the Harbor waters, even though it has specific WLAs.

| Reach | Cadmium mg/kg | Chromium mg/kg | Mercury mg/kg |
|---|---|---|---|
| Dominguez Channel Estuary | 1.2 | | |
| Fish Harbor | | | 0.15 |

**Final Toxic Pollutant WLA Specific to the Department**
See tables above.

**Final Toxic Pollutant Deadlines**
The Department is subject to the prescribed point source interim WLAs which are effective as of March 23, 2012. Compliance with all final WLAs is required by March 23, 2032.

**Department's Toxic Pollutant Contribution** (relative contribution to pollutant *loading)*
The Department's relative contribution to the toxic pollutant loading is not known.

***Los Angeles Area Lakes for Organochlorine Pesticides and PCBs***

To assess compliance with the organochlorine (OC) compounds TMDLs, monitoring should include monitoring of fish tissue at least every three years as well as once yearly sediment and water column sampling. For the OC pesticides and PCBs TMDLs a demonstration that fish tissue targets have been met in any given year must at minimum include a composite sample of skin off fillets from at least five common carp each measuring at least 350mm in length. At a minimum, compliance monitoring should measure the following in-lake water quality parameters: total suspended sediments, total PCBs, total chlordane, dieldrin, and total DDTs; as well as the following in-lake sediment parameters: total organic carbon, total PCBs, total chlordane, dieldrin, and total DDTs. WLAs are assigned to storm water inputs. These sources should be measured near the point where they enter the lakes once a year during a wet weather event. Sampling should be designed to collect sufficient volumes of suspended solids to allow for the analysis of at minimum: total organic carbon, total suspended solids, total PCBs, total chlordane, dieldrin, and total DDTs. Measurements of the temperature, dissolved oxygen, pH and electrical conductivity should also be taken.

USEPA established TMDLs do not include implementation plans so all WLAs are considered in effect as of the approval date.

***Los Angeles Area (Echo Park Lake) Nitrogen, Phosphorus, Chlordane, Dieldrin, and Trash TMDLs, USEPA Established on March 26, 2012***

The entire watershed of Echo Park Lake is contained in MS4 jurisdictions, and watershed loads are therefore assigned WLAs. The Department's areas and facilities that operate under a general industrial storm water permit also receive WLAs. There are TMDLs for PCBs, Chlordane, and Dieldrin, and each has specific WLAs for the Department which are detailed below. The TMDLs have two sets of WLAs, one of which relies on meeting various fish tissue targets that would supersede the initial set of WLAs. Each WLA must be met at the point of discharge.

**Final WLAs**

*PCBs WLA*

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (µg/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Northern | Department | State Highway Storm water | 1.77 | 0.17 |
| Southern | Department | State Highway Storm water | 1.77 | 0.17 |

*If the Fish Tissue targets are met:*

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Northern | Department | State Highway Storm water | 59.8 | 0.17 |
| Southern | Department | State Highway Storm water | 59.8 | 0.17 |

*Total Chlordane TMDL*

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Northern | Department | State Highway Storm water | 2.10 | 0.59 |
| Southern | Department | State Highway Storm water | 2.10 | 0.59 |

*If Fish Tissue Targets are met:*

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Northern | Department | State Highway Storm water | 3.24 | 0.59 |
| Southern | Department | State Highway Storm water | 3.24 | 0.59 |

*Dieldrin TMDL*

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Northern | Department | State Highway Storm water | 0.80 | 0.14 |
| Southern | Department | State Highway Storm water | 0.80 | 0.14 |

*If the Fish Tissue targets are met:*

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Northern | Department | State Highway Storm water | 1.90 | 0.14 |

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Southern | Department | State Highway Storm water | 1.90 | 0.14 |

**Final OC Compounds WLA Specific to the Department**
See tables above.

**Final OC Compounds Deadlines**
USEPA did not establish deadlines.

**Department's OC Compounds Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to the OC Pesticide pollutant loading is unknown.

***Los Angeles Area (Peck Road Park Lake) Nitrogen, Phosphorus, Chlordane, DDT, Dieldrin, PCBs, and Trash***

**Final OC Compounds WLA**
The entire watershed of Peck Road Park Lake is contained in MS4 jurisdictions, and watershed loads are therefore assigned WLAs. The Department areas and facilities that operate under a general industrial storm water permit also receive WLAs. There are TMDLs for PCBs, Chlordane, DDTs, and Dieldrin and each has specific WLAs for the Department which are detailed below. The TMDLs have two sets of WLAs, one of which relies on meeting various fish tissue targets that would supersede the initial set of WLAs. Each WLA must be met at the point of discharge.

**Final OC Compounds WLA Specific to the Department**

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Eastern | Department | State Highway Storm water | 1.29 | 0.17 |
| Western | Department | State Highway Storm water | 1.29 | 0.17 |

*If the Fish Tissue targets are met:*

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Eastern | Department | State Highway Storm water | 59.8 | 0.17 |
| Western | Department | State Highway Storm water | 59.8 | 0.17 |

*Total Chlordane TMDL*

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Eastern | Department | State Highway Storm water | 1.73 | 0.59 |
| Western | Department | State Highway Storm water | 1.73 | 0.59 |

*If the Fish Tissue targets are met:*

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Eastern | Department | State Highway Storm water | 3.24 | 0.59 |
| Western | Department | State Highway Storm water | 3.24 | 0.59 |

*Total DDTs TMDL*

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Eastern | Department | State Highway Storm water | 5.28 | 0.59 |
| Western | Department | State Highway Storm water | 5.28 | 0.59 |

*Dieldrin TMDL*

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Eastern | Department | State Highway Storm water | 0.43 | 0.14 |
| Western | Department | State Highway Storm water | 0.43 | 0.14 |

*If the Fish Tissue targets are met:*

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Eastern | Department | State Highway Storm water | 1.90 | 0.14 |

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Western | Department | State Highway Storm water | 1.90 | 0.14 |

**Final OC Compounds WLA Specific to the Department**
See tables above.

**Final OC Compounds Deadlines**
USEPA did not establish deadlines.

**Department's OC Compounds Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to the OC Pesticides and PCBs pollutant loading is not known.

***Los Angeles Area (Puddingstone Reservoir) Nitrogen, Phosphorus, Chlordane, DDT, PCBs, Mercury, and Dieldrin TMDLs, USEPA Established on March 26, 2012***

**Final OC Compounds WLA**
In the Puddingstone Reservoir watershed, WLAs are required for all permittees in the northern subwatershed and the Department's areas in the southern subwatershed. There are TMDLs for PCBs, Chlordane, DDTs, and Dieldrin and each has specific WLAs for the Department which are detailed below.

**Final OC Compounds WLA Specific to the Department**
The TMDLs have two sets of WLAs, one of which relies on meeting various fish tissue targets that would supersede the initial set of WLAs. Each WLA must be met at the point of discharge.

**Total PCBs TMDL**

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Northern | Department | State Highway Storm water | 0.59 | 0.17 |
| Southern | Department | State Highway Storm water | 0.59 | 0.17 |

*If the Fish Tissue targets are met:*

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| **Northern** | Department | State Highway Storm water | 59.8 | 0.17 |

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| **Southern** | Department | State Highway Storm water | 59.8 | 0.17 |

**Total Chlordane TMDL**

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Northern | Department | State Highway Storm water | 0.75 | 0.57 |
| Southern | Department | State Highway Storm water | 0.75 | 0.57 |

*If the Fish Tissue targets are met:*

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Northern | Department | State Highway Storm water | 3.24 | 0.57 |
| Southern | Department | State Highway Storm water | 3.24 | 0.57 |

**Total DDTs TMDL**

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Northern | Department | State Highway Storm water | 3.94 | 0.59 |
| Southern | Department | State Highway Storm water | 3.94 | 0.59 |

*If the Fish Tissue targets are met:*

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Northern | Department | State Highway Storm water | 5.28 | 0.59 |
| Southern | Department | State Highway Storm water | 5.28 | 0.59 |

**Dieldrin TMDL**

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Northern | Department | State Highway Storm water | 0.22 | 0.14 |
| Southern | Department | State Highway Storm water | 0.22 | 0.14 |

*If the Fish Tissue targets are met:*

| Subwatershed | Responsible Jurisdiction | Input | Suspended Sediment WLAs (ug/kg dry weight) | Water Column WLAs (ng/L) |
|---|---|---|---|---|
| Northern | Department | State Highway Storm water | 1.90 | 0.14 |
| Southern | Department | State Highway Storm water | 1.90 | 0.14 |

**Final OC Compounds WLA Specific to the Department**
See tables above.

**Final OC Compounds Deadlines**
USEPA did not establish deadlines.

**Department's OC Compounds Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to pollutant loading is not known.

***Los Angeles River Watershed Metals TMDL, September 6, 2007***
**Final Metals WLA**

This TMDL includes wet-weather and dry-weather WLAs for copper, lead, and zinc. Wet-weather conditions are when the maximum daily flow of the Los Angeles River is greater than or equal to 500 cfs. Dry-weather conditions are where maximum daily flow is less than 500 cfs; critical flows are also listed for each of the reaches in this TMDL.

**Final Metals WLA Specific to the Department**
For dry-weather conditions, the Department is assigned grouped WLAs with other MS4 permittees.

WERs are explicitly included in these WLAs, but default to a value of 1 (unit less) unless site-specific values are approved by the Regional Water Board. Concentration-based limits are also allowed for dry weather due to the expense of obtaining accurate flow measurements; in this case, the concentration-based limits are equal to dry-weather reach-specific dry-weather numeric targets.

*Final Mass-based Dry-weather WLAs for Storm water and MS4s, Total Recoverable Metals*

Note: All WERs are equal to 1 (unit less)

| Waterbody | Critical Flow (CFS) | Copper (kg/day) | Lead (kg/day) | Zinc (kg/day) |
|---|---|---|---|---|
| LAR 6 | 7.20 | 0.53 × WER | 0.33 × WER | |
| LAR 5 | 0.75 | 0.05 × WER | 0.03 × WER | |
| LAR 4 | 5.13 | 0.32 × WER | 0.12 × WER | |
| LAR 3 | 4.84 | 0.06 × WER | 0.03 × WER | |
| LAR 2 | 3.86 | 0.13 × WER | 0.07 × WER | |
| LAR 1 | 2.58 | 0.14 × WER | 0.07 × WER | |
| Bell Creek | 0.79 | 0.06 × WER | 0.04 × WER | |
| Tujunga Wash | 0.03 | 0.001× WER | 0.0002 × WER | |
| Burbank Channel | 3.3 | 0.15 × WER | 0.07 × WER | |
| Verdugo Wash | 3.3 | 0.18 × WER | 0.10 × WER | |
| Arroyo Seco | 0.25 | 0.01 × WER | 0.01 × WER | |
| Rio Hondo Reach 1 | 0.50 | 0.01 × WER | 0.006 × WER | 0.16 × WER |
| Compton Creek | 0.90 | 0.04 × WER | 0.02 × WER | |

*Final Concentration-based reach-specific numeric targets, total recoverable metals*

Note A: WER is equal to 1 (unit less)
Note B: WER for this constituent in this reach is 3.96

| Waterbody | Copper (µg/L) | Lead (µg/L) | Zinc (µg/L) |
|---|---|---|---|
| LA River Reach 6 | WER [Note A] × 30 | WER [Note A] × 19 | |
| LA River Reach 5 | WER [Note A] × 30 | WER [Note A] × 19 | |
| LA River Reach 4 | WER [Note B] × 26 | WER [Note A] × 10 | |
| LA River Reach 3 above LA-Glendale WRP | WER [Note B] × 23 | WER [Note A] × 12 | |
| LA River Reach 3 below LA-Glendale WRP | WER [Note B] × 26 | WER [Note A] × 12 | |

| Waterbody | Copper (µg/L) | Lead (µg/L) | Zinc (µg/L) |
|---|---|---|---|
| LA River Reach 2 | WER [Note B] × 22 | WER [Note A] × 11 | |
| LA River Reach 1 | WER [Note B] × 23 | WER [Note A] × 12 | |
| Bell Creek | WER [Note A] × 30 | WER [Note A] × 19 | |
| Burbank Western Channel (above WRP) | WER [Note B] × 26 | WER [Note A] × 14 | |
| Burbank Western Channel (below WRP) | WER [Note B] × 19 | WER [Note A] × 9.1 | |
| Verdugo Wash | WER [Note B] × 23 | WER [Note A] × 12 | |
| Compton Creek | WER [Note A] × 19 | WER [Note A] × 8.9 | |
| Arroyo Seco | WER [Note B] × 22 | WER [Note A] × 11 | |
| Rio Hondo Reach 1 | WER [Note A] × 13 | WER [Note A] × 5.0 | WER [Note A] × 131 |
| Monrovia Canyon | | WER [Note A] × 8.2 | |

Wet-weather allocations are apportioned among storm water permit holders based on percent area of the watershed served by storm drains.

*Final Mass-based wet-weather WLAs, Total Recoverable Metals*

| Metal | Waste Load Allocation (kg/day) Total Recoverable |
|---|---|
| Cadmium | WER × (1 ÷ 5.3 E 11) × daily volume (L) -0.03 |
| Copper | WER × (1 ÷ 2.9 E 10) × daily volume (L) -0.2 |
| Lead | WER × (1 ÷ 1.06 E 09) × daily volume (L) -0.07 |
| Zinc | WER × (1 ÷ 2.7 E 09) × daily volume (L) -1.6 |

**Final Metals Deadlines**

By January 11, 2024, the jurisdictional group shall demonstrate that 100 percent of the group's total drainage area served by the storm drain system is effectively meeting the dry-weather WLAs and 50 percent of the group's total drainage area served by the storm drain system is effectively meeting the wet-weather WLAs. By January 11, 2028, the jurisdictional group shall demonstrate that 100 percent of the group's total drainage area served by the storm drain system is effectively meeting both the dry-weather and wet-weather WLAs. MS4s and the Department may meet the TMDL using a phased implementation approach using a combination of structural and non-structural BMPs.

**Department's Metals Contribution** (relative contribution to pollutant loading)
Unknown

***Los Cerritos Channel Metals TMDL, March 17, 2010***

**Final Metals WLA**

This TMDL assigns the Department wet-weather WLAs for copper, lead and zinc and a dry-weather WLA for copper only. Wet weather is defined as where the maximum daily flow of Los Cerritos Channel is greater than 23 cfs, and dry weather is where the maximum daily flow of the Channel is less than 23 cfs. For dry-weather copper targets, a site-specific translator was used, defined as the median value of the ratio of direct measurements to CTR criteria. Only the Department and other MS4s have a mass-based WLA for copper for dry weather, and this is divided among permittees based on estimates of respective percentage of total watershed area.

Final mass-based wet-weather WLAs are divided among the Department, other MS4 permittees, General Construction permittees and General Industrial permittees based on an estimate of the percentage of land area covered under each permit. The Department's estimated percent area of the watershed is 0.8 percent.

**Final Metals WLA Specific to the Department**

| Copper Dry-weather WLA, Total Recoverable Metal | |
|---|---|
| Copper | 1.0 g/day |

**Metals Wet-weather WLAs, Total Recoverable Metal**
**(V is daily flow volume in liters)**

| Copper g/day | Lead g/day | Zinc g/day |
|---|---|---|
| 0.070 × V ÷ 1 E 06 | 0.397 × V ÷ 1 E 06 | 0.680 × V ÷ 1 E 06 |

**Final Metals Deadlines**

USEPA did not include implementation measures for the TMDL, and as such implementation procedures are the responsibility of the Los Angeles Regional Water Board. Implementation measures for this TMDL are currently being developed by the Los Angeles Regional Water Board.

**Department's Metals Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to the metals pollutant loading is not known.

***Machado Lake Pesticides and PCBs TMDL, March 20, 2012***

The point sources of pesticides and PCBs into Machado Lake are storm water and urban runoff discharges including those from the Department's MS4. Storm water and urban runoff dischargers to Machado Lake occur through the following sub-drainage systems: Wilmington Drain, Project 77 and Project 510.

**Final Pesticides and PCBs WLA**
The following WLAs apply to all point sources:

| Pollutants | WLAs (ug/kg dry weight) |
|---|---|
| Total PCBs | 59.8 |
| DDT (all congeners) | 4.16 |
| DDE (all congeners) | 3.16 |
| DDD (all congeners) | 4.88 |
| Total DDT | 5.28 |
| Total Chlordane | 3.24 |
| Dieldrin | 1.9 |

**Final Pesticides and PCBs WLA Specific to the Department**
See table above.

**Final Pesticides and PCBs Deadlines**
The TMDL WLAs are applied with a three-year averaging period and shall be incorporated into MS4 permits, including the Department's MS4 permit, and general construction and industrial storm water NPDES permits and any other non-storm water NPDES permits. Storm water dischargers may coordinate compliance with the TMDL. Permitted storm water dischargers can implement a variety of implementation strategies to meet the required WLAs, such as non-structural and structural BMPs, and/or diversion and treatment to reduce sediment transport from the watershed to the lake. Compliance with the TMDL may be based on a coordinated Monitoring and Reporting Program. The Department is subject to the prescribed point source WLAs with a final compliance date of September 30, 2019.

**Department's Pesticides and PCBs Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to the OC Pesticides and PCBs pollutant loading is not known.

***Marina Del Rey Harbor Toxics Pollutants TMDL, March 26, 2006***
**Final Toxic Pollutant WLAs**

The Department is assigned mass-based WLAs for copper, lead and zinc along with other storm water permittees in the watershed. The Copper, Lead, and Zinc WLAs are apportioned between the permittees based on an estimate of the percentage of land area covered under each permit.

*Total Mass-based Storm Water Metal WLAs:*

| Copper (kg/yr) | Lead (kg/yr) | Zinc (kg/year) |
|---|---|---|
| 2.06 | 2.83 | 9.11 |

*Total Mass-based Storm Water Organics WLAs:*

| Total Chlordane (g/yr) | Total PCBs (g/yr) |
|---|---|
| 0.03 | 1.38 |

**Final Toxic Pollutants WLAs Specific to the Department**

*Mass-based Metals WLAs for Caltrans*

| Copper(kg/yr) | Lead(kg/yr) | Zinc (kg/year) |
|---|---|---|
| 0.022 | 0.03 | 0.096 |

*Mass-based Organics WLAs for the Department:*

| Total Chlordane (g/yr) | Total PCBs (g/yr) |
|---|---|
| 0.0003 | 0.015 |

**Final Toxic Pollutant Deadlines**

The implementation schedule for the MS4 permittees and the Department consists of a phased approach. A combination of non-structural and structural BMPs may be used to achieve compliance with the WLAs, with compliance to be achieved in prescribed percentages of the watershed. Total compliance is to be achieved within 10 years or March 22, 2016. However, the Regional Board may extend the implementation period up to 15 years or March 22, 2021, if an integrated water resources approach is employed.

**Department Toxic Pollutant Contribution** (relative contribution to pollutant loading)

The Department is assigned approximately one percent of the WLA for each pollutant, based on an estimate of area within the watershed.

***San Gabriel River Metals & Selenium TMDL, USEPA Established on March 26, 2007***

**Final Metals WLA**

The Department is assigned WLAs for dry-weather and wet-weather for copper, lead and zinc (as well as selenium). For San Gabriel River Reach 2, the critical flow for wet weather is 260 cfs; for Coyote Creek, the critical flow is 156 cfs. The combined storm water WLA is allocated to individual permits based on percent area of the developed portion of the watershed.

For dry-weather copper, all MS4 storm water permittees, including the Department, are assigned concentration-based WLAs specific to San Gabriel River Reach 1, Coyote Creek, and the San Gabriel River Estuary.

*Dry-weather Concentration-Based Copper WLAs for Storm water Permittees*

| Waterbody | Concentration-based WLA (µg/L) |
|---|---|
| Estuary | 3.7 |
| San Gabriel Reach 1 | 18 |
| Coyote Creek | 20 |

The TMDL establishes wet-weather WLAs to San Gabriel River Reach 2 for lead, and the Department is part of a grouped mass-based WLA. For Coyote Creek, mass-based WLAs are applied to copper, lead, and zinc. These WLAs are further divided among municipal storm water, industrial storm water, and construction storm water permits that are expressed as an area-based proportion of the total WLA. The Department and other MS4s share WLAs because there are not enough data on the relative reach-specific extent of these permittees' areas. The mass-based WLAs for the grouped Department's and MS4s are defined as the daily storm volume times the numeric target of the metal for the waterbody times the estimated percentage of watershed covered by these permits.

*WLAs for San Gabriel River Reach 2, Coyote Creek and to all of their respective Tributaries*

| Reach | Copper (kg/day) | Lead (kg/day) | Zinc (kg/day) |
|---|---|---|---|
| San Gabriel Reach 2 | | Daily storm vol × 166 µg/L × 49% | |
| Coyote Creek | Daily storm vol × 27 µg/L × 91.5% | Daily storm vol × 106 µg/L × 91.5% | Daily storm vol × 158 µg/L × 91.5% |

**Final Metals WLA Specific to the Department**
No specific WLAs.

**Final Metals Deadlines**
USEPA did not include implementation measures for the TMDL, and implementation procedures are the responsibility of the Los Angeles Regional Water Board. Implementation measures or this TMDL are currently being developed by the Los Angeles Regional Water Board.

**Department's Metals Contribution** (relative contribution to pollutant loading)
The Department's contribution to the metals loads is not known.

***Santa Monica Bay PCBs and DDTs TMDLs, USEPA Established on March 26, 2012***

**Final PCBs and DDTs WLA**
The grouped WLAs are apportioned to the Los Angeles County MS4 permit, the Department's MS4 permit, and enrollees under the general construction and industrial storm water permits. Mass-based WLAs are to be partitioned among the four groups based on the percent area of each major group in the watersheds draining to Santa Monica Bay. Permittees covered under the general construction and storm water permittees are not expected to perform individual sampling; instead, monitoring should be conducted on a coordinated, watershed-wide basis consistent with the WLAs in the TMDL. The establishment of watershed efforts to identify and address sources of DDTs and PCBs within the watersheds and reporting of the total storm water loadings of DDT and PCB to Santa Monica Bay is encouraged.

The analysis of DDT and PCBs on suspended particle loadings from the mass emission stations will provide more robust measures of mass loadings. If additional data indicate that existing storm water loadings differ from the storm water WLAs defined in the TMDL, the Los

Angeles Regional Water Board should consider re-opening the TMDL to better reflect actual loadings.

BMPs and pollutant removal are the most suitable courses of action to reduce DDT and PCBs in the Santa Monica Bay Watershed. Attention should be focused on those watersheds with the highest potential loadings to Santa Monica Bay, such as those that are more heavily urbanized. BMPs should also be targeted to reduce potential PCB loads from industrial and construction runoff as studies have shown that these may be a major source of PCBs. USEPA also recommends implementation of a PCB Source Identification and Control program within storm water permits to evaluate and identify controllable sources of PCBs.

**Final PCBs and DDT WLAs Specific to the Department**

*Final PCBs and DDTs WLAs*

| Total PCBs (g/yr) | Total DDTs (g/yr) |
|---|---|
| 3.9 | 0.75 |

**Final PCBs and DDTs Deadlines**
USEPA recommends that storm water WLAs be evaluated based on a three year averaging period. This will provide more robust assessment for compliance and should smooth out variability due to wet years. This is consistent with timeframes provided for the Los Angeles Harbor/Long Beach TMDL.

**Department's PCBs and DDTs Contribution** (relative contribution to pollutant loading)
The footprint of the Department's MS4 is 2.7 percent of the area within the Santa Monica Bay watersheds.

## SANTA ANA REGION METALS/TOXICS/PESTICIDES TMDLS

### *Rhine Channel Area of Lower Newport Bay Chromium and Mercury, USEPA Established on June 14, 2002*

**Final Chromium WLA**
For Rhine Channel, the final Chromium WLA is 7.44 kg/yr in sediment.

**Final Chromium WLA Specific to the Department**
The final mass-based Chromium WLA for the Department is 0.89 kilograms/year in sediment.

**Final Chromium Deadlines**
The Santa Ana Regional Water Board anticipated a Basin Plan Amendment addressing implementation of the above TMDLs in 2007; these amendments have not yet been completed.

**Department's Chromium Contribution (**relative contribution to pollutant loading**)**
The Department's relative contribution to the Chromium loading is approximately three percent of the total, based on area.

***San Diego Creek and Newport Bay, including Rhine Channel Metals (Copper and Zinc) TMDL, USEPA Established on June 14, 2002***

**Final Metals WLA**

WLAs are established for cadmium, copper, lead and zinc in the San Diego Creek watershed, for cadmium, copper, lead and zinc in Newport Bay, and for cadmium, copper, lead, zinc and chromium (and mercury) in Rhine Channel. San Diego Creek is a fresh water stream, while Newport Bay and Rhine Channel are saltwater.

**Final Metals WLA Specific to the Department**

For San Diego Creek, the Department is assigned concentration-based WLAs for cadmium, copper, lead, and zinc. There are no wet-weather or dry-weather WLAs, but there are four sets of WLAs for each metal for four different flow tiers. All flow tiers have an acute and chronic WLA, except for the highest flow tier, which only has an acute WLA.

*Concentration-based WLAs for San Diego Creek Watershed by Flow Tiers, µg/L*

* Applies to Upper Newport Bay Only

| Metal | < 20 cfs); H = 400 mg/L | | 21 – 181 cfs | | 182 - 815 cfs | | > 815 cfs |
|---|---|---|---|---|---|---|---|
| | Acute | Chronic | Acute | Chronic | Acute | Chronic | Acute |
| Cu | 50 | 29.3 | 40 | 24.3 | 30.2 | 18.7 | 25.5 |
| Pb | 281 | 10.9 | 224 | 8.8 | 162 | 6.3 | 134 |
| Zn | 379 | 382 | 316 | 318 | 243 | 244 | 208 |

For Newport Bay, mass-based WLAs for cadmium, copper, lead and zinc were assigned to the Department. These WLAs were developed on estimates made using Best Professional Judgment because insufficient data were available to accurately estimate relative contributions to existing loads. The Department's share of the estimated loads is based on the relative proportion of watershed land area among the Department and adjacent permit-holders.

*Final mass-based WLAs in Newport Bay, Dissolved Metals*

| Metal | Cu | Pb | Zn |
|---|---|---|---|
| Total | 423 lbs/yr | 2,171 lbs/yr | 22,866 lbs/yr |

Additional concentration-based limits apply only to sources which discharge directly to the Bay, including storm water dischargers from storm drains direction to Bay segments.

*Newport Bay Concentration-based Dissolved Metal TMDLs, WLAs/Las*

* Applies to Upper Newport Bay Only

| Metal | Dissolved saltwater Acute TMDLs and allocations (µg/L) | Dissolved saltwater chronic TMDLs and allocations (µg/L) |
|---|---|---|
| Cu | 4.8 | 3.1 |
| Pb | 210 | 8.1 |
| Zn | 90 | 81 |

**Final Metals Deadlines**
USEPA did not include implementation measures for the TMDL.

**Department's Metals Contribution (**relative contribution to pollutant loading**)**
The Department's relative contribution to the metals pollutant loading is not known.

***San Diego Creek and Upper Newport Bay Cadmium TMDL, USEPA Established on June 14, 2002***

**Final Cadmium WLA**

*Concentration-based WLAs for San Diego Creek Watershed by Flow Tiers*

* Applies to Upper Newport Bay Only

| Metal | < 20 cfs); H = 400 mg/L | | 21 – 181 cfs | | 182 – 815 cfs | | > 815 cfs |
|---|---|---|---|---|---|---|---|
| | Acute | Chronic | Acute | Chronic | Acute | Chronic | Acute |
| Cd (µg/L) | 19.1 | 6.2 | 15.1 | 5.3 | 10.8 | 4.2 | 8.9 |

*Newport Bay Concentration-based Dissolved Metal TMDLs, WLAs/Las*

* Applies to Upper Newport Bay Only

| Metal | Dissolved saltwater Acute TMDLs and allocations (µg/L) | Dissolved saltwater chronic TMDLs and allocations (µg/L) |
|---|---|---|
| Cd | 42 | 9.3 |

**Final Cadmium WLA Specific to the Department**
See Table above.

**Final Cadmium Deadlines**
USEPA did not include implementation measures for the TMDL.

**Department's Cadmium Contribution**
The Department's relative contribution to the cadmium pollutant loading is not known.

***San Diego Creek Watershed, Organochlorine Compounds and PCBs TMDLs, November 12, 2013***

**Final OC Compounds WLA**
The Department is listed as a primary source of pollutant loads to the San Diego Creek watershed. The mass-based WLAs were expressed as both daily and annual values. Pollutants include Total DDT, Chlordane, Total PCBs and Toxaphene.

**WLAs Expressed as a Daily Value (grams/day)**

| Watershed | Input | Total DDT | Chlordane | Total PCBs | Toxaphene |
|---|---|---|---|---|---|
| San Diego Creek | Department (11%) | 0.11 | 0.07 | 0.03 | 0.002 |

**WLAs Expressed as an Annual Value (grams/year)**

| Watershed | Input | Total DDT | Chlordane | Total PCBs | Toxaphene |
|---|---|---|---|---|---|
| San Diego Creek | Department (11%) | 39.2 | 25.2 | 12.4 | 0.6 |

**Final OC Compounds WLA Specific to the Department**
See Tables above.

**Final OC Compounds Deadlines**
Compliance with the TMDLs and WLAs is to be achieved as soon as possible, but no later than December 31, 2020. The way that this deadline applies to a particular discharger differs depending on whether the discharger is participating in the Working Group. Ultimate compliance with permit limitations based on WLAs is expected to be based upon iterative implementation of effective BMPs to manage the discharge of fine sediments containing organochlorine compounds, along with monitoring to measure BMP effectiveness.

**Department's OC Compounds Contribution** (relative contribution to pollutant loading)
Based upon the percentage of the total urban land use comprised by Urban-Roads, Department's facilities and roadways make up 11 percent of the land area and are assigned a proportion of the overall WLAs accordingly.

***Upper & Lower Newport Bay Organochlorine Compounds TMDL, November 12, 2013***

**Final OC Compounds WLA**

*Upper Newport Bay and Lower Newport Bay OC Compounds WLAs*

WLAs Expressed as a Daily Value (grams/day)

| Watershed | Input | Total DDT | Chlordane | Total PCBs | Toxaphene |
|---|---|---|---|---|---|
| Upper Newport Bay | Department (11%) | 0.04 | 0.03 | 0.02 | |
| Lower Newport Bay | Department (11%) | 0.02 | 0.01 | 0.07 | |

WLAs Expressed as an Annual Value (grams/year)

| Watershed | Input | Total DDT | Chlordane | Total PCBs | Toxaphene |
|---|---|---|---|---|---|
| Upper Newport Bay | Department (11%) | 15.8 | 9.2 | 9.1 | |
| Lower Newport Bay | Department (11%) | 5.8 | 3.4 | 23.9 | |

**Final OC Compounds WLA Specific to the Department**
See Tables above.

**Final OC Compounds Deadlines**
Compliance with the TMDLs and WLAs is to be achieved as soon as possible, but no later than December 31, 2020. The way that this deadline applies to a particular discharger differs depending on whether the discharger is participating in the Working Group. Ultimate compliance with permit limitations based on WLAs is expected to be based upon iterative implementation of effective BMPs to manage the discharge of fine sediments containing organochlorine compounds, along with monitoring to measure BMP effectiveness.

**Department's OC Compounds Contribution** (relative contribution to pollutant loading)
Based upon the percentage of the total urban land use comprised by Urban-Roads, Department's facilities and roadways make up 11 percent of the land area and are assigned a proportion of the overall WLAs accordingly.

***Chollas Creek Dissolved Copper, Lead and Zinc TMDLs, December 18, 2008***

**Final Metals WLA**

WLAs are concentration-based and set as the acute and chronic limits in the California Toxics Rule times 90 percent for all permitted dischargers, in units of µg/L, as dissolved metals. The final WLAs are based on statistical measures of hardness used in calculating permit requirements.

**Final Concentration-based WLAs**

*Chollas Creek, Copper, Lead, and Zinc WLAs, Dissolved Metal*

***Numeric Target for Acute Conditions: Criteria Maximum Concentration, (µg/L)***

Copper: $1 * 0.96 * e^{0.9422*\ln(hardness)-1.7} * 0.9$

Lead: $1 * [1.46203 - 0.145712 * \ln(hardness)] * \left[e^{1.273*\ln(hardness)-1.460}\right] * 0.9$

Zinc: $1 * 0.978 * e^{0.8473*\ln(hardness)+0.884} * 0.9$

***Numeric Target for Chronic Conditions: Criteria Continuous Concentration, (µg/L)***

Copper: $1 * 0.96 * e^{0.8545*\ln(hardness)-1.702} * 0.9$

Lead: $1 * [1.46203 - 0.145712 * \ln(hardness)] * e^{1.273*\ln(hardness)-4.705} * 0.9$

Zinc: $1 * 0.986 * e^{0.8473*\ln(hardness)+0.884} * 0.9$

**Final Metals WLA Specific to the Department**

There are no WLAs specific to the Department.

**Final Metals Deadlines**

The Department along with other responsible parties must meet 100 percent of Chollas Creek Metals TMDL WLA reductions by December 18, 2028.

**Department's Contribution** (relative contribution to pollutant loading)

The Department's contribution to the metal loads is not known.

## D. Trash TMDL Pollutant Category

### General Description of Pollutant Category

As discussed under the ten individual TMDLs below, the TMDLs in the trash pollutant category establish that the Department varies in the significance of a source of trash and debris. The scale of the Department as a source depends on the magnitude and location of the impacted water body and corresponding land uses. For the individual TMDLs, the Department is not the sole responsible party for source of trash and debris. Other point source responsible parties include Los Angeles County MS4 permittees, Ventura County MS4 permittees, and industrial permittees.

Since trash generation rates are dependent on land use, the requirements for the Department in Attachment IV Section III.D.1 focus on significant trash generating areas. These areas include: highway on- and off-ramps in high density residential, commercial and industrial land uses, rest areas and park-and-rides, state highways in commercial and industrial land uses, and mainline highway segments to be identified by the Department through pilot studies and/or surveys. The requirements in Attachment IV are expected to address the highest source of trash from the Department by focusing management practices on the highest problem areas.

Attachment IV Section III.D.1 establishes a prohibition of discharge of trash to receiving waters. All of the individual TMDLs set a numeric target of zero trash, since the receiving water body lacks an assimilative capacity for any piece of the trash. Attaining the numeric target is difficult due to the transport mechanisms of the trash, specifically for the Department whose users are temporary and transitory. Attachment IV Section III.D.2 sets forth two compliance options to achieve the prohibition of discharge. The compliance options focus on implementation of management practices, treatment controls, and institutional controls in the significant trash generating areas and the coordination with neighboring municipalities to implement treatment and institutional controls in significant trash generating areas and priority land use areas (high density residential, industrial, commercial, mixed urban, and public transportation stations).

### Sources of Pollutant & How it Enters the Waterway

Trash and debris are the man-made products that are improperly discarded and transported to surface water bodies. Trash is considered a ‘gross pollutants’ and excludes sediments, oil and grease, and vegetation. Trash can include cigarette butts, paper, fast food containers, plastic grocery bags, cans and bottles, used diapers, construction site debris, industrial plastic pellets, old tires and appliances. Trash and debris cause impairments to beneficial uses of surface water bodies, including rivers, lakes, enclosed bays and estuaries, and ocean waters.

### Watershed Contribution

Trash impacts aquatic habitat and life. Mammals, turtles, birds, fish, and crustaceans are threatened following the ingestion or entanglement of trash. Ingestion and entanglement can be fatal for freshwater, estuarine, saline and marine aquatic life. Similarly, habitat alterations and degradations due to trash can make natural habitats unsuitable for spawning, migration, and preservation of aquatic life. These negative effects of trash to aquatic life can impact several beneficial uses. The aquatic life beneficial uses that can be impacted by negative effects

of trash include: Warm Freshwater Habitat (WARM); Cold Freshwater habitat (COLD); Inland Saline Water Habitat (SAL); Estuarine Habitat (EST); Marine Habitat (MAR); Wildlife Habitat (WILD); Preservation of Biological Habitats (BIOL); Rare, Threatened, or Endangered Species (RARE); Migration of Aquatic Organisms (MIGR); Spawning, Reproduction, and/or Early Development (SPWN); and Wetland Habitat (WET).

Trash impacts human activity by means of jeopardizing public health and safety and posing harm and hindrance in recreational, navigational, and commercial activities. The human beneficial uses impacted by trash and debris include: Navigation (NAV); Water Contact Recreation (REC-1); Non-Contact Water Recreation (REC-2); Commercial and Sport Fishing (COMM); Aquaculture ( AQUA); Shellfish Harvesting (SHELL); and Industrial Service Supply (IND).

Trash and debris, which is intentionally or accidentally discarded in watershed drainage areas, enter a water body through a transport mechanism. Transport mechanisms include the following:

1. Storm drains: trash is deposited throughout the watershed and is carried to a water body during and after significant rainstorms through storm drains.
2. Wind/wave action: trash can also blow into the waterways directly.
3. Direct disposal: direct dumping of trash to water body.

The amount and type of trash and debris that is washed into the storm drain system is generally a function of the surrounding land use. It is generally accepted that commercial, industrial, high density residential land use contribute larger loads of gross pollutants per area compared to low residential and open space and park land use areas.

***Control Measures***

Full capture system is a type of treatment control that is a device or series of devices that traps all particles that are 5 mm or greater and has a design treatment capacity that is not less than the peak flow rate, Q, resulting from a one-year, one-hour, storm in the subdrainage area. For the Department, there are three types of full capture systems that fall under the category of Gross Solids Removal Devices (GSRDs). Gross Solids Removal Devices (GSRDs) were developed by the Department to be retrofitted into existing highway drainage systems or implemented in future highway drainage systems. GSRDs are structures that remove litter and solids five mm and larger from the storm water runoff using various screening technologies. Overflow devices are incorporated, and the usual design of the overflow release device is based upon the design storm for the roadway. Though designed to capture litter, the devices can also capture some of the vegetation debris. The devices shown below are generally limited to accept flows from pipes 30 inches in diameter and smaller.

The three types of potential GSRDs the Department could utilize are linear radial and two versions using an inclined screen. A linear radial device is relatively long and narrow, with flow entering one end and exiting the other end. It is suited for narrow and flat rights-of-way with limited space. It utilizes modular well screen casings with 5 mm louvers and is contained in a concrete vault, although it also could be attached to a headwall at a pipe outfall. While runoff flows enter into the screens, they pass radially through the louvers and trap litter in the casing. A smooth bottom to convey litter to the end of the screen sections is required, so a segment of the circumference of each screen is uncovered. The louvered sections have access doors for

cleaning by vacuum truck or other equipment. Under most placement conditions the goal would be to capture within the casing one year's volume of litter. This device has been configured with an overflow/bypass for larger storm events and if the unit becomes plugged.

Two Inclined Screen Devices have also been developed. Each device requires about 1-meter of hydraulic head and is better suited for fill sections. In the Type 1 device, the storm water runoff flows over the weir and falls through the inclined bar rack. The screen has five-mm maximum spacing between the bars. Flow passes through the screen and exits via the discharge pipe. The trough distributes influent over the inclined screen. Storm water pushes captured litter toward the litter storage area. The gross solids storage area is sloped to drain to prevent standing water. This device has been configured with an overflow/bypass for larger storm events and if the unit becomes plugged. It has a goal of litter capture and storage for one year. The Type 2 Inclined Screen only comes in a sloped sidewall version.

Full capture devices and treatment controls are highly effective to capture and retain trash when properly maintained. However, there are locations that might be infeasible to install treatment controls. The Department may elect to employ institutional controls, which are non-structural best management practices that may include street sweeping and anti-litter education and outreach programs. Street sweeping minimizes trash loading to the river by removing trash from streets and curbs. Maintaining a regular street sweeping schedule reduces the buildup of trash on streets and prevents trash from entering catch basins and the storm drain system. Street sweeping can also improve the appearance of roadways. There are at least three types of street sweepers the Department may employ: 1) mechanical, 2) vacuum filter, and 3) regenerative air sweepers. Public education can be an effective implementation alternative to reduce the amount of trash entering water bodies. The public is often unaware that trash littered on the street ends up in receiving waters, much less the cost of abating it. The Department may elect to continue to participate in educational programs like 'Adopt-A-Highway' and 'Don't Trash California'.

As specified in Attachment IV Section III.D.3, the Department shall submit an annual status report of the selected treatment and institutional control measures implemented to comply with the prohibition of discharge of trash. In addition to the annual status report, the Department should conduct a pilot survey to further determine highway characteristics and sections that should be included in the category of significant trash generating areas. The pilot study will further assure compliance with the prohibition of discharge and reduction of trash to receiving water bodies from high trash generation areas from the Department's jurisdiction.

## LOS ANGELES REGION TRASH TMDLS

### *Ballona Creek Trash TMDL, August 1, 2002 and February 8, 2005*

**Final WLA**

The numeric target for this TMDL is zero trash in the water. Storm drains were identified as a major source of trash. WLAs were assigned to permittees of the Los Angeles County MS4 permit and the Department.

**Final WLA Specific to the Department**
The Department is assigned the following baseline WLAs of trash.

| Weight (lbs/mile$^2$) | Volume (ft$^3$/mile$^2$) |
|---|---|
| 7479.36 | 892.64 |

**Final Deadlines**
The implementation schedule for the MS4 and the Department permittees consists of a phased approach with compliance to be achieved in prescribed percentages. Total compliance, 100 percent reduction of trash from the Baseline WLA, is to be achieved within twelve years from the effective date of the TMDL (September 30, 2015).

**Department's Contribution (**relative contribution to pollutant loading**)**
The Department's Baseline WLA relative to all other point sources (municipal permittees) is 13 percent.

***Legg Lake Trash TMDL, February 27, 2008***
**Final WLA**
The numeric target for this TMDL is zero trash in Legg Lake and on the shoreline. Both point sources and nonpoint sources are identified as sources of trash in Legg Lake. WLAs were assigned to the permittees of the Los Angeles County MS4 permit and the Department.

**Final Trash WLA Specific to the Department**
The Department is assigned the following baseline WLAs assuming a trash generation rate of 6677 (gallons of uncompressed litter per mile$^2$ per year).

| Point Source Area (mile$^2$) | Baseline WLA (gal/yr) |
|---|---|
| 0.09 | 586.92 |

**Final Trash Deadlines**
The implementation schedule for the Department consists of a phased approach with compliance to be achieved in prescribed percentages. Total compliance, 100 percent reduction of trash from the Baseline WLA, is to be achieved within eight years from the effective date of the TMDL (March 6, 2016).

**Department's Trash Contribution** (relative contribution to pollutant loading)
The Department's Baseline WLA relative to all other point sources (municipal permittees) is 7.9 percent.

***Los Angeles Area (Echo Park Lake) Nitrogen, Phosphorus, Chlordane, Dieldrin, PCBs, and Trash TMDL, March 26, 2012***
**Final Trash WLA**
The numeric target for this TMDL is zero trash in Echo Park Lake and on the shoreline. Both point sources and nonpoint sources are identified as sources of trash. WLAs could be assigned to permittees of the Los Angeles County MS4 permit and the Department.

The Department is estimated to have the following baseline WLAs assuming a trash generation rate of 6,677 (gallons of uncompressed litter per mile$^2$ per year).

| Point Source Area (mile$^2$) | Current Point Source Trash Load (gal/yr) |
|---|---|
| 0.022 | 150 |

**Final Trash WLA Specific to the Department**
No WLAs were assigned to the Department.

**Final Trash Deadlines**
There is no compliance and implementation schedule for the Echo Park Lake Trash TMDL.

**Department's Trash Contribution (**relative contribution to pollutant loading**)**
As there is no assigned WLA, the Department's contribution to the estimated point source trash loads is 16.7 percent.

***Los Angeles Area (Peck Road Park) Lake Nitrogen, Phosphorus, Chlordane, DDT, Dieldrin, PCBs, and Trash TMDL, March 26, 2012***

**Final Trash WLA**

The numeric target for this TMDL is zero trash in Peck Road Lake and on the shoreline. Both point sources and nonpoint sources are identified as sources of trash. WLAs could be assigned to permittees of the Los Angeles County MS4 permit and the Department.

**Final Trash WLA Specific to the Department**
No WLAs were assigned to the Department.

**Final Trash Deadlines**
There is no compliance and implementation schedule for the Peck Road Park Lake Trash TMDL.

**Department's Trash Contribution (**relative contribution to pollutant loading**)**
As there are no assigned WLAs, the Department's contribution to the estimated point source trash loads is 3.9 percent or 950 gal/yr.

***Los Angeles River Trash TMDL, December 24, 2008***

**Final Trash WLA**
The numeric target for the Los Angeles River Watershed Trash TMDL is zero trash in the water. Storm drains were identified as a major source of trash in the Los Angeles River. WLAs were assigned to permittees of the Los Angeles County MS4 permit and the Department.

**Final Trash WLA Specific to the Department**
The Department is assigned the following baseline WLAs for trash.

| WLA (gal) | WLA (lbs) |
|---|---|
| 59421 | 66,566 |

**Final Trash Deadlines**
The implementation schedule for the MS4 and the Department consists of a phased approach with compliance to be achieved in prescribed percentages. Total compliance, 100 percent reduction of trash from the Baseline WLA, is to be achieved within seven years from the effective date of the TMDL (September 30, 2014).

**Department's Trash Contribution** (relative contribution to pollutant loading)
The Department's Baseline WLA relative to all other point sources (municipal permittees) is 11.8 percent.

***Machado Lake Trash TMDL, February 27, 2008***

**Final Trash WLA**
The numeric target for this TMDL is zero trash in Machado Lake and on the shoreline. Both point sources and nonpoint sources are identified as sources of trash in Machado Lake. WLAs were assigned to permittees of the Los Angeles County MS4 permit and the Department.

**Final Trash WLA Specific to the Department**
The Department is assigned the following baseline WLA assuming a trash generation rate of 5,334 (gallons of uncompressed litter per mile$^2$ per year).

| Point Source Area (mile$^2$) | Baseline WLA (gal/yr) |
|---|---|
| 0.63 | 4,215.84 |

**Final Trash Deadlines**
The implementation schedule for the Department consists of a phased approach with compliance to be achieved in prescribed percentages. Total compliance, 100 percent reduction of trash from the Baseline WLA, is to be achieved within eight years of the effective date of the TMDL (March 6, 2016).

**Department's Trash Contribution** (relative contribution to pollutant loading)
The Department's Baseline WLA relative to all other point sources (municipal permittees) is 4.5 percent.

***Malibu Creek Watershed Trash TMDL, June 26, 2009***

**Final Trash WLAs**
The numeric target for the Malibu Creek Watershed Trash TMDL is zero trash in or on the water and on the shoreline. For point sources, zero means that no trash is discharged into the water body of concern, shoreline, and channels. Both point source and nonpoint sources of trash were identified in the water bodies in the Malibu Creek Watershed. For point sources, WLAs were assigned to permittees of the Los Angeles County MS4 permit and Ventura County MS4 permit and the Department.

**Final Trash WLA Specific to the Department**
The Department is assigned the following WLAs assuming a trash generation rate of 640 (gallons of uncompressed litter).

| Point Source Area (mile$^2$) | Baseline WLA (gal/yr) |
|---|---|
| 0.32 | 10,813 |

**Final Trash Deadlines**
The implementation schedule for the MS4 and the Department consists of a phased approach with compliance to be achieved in prescribed percentages. Total compliance, 100 percent reduction of trash from the Baseline WLA, is to be achieved within eight years of the effective date of the TMDL (July 7, 2017).

**Department's Trash Contribution** (relative contribution to pollutant loading)
The Department's Baseline WLA relative to all other point sources (municipal permittees) is 65.5. percent.

***Revolon Slough and Beardsley Wash Trash TMDL, August 1, 2002, February 8, 2005, and February 27, 2008***

**Final Trash WLA**
The numeric target for the Revolon Slough and Beardsley Wash TMDL is zero trash within Revolon Slough, Beardsley Wash and their tributaries. Both point source and nonpoint sources of trash were identified in the Revolon Slough and Beardsley Wash. For point sources, WLAs were assigned to permittees of the Ventura County MS4 permit and the Department.

**Final Trash WLA Specific to the Department**
The Department is assigned the following WLA (gal/year) assuming a trash generation rate of 640 (gallons of uncompressed litter).

| Point Source Area (mile$^2$) | Baseline WLA (gal/yr) |
|---|---|
| 1.68 | 11,215.45 |

**Final Trash Deadlines**
The implementation schedule for the Department consists of a phased approach with compliance to be achieved in prescribed percentages. Total compliance, 100 percent reduction of trash from the Baseline WLA, is to be achieved within eight years of the effective date of the TMDL (March 6, 2016).

**Department's Trash Contribution** (relative contribution to pollutant loading)
The Department's Baseline WLA relative to all other point sources (municipal permittees) is 64.1 percent.

***Santa Monica Bay Nearshore & Offshore Debris (trash and plastic pellets), March 20, 2012***

**Final Trash WLA**
The numeric target for the Santa Monica Bay Debris TMDL is zero trash in Santa Monica Bay. For point sources, zero trash is defined as no trash discharged into water bodies within the Santa Monica Bay Watershed and into Santa Monica Bay or on the shoreline of Santa Monica Bay. For nonpoint sources, zero trash is defined as no trash on the shoreline or beaches, or in

harbors adjacent to Santa Monica Bay. The numeric target for plastic pellets in the Santa Monica Bay Debris TMDL is zero plastic pellets in Santa Monica Bay. Both point source and nonpoint sources of trash were identified in Santa Monica Bay Nearshore and Offshore areas. For point sources, WLAs were assigned to permittees of the Los Angeles County MS4 permit and Ventura County MS4 permit and the Department.

**Final Trash WLA Specific to the Department**
The Baseline WLA for the Department was based on a trash generation rate of 33,452.8 gallons per mile$^2$ per year.

| Point Source Area (mile$^2$) | Baseline WLA (gal/year) |
|---|---|
| 1.08 | 36,129.0 |

**Final Trash Deadlines**
The implementation schedule for the Department consists of a phased approach with compliance to be achieved in prescribed percentages. Total compliance, 100 percent reduction of trash from the Baseline WLA, is to be achieved within eight years of the effective date of the TMDL (March 12, 2020).

**Department's Trash Contribution** (relative contribution to pollutants)
The Department's Baseline WLA relative to all other point sources (municipal permittees) is 32.8 percent.

***Ventura River Estuary Trash TMDL, February 27, 2008***
**Final Trash WLA**
The numeric target for the Ventura River Estuary Trash TMDL is zero trash in or on the water and on the shoreline. Both point source and nonpoint sources of trash were identified in the Ventura River Estuary.

**Final Trash WLA Specific to the Department**
The Department is assigned the following WLAs assuming a trash generation rate of 640 (gallons of uncompressed litter).

| Point Source Area (mile$^2$) | Baseline WLA (gal/yr) |
|---|---|
| 0.31 | 2,049.86 |

**Final Trash Deadlines**
The implementation schedule for the Department consists of a phased approach with compliance to be achieved in prescribed percentages. Total compliance, 100 percent reduction of trash from the Baseline WLA, is to be achieved within eight years of the effective date of the TMDL (March 8, 2016).

**Department's Trash Contribution** (relative contribution to pollutants)
The Department's Baseline WLA relative to all other point sources (municipal permittees) is 34.8 percent.

## E. Bacteria TMDL Pollutant Category

### General Description of Pollutant Category

Receiving waters are often adversely affected by urban storm water runoff containing bacteria. Several reaches and tributaries have been impaired due to excessive amounts of coliform bacteria. There is a causal relationship between adverse health effects and recreational water quality, as measured by bacterial indicator densities. Fecal coliform bacteria may be introduced from a variety of sources including storm water runoff, dry-weather runoff, onsite wastewater and animal wastes. In addition, humans may be exposed to waterborne pathogens through recreation water use or by harvesting and consuming filter-feeding shellfish.

Attachment IV of this permit requires the Department to prioritize reaches, including those within watersheds under a bacteria TMDL, and then further to select each year the reaches for implementing control measures to address the highest priority reaches.

### Sources of Pollutant & How it Enters the Waterway

Major contributors are flows and associated bacteria loading from storm water conveyance systems. The extent of bacteria loading from natural sources such as birds, waterfowl and other wildlife, however, are unknown as data does not exist to quantify the impact of wildlife on the waterbodies.

### Watershed Contribution

The TMDLs in the Bacteria Pollutant Category show that the Department is a relatively minor source of pollutants.

### Control Measures

This prioritization strategy will control the largest sources of bacteria first and allow for attainment of the applicable WLAs consistent with the bacteria TMDLs identified in Part E of Attachment IV. The Department must install structural and nonstructural controls utilizing BMPs to variously control dry weather discharges and wet weather discharges.

The Department has options that would be effective for controlling non-storm water runoff during dry weather. The Department is required to implement control measures to ensure that the effective prohibition of non-storm water discharges is implemented. This can be achieved through infiltration, diversion, or other methods. Generally, there should be no flow from areas during dry weather. Overwatering, broken sprinklers and irrigation pipes can be a source of dry weather flows. The Department can limit dry weather discharges by ensuring that broken sprinklers and irrigation pipes are fixed within 72 hours. To control overwatering and the resulting runoff, the Department could review watering schedules for irrigated areas on an annual basis.

To control runoff during wet weather, the Department should work with responsible agencies to jointly comply with the TMDL whenever possible. If the Department does not work with the other responsible agencies, non-structural and structural BMPs would be necessary. Increasing infiltration through the slowing of runoff and improving soil structure and texture to encourage infiltration of storm water are non-structural ways to reduce runoff. In addition,

structural BMPs like biofiltration strips, biofiltration swales and detention basis can work in concert with the non-structural BMPs to capture of the runoff.

Wet-weather flows for the most part impact water contact recreation beneficial uses (REC-1). The Department shall implement control measures to prevent or eliminate the discharge of bacteria from its ROW through a combination of source control and treatment BMPs. These treatment BMPs shall include retention/detention, infiltration, diversion of storm water or through preemptive activities such as sweeping, clean-up of illegal dumping, and public education on littering.

## SAN FRANCISCO BAY BACTERIA TMDLS

***Richardson Bay Pathogens TMDL, December 18, 2009***

The TMDL identifies storm water runoff as a potential pathogen source, along with sanitary sewer systems and houseboats and vessel marinas. The Department is listed in the storm water runoff source category along with other implementing parties.

**Final Pathogens WLA**

The WLA for Fecal Coliform in the pollutant category of storm water runoff is a median of < 14 MPN/100 ml and a 90$^{th}$ percentile limit of <43 MPN/100 ml (no more than 10 percent of total samples during any 30-day period may exceed this number)

The implementation plan for storm water runoff has the following actions:

1. Implement applicable storm water management plan.
2. Update/amend storm water management plan, as appropriate, to include specific measures to reduce pathogen loading, including additional education and outreach efforts, and installation of additional pet waste receptacles.
3. Report progress on implementation of pathogen reduction measures to the Water Board.

For most pollutants, TMDLs are expressed on a mass-load basis (e.g., kilograms per year). For pathogen indicators such as fecal coliform, however, it is the number of organisms in a given volume of water (i.e., their density), and not their total number (or mass) that is significant with respect to public health risk and protection of beneficial uses. The density of fecal coliform organisms in a discharge and/or in the receiving waters is the technically relevant criteria for assessing the impact of discharges, water quality, and public-health risk. USEPA guidance recommends establishing density-based TMDLs for pollutants that are not readily controllable on a mass basis. Therefore, we propose density-based TMDLs and pollutant load allocations, expressed in terms of fecal coliform concentrations.

Establishment of a density-based, rather than a mass-based, TMDL carries the advantage of eliminating the need to conduct a complex and potentially error-prone analysis to link loads and projected densities. A load-based pathogens TMDL would require calculation of acceptable loads based on acceptable bacterial densities and anticipated discharge volumes, and then back-calculation of expected densities under various load reduction scenarios. Since discharge volumes in Richardson Bay are highly variable and difficult to measure, such an

analysis would inevitably involve a great deal of uncertainty with no increased water quality benefit.

**Pathogen WLA Specific to the Department**
As stated in the TMDL, the Department's wasteload allocations for discharges from municipal separate storm sewers are set by NPDES permits No. CAS000004 [Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)] and CAS000003 (National Pollutant Discharge Elimination System (NPDES) Statewide Storm Water Permit Waste Discharge Requirements (WDRs) for State Of California Department Of Transportation).

**Final Pathogens Deadline**
The completion date for these implementation actions is "as specified in approved storm water management plan and in applicable NPDES permit." Region 2 does not anticipate that the Department's storm water management plan will need to be revised because they believe that the source of bacteria in highway runoff is wildlife.

The TMDL also notes that in 2013, the Water Board will evaluate monitoring results and assess progress towards attaining TMDL targets and load allocations.

**Department's Pathogens Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to pathogen pollutant loading is not known.

***San Pedro and Pacifica State Beach Bacteria TMDL, August 1, 2013***
The San Pedro and Pacifica State Beach Bacteria TMDL was developed by the San Francisco Bay Regional Water Quality Control Board and approved by USEPA on August 1, 2013. The TMDL identifies sanitary sewer systems, horse facilities and municipal storm water runoff and dry weather flows as sources that have the potential to discharge bacteria, if not properly managed, to San Pedro Creek and Pacifica State Beach.

**Final Bacteria WLA**
The TMDL established a desired, or target condition for the water contact recreation use in San Pedro Creek and at Pacifica State Beach based on the water quality objectives for indicator bacteria. The wasteload allocations are based on the water quality objectives shown in the table below:

**Bacteriological Water Quality Objectives for San Pedro Creek and Pacifica State Beach**

Note A: Based on a minimum of five consecutive samples equally spaced over a 30-day period.
Note B: Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.
Note C: Calculated based on the five most recent samples from each site during a 30-day period.
NA: not applicable

| Indicator Type | Pacifica State Beach (Marine REC-1) MPN/100 mL | | San Pedro Creek (Freshwater REC-1) MPN/100 mL Note A | |
|---|---|---|---|---|
| | Single Sample Maximum | Geometric Mean Note C | 90th Percentile/No Sample Greater Than | Geometric Mean/Log Mean/Median |
| E. coli | NA | NA | 235 | 126 |
| Fecal Coliform | 400 | 200 | 400 | 200 |
| Enterococcus | 104 | 35 | NA | NA |
| Total Coliform | 10,000 Note B | 1,000 | 10,000 | 240 |

For this TMDL, a reference system and antidegradation approach has been incorporated the wasteload allocations as an allowable number of times that the water quality objectives can be exceeded. The following table lists the allowable exceedances:

**Numeric Targets, TMDLs and Allocations Based on Allowable Exceedances of Single-Sample Objective for San Pedro Creek and Pacifica State Beach**

Notes A: Allowable exceedances are calculated by multiplying exceedance rates observed in the reference system(s) by the number of days during each respective period in the reference year (1994).
Note B: To end up with whole numbers, where the fractional remainder for the calculated allowable exceedance days exceeds 0.1, then the number of days is rounded up.
Note C: The calculated number of exceedance days assumes that daily sampling is conducted.
Note D: To determine the allowable number of exceedance events given a weekly sampling regime, as practiced for monitoring San Pedro Creek and Pacifica State Beach, the number of exceedance days was adjusted by solving for "X" in the following equation: X = (exceedance days × 52 weeks) / 365 days.
Note E: Wet weather is defined as any day with 0.1 inches of rain or more and the following three days.

| Allowable Exceedances of Single-Sample Objectives | San Pedro Creek | | Pacifica State Beach | | |
|---|---|---|---|---|---|
| | Dry Weather | Wet Weather Note E | Summer Dry Weather (Apr 1 – Oct 31) | Winter Dry Weather (Nov 1 – Mar 31) | Wet Weather Note E |
| Assuming daily sampling is conducted Notes A, B, C | 4 | 26 | 0 | 2 | 30 |
| Assuming weekly sampling is conducted Note D | 1 | 4 | 0 | 1 | 5 |

**Final Bacteria Deadlines**

The TMDLs, load allocations and wasteload allocations for Pacifica State Beach shall be attained within eight years of the effective date of the TMDL (August 1, 2021). The TMDLs, load allocations and wasteload allocations to San Pedro Creek shall be attained within 15 years of the effective Date of the TMDL (August 1, 2028).

Storm water discharges from the Department's stretch of Highway 1 crossing the northwestern edge of the San Pedro Creek watershed are not a significant source of indicator bacteria because that section of the highway does not include any typical bacteria-generating sources such as homeless encampments, restroom facilities, garbage bins, etc. The Department's existing BMPs and storm water NPDES permit requirements, as of the effective date of the TMDL (August 1, 2013), are sufficient to attain and maintain its portion of the wasteload allocation.

**Department's Bacteria Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to bacteria pollutant loading is not known.

## LOS ANGELES REGION BACTERIA TMDLS

### *Ballona Creek, Ballona Estuary, and Sepulveda Channel Bacteria TMDL, March 26, 2007*

**Final Bacteria WLA**
The Department is noted as a source of storm water runoff. The Department and municipal storm water permittees and co-permittees are assigned waste load allocations (WLAs) expressed as the number of daily or weekly sample days that may exceed the single sample targets equal to the TMDLs established for the impaired reaches and WLA assigned to waters tributary to impaired reaches. The County of Los Angeles, the Department, and the Cities of Los Angeles, Culver City, Beverly Hills, Inglewood, West Hollywood, and Santa Monica are the responsible jurisdictions and responsible agencies for the Ballona Creek Watershed.

For the single sample objectives of the impaired REC-1 and LREC-1 reaches, the proposed WLA for summer dry-weather is zero (0) days of allowable exceedances, and those for winter dry-weather and wet-weather are three (3) days and seventeen (17) days of exceedance, respectively. In the instances where more than one single sample objective applies, exceedance of any one of the limits constitutes an exceedance day. The proposed waste load allocation for the rolling 30-day geometric mean for the responsible agencies and jurisdictions is zero (0) days of allowable exceedances.

For the single sample objectives of the impaired REC-2 reach, the proposed WLA for all periods is a 10 percent exceedance frequency of the REC-2 single sample water quality objectives. The proposed waste load allocation for the rolling 30-day geometric mean for the responsible agencies and jurisdictions is zero (0) days of allowable exceedances.

In addition to assigning TMDLs for the impaired reaches, Waste Load Allocations and Load Allocations are assigned to the tributaries to these impaired reaches. These WLAs and LAs are to be met at the confluence of each tributary and its downstream reach (see Table 7.21.2b of Attachment A to Resolution No. 2006-011). See Chapter 3 of Region 4's Basin Plan for bacteriological objectives for Water Contact Recreation for Marine and Fresh Waters, for Limited Water Contact Recreation and for Non-contact Water Recreation.

**Final Bacteria WLA Specific to the Department**
There is no specific WLA assigned to the Department. The responsible jurisdictions and responsible agencies within the watershed are jointly responsible for complying with the waste load allocation in each reach.

**Final Bacteria Deadlines**
See Final WLA above.

**Department's Bacteria Contribution** (relative contribution to pollutant loading)
The Department's jurisdiction within the cities and unincorporated areas in the Ballona Creek Watershed totals 1206 acres. This equals 1.5 percent of the watershed.

***Long Beach City Beaches Indicator Bacteria TMDL, March 26, 2012***

The TMDL identifies storm water runoff from the Department's properties such as the highway system, park and ride facilities, and maintenance yards as a potential source of bacteria. The Department has jurisdiction of some areas in the Los Angeles River (LAR) Estuary direct drainage, but not in the Long Beach City beaches direct drainage.

**Final Bacteria WLA**

To implement the single sample bacteria water quality objectives (total coliform, fecal coliform, enterococcus, and fecal-to-total coliform ratio) for waters designated REC-1, an allowable number of exceedance days for three seasons (summer dry, winter dry and winter wet) is set for marine waters using a reference system/anti-degradation approach. This approach ensures that bacteriological water quality is at least as good as that of a reference system and that no degradation of the existing bacteriological water quality is permitted where the existing condition is better than that of the selected reference system(s). The exceedance days are used to set load allocations (LA) and waste load allocations (WLAs) in these TMDLs.

Storm water systems covered under the City of Long Beach, Los Angeles County and the Department's MS4 permits are assigned WLAs in the form of exceedance days. During summer dry conditions, reductions in exceedance days are estimated to be 13-120 days during a 120 day period (11 percent to 100 percent of the time), depending on the location of the monitoring site. During winter wet conditions, reductions in exceedance days are estimated to be 11-45 days during a 75-day period (15 percent to 60 percent of the time) depending on the location of the monitoring site. During winter dry conditions, reductions in exceedance days are estimated to be 0-11 days during an 80 day period (zero (0) percent to 14 percent of the time) depending on the location of the monitoring site.

**Final Bacteria WLA Specific to the Department**

See Final WLA above.

**Final Bacteria Deadlines**

As this TMDL was established by USEPA, USEPA only described recommendations to the Regional Board that could be used. No timelines were noted.

**Department's Bacteria Contribution** (relative contribution to pollutant loading)

The loading of bacteria specifically from the Department's properties has not been determined in the LAR Estuary direct drainage. However a conservative estimate of 128 acres or approximately two percent of the LAR Estuary drainage area is noted in the TMDL.

***Los Angeles River Watershed Bacteria, March 23, 2012***

**Final Bacteria WLA**

The Los Angeles River Watershed Bacteria TMDL was developed by the Los Angeles Regional Water Quality Control Board and approved by USEPA. The TMDL identifies storm water from the MS4 Permittees (the Department along with the County of Los Angeles and the Incorporated Cities therein and the City of Long Beach) as the principal source of bacteria in both dry weather and wet weather.

**Final Bacteria WLA Specific to the Department**

This TMDL uses a "reference system/anti-degradation approach" to implement the water quality objectives per the implementation provisions in Chapter 3 of the Basin Plan. On the basis of the historical exceedance frequency at Southern California reference reaches, a certain number of daily exceedances of the single sample bacteria objectives are permitted. The allowable number of exceedance days is set such that (1) bacteriological water quality at any site is at least as good as at the reference site(s) and (2) there is no degradation of existing bacteriological water quality. This approach recognizes that there are natural sources of bacteria that may cause or contribute to exceedances of the single sample objectives and that it is not the intent of the Regional Board to require treatment or diversion of natural coastal creeks or to require treatment of natural sources of bacteria from undeveloped areas.

For MS4 dischargers, the final dry-weather WLAs and wet-weather WLA for the single sample targets are listed below**:**

| Allowable Number of Exceedance Days | Daily Sampling | Weekly Sampling |
|---|---|---|
| Dry Weather | 5 | 1 |
| Non-High Flow Suspension (HFS) Waterbodies Wet Weather | 15 | 2 |
| HFS Waterbodies Wet Weather | 10 (not including HFS days) | 2 (not including HFS days) |

The final WLAs for the geometric mean target during any time at any river segment and tributary in the Los Angeles River Watershed is zero (0) days of allowable exceedances.

**Final Bacteria Deadlines**

The Department has from 8.5 to 25 years (September 23, 2020 to March 23, 2037) to achieve final WLAs depending on the segment of the waterbody. Table 7-39.3 in Attachment A to Resolution No. R10-007 lists other interim implementation compliance dates.

**Department's Bacteria Contribution** (relative contribution to pollutant loading)

The Department's MS4 permit covers approximately 6,950 acres, which is equivalent to around one percent of the urban watershed.

***Malibu Creek and Lagoon Bacteria TMDL, June 7, 2012***

The TMDL identifies on-site wastewater treatment plants, storm water runoff, dry weather runoff and wildlife (birds) as possible sources of bacterial contamination.

**Final WLA**

*Malibu Creek and Lagoon Bacteria TMDL: Final Annual Allowable Exceedance Days for Single Sample Limits by Sampling Location*

**Notes**: The number of allowable exceedances is based on the lesser of (1) the reference system or (2) existing levels of exceedance based on historical monitoring data.
The allowable number of exceedance days is calculated based on the 90th percentile storm year in terms of wet days at the LAX meteorological station.
α: A dry day is defined as a non-wet day.
A wet day is defined as a day with a 0.1 inch or more of rain and the three days following the rain event.
* The number of allowable exceedance days is for the winter dry-weather period. No exceedance days are allowed for the summer dry-weather period.

| Station ID | Location Name | Dry Weather α. Compliance Deadline: January 24, 2012 | | Wet Weather α. Compliance Deadline: July 15, 2021 | |
|---|---|---|---|---|---|
| | | Daily sampling (No. days) | Weekly sampling (No. days) | Daily sampling (No. days) | Weekly sampling (No. days) |
| LA RWQCB | Triunfo Creek | 5 | 1 | 15 | 2 |
| LA RWQCB | Lower Las Virgenes Creek | 5 | 1 | 15 | 2 |
| LA RWQCB | Lower Medea Creek | 5 | 1 | 15 | 2 |
| LVMWD (R-9) | Upper Malibu Creek, above Las Virgenes Creek | 5 | 1 | 15 | 2 |
| LVMWD (R-2) | Middle Malibu Creek, below Tapia discharge 001 | 5 | 1 | 15 | 2 |
| LVMWD (R-3) | Lower Malibu Creek, 3 mi below Tapia | 5 | 1 | 15 | 2 |
| LVMWD (R-4) | Malibu Lagoon, above PCH | 5 | 1 | 15 | 2 |
| LVMWD (R-11) | Malibu Lagoon, below PCH | 9* | 2* | 17 | 3 |

| Station ID | Location Name | Dry Weather [α]. Compliance Deadline: January 24, 2012 | | Wet Weather [α]. Compliance Deadline: July 15, 2021 | |
|---|---|---|---|---|---|
| | | Daily sampling (No. days) | Weekly sampling (No. days) | Daily sampling (No. days) | Weekly sampling (No. days) |
| | Other sampling stations as identified in the Compliance Monitoring Plan as approved by the Executive Officer including at least one sampling station in each subwatershed, and areas where frequent REC-1 use is known to occur. | 5 | 1 | 15 | 2 |

**Final Bacteria WLA Specific to the Department**
No exceedances are allowed for the geometric mean limits. The allowable days of exceedance for the single sample limits differ depending on season, dry weather or wet weather, and by sampling locations as described in the Table above (Malibu Creek and Lagoon Bacteria TMDL: Final Annual Allowable Exceedance Days for Single Sample Limits by Sampling Location

**Final Bacteria Deadlines**
This TMDL will be implemented in two phases as outlined in the TMDL. By January 24, 2012, compliance with the allowable number of dry-weather exceedance days must be achieved. By July 15, 2021, compliance with the allowable number of wet-weather exceedance days and the geometric mean targets must be achieved.

**Department's Bacteria Contribution** (relative contribution to pollutant loading**)**
The Department's relative contribution to bacteria pollutant loading is not known.

***Marina del Rey Harbor (MdRH) Mother's Beach and Back Basin Bacteria TMDL, March 18, 2004, revised November 7, 2013***
The TMDL identifies dry-weather urban runoff and storm water conveyed by storm drains as the primary sources of elevated bacterial indicator densities to MdRH Mothers' Beach and back basins during dry and wet weather. Potential sources of bacterial contaminations at Mothers' Beach and the back basins of MdRH include marina activities such as waste disposal from boats, boat deck and slip washing, swimmer "wash-off," restaurant washouts and natural sources from birds, waterfowl and other wildlife.

**Final Bacteria WLA**

Implementation of the bacteria objectives and the associated TMDL numeric targets is achieved using a "reference system/anti-degradation approach" as set forth in Chapter 3 of the Basin Plan. As required by the Clean Water Act and California Water Code, Basin Plans include beneficial uses of waters, water quality objectives to protect those uses, an anti-degradation policy, collectively referred to as water quality standards, and other plans and policies necessary to implement water quality standards. This TMDL and its associated waste load allocations, which shall be incorporated into relevant permits, and load allocations are the vehicles for implementation of the Region's standards.

The geometric mean targets may not be exceeded at any time. For purposes of this TMDL, the geometric means shall be calculated weekly as a rolling geometric mean using five or more samples, for six week periods starting all calculation weeks on Sunday. For the single sample targets, each existing monitoring site is assigned an allowable number of exceedance days for three time periods: (1) summer dry-weather (April 1 to October 31), (2) winter dry-weather (November 1 to March 31), and (3) wet-weather (defined as days with 0.1 inch of rain or greater and the three days following the rain event).

The County of Los Angeles, Los Angeles County Flood Control District, City of Los Angeles, and Culver City are the Los Angeles County MS4 permittees identified as the responsible jurisdictions and responsible agencies for the Marina del Rey Watershed. All proposed WLAs for summer dry weather are zero (0) days of allowable exceedances.[24] The proposed WLAs for winter dry weather and wet weather vary by monitoring location as identified in the following table:

[24] In order to fully protect public health, no exceedances are permitted at any monitoring location during summer dry-weather (April 1 to October 31). In addition to being consistent with the two criteria, waste load allocations of zero (0) days of allowable exceedances are further supported by the fact that the California Department of Public Health has established minimum protective bacteriological standards – the same as the numeric targets in this TMDL – which, when exceeded during the period April 1 to October 31, result in posting a beach with a health hazard warning (California Code of Regulations, Title 17, Section 7958).

**Marina del Rey Harbor Mothers' Beach and Back Basins Bacteria TMDL: Final Allowable Exceedance Days by Sampling Location**

Notes: The number of allowable exceedances is based on the lesser of (1) the reference system or (2) existing levels of exceedance based on historical monitoring data.
The allowable number of exceedance days during winter dry-weather is calculated based on the 10th percentile storm year in terms of dry days at the LAX meteorological station.
The allowable number of exceedance days during wet-weather is calculated based on the 90th percentile storm year in terms of wet days at the LAX meteorological station.
α: A dry day is defined as a non-wet day.
A wet day is defined as a day with a 0.1 inch or more of rain and the three days following the rain event.

| Station ID | Location Name | Compliance Deadline: March 18, 2007. Summer Dry Weather α. Apr 1 – Oct 31 | | Compliance Deadline: March 18, 2007. Winter Dry Weather α. Nov 1 – Mar 31 | | Compliance Deadline: July 15, 2021. Wet Weather α. Nov 1 – Oct 31 | |
|---|---|---|---|---|---|---|---|
| | | Daily sampling (No. days) | Weekly sampling (No. Days) | Daily sampling (No. days) | Weekly sampling (No. days) | Daily sampling (No. days) | Weekly sampling (No. days) |
| MdRH-1 | Mothers' (Marina) Beach, at playground area | 0 | 0 | 9 | 2 | 17 | 3 |
| MdRH-2 | Mothers' (Marina) Beach, at lifeguard tower | 0 | 0 | 9 | 2 | 17 | 3 |
| MdRH-3 | Mothers' (Marina) Beach, between lifeguard tower and boat dock | 0 | 0 | 9 | 2 | 17 | 3 |
| MdRH-4 | Basin D, near first slips outside swim area | 0 | 0 | 9 | 2 | 17 | 3 |

| Station ID | Location Name | Compliance Deadline: March 18, 2007. Summer Dry Weather [α]. Apr 1 – Oct 31 | | Compliance Deadline: March 18, 2007. Winter Dry Weather [α]. Nov 1 – Mar 31 | | Compliance Deadline: July 15, 2021. Wet Weather [α]. Nov 1 – Oct 31 | |
|---|---|---|---|---|---|---|---|
| | | Daily sampling (No. days) | Weekly sampling (No. Days) | Daily sampling (No. days) | Weekly sampling (No. days) | Daily sampling (No. days) | Weekly sampling (No. days) |
| MdRH-5 | Basin E, in front of tide-gate from Oxford Basin | 0 | 0 | 9 | 2 | 17 | 3 |
| MdRH-6 | Basin E, center of basin | 0 | 0 | 9 | 2 | 17 | 3 |
| MdRH-7 | Basin E, in front of Boone-Olive Pump Outlet | 0 | 0 | 9 | 2 | 17 | 3 |
| MdRH-8 | Back of Main Channel | 0 | 0 | 9 | 2 | 17 | 3 |
| MdRH-9 | Basin F, center of basin | 0 | 0 | 9 | 2 | 8 | 1 |

**Final Bacteria WLA Specific to the Department**
See Final WLA above.

**Final Bacteria Deadlines**
This TMDL will be implemented over an 18-year period. By March 18, 2007, there shall be no allowable exceedances of the single sample limits at any location during summer dry weather (April 1 to October 31) or winter dry weather (November 1 to March 31). By July 15, 2021, compliance with the allowable number of wet weather exceedance days and the geometric mean targets must be achieved.

**Department's Bacteria Contribution (**relative contribution to pollutant loading**)**
The Department's jurisdiction covers one percent of the watershed.

***Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL, January 13, 2012***

The TMDL identifies dry- and wet-weather urban runoff discharges from the storm water conveyance systems as significant contributors of bacteria loading to the Santa Clara River and Estuary. Mass emission data collected by MS4 Permittees show elevated levels of bacteria in the river. Data from natural landscapes in the region indicate that open space loading is not a significant source of bacteria.

**Final Bacteria WLA**
The Statewide Storm Water Permit for Department Activities (CAS000003) are assigned WLAs of zero (0) allowable exceedance days of the single sample targets for both dry and wet weather and no exceedances of the geometric mean targets because they are not expected to be significant source of indicator bacteria. Compliance with an effluent limit based on the bacteria water quality objectives will be used to demonstrate compliance with the WLA.

**Final Bacteria WLA Specific to the Department**
See Final WLA above.

**Final Deadlines**
The TMDL states that WLAs assigned to the Department's permit must be attained on the effective date of the TMDL.

**Department's Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to pollutant loading is unknown.

***Santa Monica Bay Beaches Bacteria TMDL June 19, 2003, Revised November 7, 2013***
**Final WLA**

With the exception of isolated sewage spills, dry weather urban runoff and storm water runoff conveyed by storm drains and creeks is the primary source of elevated bacterial indicator densities to Santa Monica Beaches (SMB). Limited natural runoff and groundwater may also potentially contribute to elevated bacterial indicator densities during winter dry weather. Because the bacterial indicators used as targets in the TMDL are not specific to human sewage, storm water runoff from undeveloped areas may also be a source of elevated bacterial indicator densities. For example, storm water runoff from natural areas may convey fecal matter from wildlife and birds or bacteria from soil. This is supported by the finding that, at the reference beach, the probability of exceedance of the single sample targets during wet weather is 0.22.

Implementation of the bacteria objectives in Chapter 3 of the Basin Plan and the associated TMDL numeric targets is achieved using a "reference system/anti-degradation approach" rather than the alternative "natural sources exclusion approach" or strict application of the single sample objectives. As required by the Clean Water Act and Porter-Cologne Water Quality Control Act, Basin Plans include beneficial uses of waters, water quality objectives to protect those uses, an anti-degradation policy, collectively referred to as water quality standards, and other plans and policies necessary to implement water quality standards. This

TMDL and its associated waste load allocations, which shall be incorporated into relevant permits, and load allocations are the vehicles for implementation of the Region's standards.

The geometric mean targets may not be exceeded at any time. For the single sample targets, each existing shoreline monitoring site is assigned an allowable number of exceedance days during three time periods as defined in the table below (summer dry weather, winter dry weather, and wet weather [defined as days with 0.1 inch of rain or greater and the three days following the rain event]). The allowable exceedance days for each associated shoreline monitoring site are identified in the following table:

**Allowable Number of Days that may Exceed any Single Sample Bacterial Indicator Target for Existing Shoreline Monitoring Stations**

Notes: The allowable number of exceedance days during winter dry weather is calculated based on the 10th percentile year in terms of non-wet days at the LAX meteorological station.
The number of allowable exceedances during winter dry weather is based on the lesser of (1) the reference system or (2) existing levels of exceedance based on historical shoreline data.
α: Dry weather days are defined as those with <0.1 inch of rain and those days not less than 3 days after a rain day. Rain days are defined as those with >=0.1 inch of rain.
Detailed descriptions of the sampling locations are provided in the Santa Monica Bay Beaches Bacterial TMDLs Coordinated Shoreline Monitoring Plan.
β: Monitoring began in 2010 and data was examined from April 2010 to November 2011
Daily and Weekly sampling data are in units of number of days

| Station ID | Location Name | Sub-watershed | Summer Dry Weather α | | Winter Dry Weather α | | Wet Weather | |
|---|---|---|---|---|---|---|---|---|
| | | | Daily sampling | Weekly sampling | Daily sampling | Weekly sampling | Daily sampling | Weekly sampling |
| SMB 1-1 | Leo Carillo Beach (REFERENCE BEACH) | Arroyo Sequit Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 1-2 | El Pescador State Beach | Los Alisos Canyon | 0 | 0 | 1 | 1 | 5 | 1 |
| SMB 1-3 | El Matador State Beach | Encinal Canyon | 0 | 0 | 1 | 1 | 3 | 1 |
| SMB 1-4 | Trancas Creek | Trancas Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 1-5 | Zuma Creek | Zuma Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 1-6 | Walnut Creek | Ramirez Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB O-1 β | Paradise Cove | Ramirez Canyon | 0 | 0 | 9 | 2 | 15 | 3 |

| Station ID | Location Name | Sub-watershed | Summer Dry Weather [α] | | Winter Dry Weather [α] | | Wet Weather | |
|---|---|---|---|---|---|---|---|---|
| | | | Daily sampling | Weekly sampling | Daily sampling | Weekly sampling | Daily sampling | Weekly sampling |
| SMB 1-7 | Ramirez Creek | Ramirez Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 1-8 | Escondido Creek | Escondido Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 1-9 | Latigo Canyon Creek | Latigo Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 1-10 | Solstice Creek | Solstice Canyon | 0 | 0 | 5 | 1 | 17 | 3 |
| SMB O-2 [β] | Puerco Canyon storm drain | Corral Canyon | 0 | 0 | 0 | 0 | 6 | 1 |
| SMB 1-11 | Wave wash of unnamed creek on Puerco Beach | Corral Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 1-12 | Marie Canyon Storm Drain on Puerco Beach | Corral Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 1-13 | Sweetwater Creek on Carbon Beach | Carbon Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 1-14 | Las Flores Creek | Las Flores Canyon | 0 | 0 | 6 | 1 | 17 | 3 |
| SMB 1-15 | Big Rock Beach at 19948 Pacific Coast Hwy | Piedra Gorda Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 1-16 | Pena Creek | Pena Canyon | 0 | 0 | 3 | 1 | 14 | 2 |
| SMB 1-17 | Tuna Canyon Creek | Tuna Canyon | 0 | 0 | 7 | 1 | 12 | 2 |
| SMB 1-18 | Topanga Creek | Topanga Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 4-1 | San Nicholas Canyon Creek | Nicholas Canyon | 0 | 0 | 4 | 1 | 14 | 2 |
| SMB 2-1 | Castlerock (Parker Mesa) Storm Drain | Castlerock Canyon | 0 | 0 | 9 | 2 | 17 | 3 |

| Station ID | Location Name | Sub-watershed | Summer Dry Weather α | | Winter Dry Weather α | | Wet Weather | |
|---|---|---|---|---|---|---|---|---|
| | | | Daily sampling | Weekly sampling | Daily sampling | Weekly sampling | Daily sampling | Weekly sampling |
| SMB 2-2 | Santa Ynez Storm Drain | Santa Ynez Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 2-3 | Will Rogers State Beach at 17200 Pacific Coast Hwy. | Santa Ynez Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 2-4 | Pulga Canyon storm drain | Pulga Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 2-5 | Temescal Storm Drain | Pulga Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 2-6 | Bay Club Storm Drain | Santa Ynez Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 2-7 | Santa Monica Canyon, Will Rogers State Beach | Santa Monica Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 2-8 | Venice Pier, Venice | Ballona | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 2-9 | Topsail Street extended | Ballona | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 2-10 | Dockweiler State Beach at Culver Bl. Storm Drain | Dockweiler | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 2-11 | North Westchester Storm Drain | Dockweiler | 0 | 0 | 0 | 0 | 17 | 3 |
| SMB 2-12 | World Way extended | Dockweiler | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 2-13 | Imperial Highway storm drain (Dockweiler) | Dockweiler | 0 | 0 | 4 | 1 | 17 | 3 |
| SMB 2-14 | Opposite Hyperion Plant, 1 mile | Dockweiler | 0 | 0 | 9 | 2 | 17 | 3 |

| Station ID | Location Name | Sub-watershed | Summer Dry Weather α | | Winter Dry Weather α | | Wet Weather | |
|---|---|---|---|---|---|---|---|---|
| | | | Daily sampling | Weekly sampling | Daily sampling | Weekly sampling | Daily sampling | Weekly sampling |
| SMB 2-15 | Grand Avenue Storm Drain | Dockweiler | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 3-1 | Montana Ave. Storm Drain | Santa Monica | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 3-2 | Wilshire Blvd., Santa Monica | Santa Monica | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 3-3 | Santa Monica Municipal Pier at storm drain | Santa Monica | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 3-4 | Santa Monica Beach at Pico/Kenter storm drain | Santa Monica | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 3-5 | Ashland Av. storm drain (Venice) | Santa Monica | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 3-6 | Rose Ave. Storm Drain on Venice Beach | Santa Monica | 0 | 0 | 6 | 1 | 17 | 3 |
| SMB 3-7 | Venice City Beach at Brooks Storm Drain (projection of Brooks Ave.) | Ballona | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 3-8 | Venice Pavilion at projection of Windward Av. | Ballona | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 3-9 | Strand Street extended | Santa Monica | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 5-1 | Manhattan State Beach at 40th Street (El Porto Beach) | Hermosa | 0 | 0 | 1 | 1 | 4 | 1 |

| Station ID | Location Name | Sub-watershed | Summer Dry Weather α | | Winter Dry Weather α | | Wet Weather | |
|---|---|---|---|---|---|---|---|---|
| | | | Daily sampling | Weekly sampling | Daily sampling | Weekly sampling | Daily sampling | Weekly sampling |
| SMB 5-2 | Terminus of 28th Street Drain in Manhattan Beach | Hermosa | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 5-3 | Manhattan Beach Pier | Hermosa | 0 | 0 | 3 | 1 | 6 | 1 |
| SMB 5-4 | Near 26th Street on Hermosa Beach | Hermosa | 0 | 0 | 3 | 1 | 12 | 2 |
| SMB 5-5 | Hermosa Beach Pier | Hermosa | 0 | 0 | 2 | 1 | 8 | 2 |
| SMB 6-1 | Herondo Storm Drain | Redondo | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 6-2 | Redondo Municipal Pier - 100 yards south | Redondo | 0 | 0 | 3 | 1 | 14 | 2 |
| SMB 6-3 | 4' × 4' outlet at projection of Sapphire Street | Redondo | 0 | 0 | 5 | 1 | 17 | 3 |
| SMB 6-4 | 120' north of Topaz groin | Redondo | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB 6-5 | Storm Drain at Projection of Avenue I | Redondo | 0 | 0 | 4 | 1 | 11 | 2 |
| SMB 6-6 | Malaga Cove, Palos Verdes Estates | Redondo | 0 | 0 | 1 | 1 | 3 | 1 |
| SMB 7-1 | Malaga Cove | Palos Verdes | 0 | 0 | 1 | 1 | 14 | 2 |
| SMB 7-2 | Bluff Cove | Palos Verdes | 0 | 0 | 1 | 1 | 0 | 0 |
| SMB 7-3 | Long Point | Palos Verdes | 0 | 0 | 1 | 1 | 5 | 1 |
| SMB 7-4 | Abalone Cove | Palos Verdes | 0 | 0 | 0 | 0 | 1 | 1 |

| Station ID | Location Name | Sub-watershed | Summer Dry Weather α | | Winter Dry Weather α | | Wet Weather | |
|---|---|---|---|---|---|---|---|---|
| | | | Daily sampling | Weekly sampling | Daily sampling | Weekly sampling | Daily sampling | Weekly sampling |
| SMB 7-5 | Portuguese Bend Cove | Palos Verdes | 0 | 0 | 1 | 1 | 2 | 1 |
| SMB 7-6 | Royal Palms | Palos Verdes | 0 | 0 | 1 | 1 | 6 | 1 |
| SMB 7-8 | Wilder Annex | Palos Verdes | 0 | 0 | 1 | 1 | 2 | 1 |
| SMB 7-9 | Outer Cabrillo Beach | Palos Verdes | 0 | 0 | 1 | 1 | 3 | 1 |
| SMB MC-1 | Malibu Point, Malibu Colony Dr. | Malibu Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB MC-2 | Surfrider Beach (breach point of Malibu Lagoon) | Malibu Canyon | 0 | 0 | 9 | 2 | 17 | 3 |
| SMB MC-3 | Malibu Pier on Carbon Beach | Malibu Canyon | 0 | 0 | 9 | 2 | 17 | 3 |

**Compliance Deadlines**

| | Summer Dry Weather Apr 1 – Oct 31 | Winter Dry Weather Nov 1 – Mar 31 | Wet Weather Year-round |
|---|---|---|---|
| **Compliance Deadline** | 15-Jul-06 | 1-Nov-09 | 15-Jul-21 |

**Final Bacteria WLA Specific to the Department**
See Final WLA above.

**Final Bacteria Deadlines**
The final implementation targets in terms of allowable wet-weather exceedance days must be achieved at each individual beach location no later than July 15, 2021.

**Department's Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to bacteria pollutant loading is not known.

***Coachella Valley Storm Water Channel (CVSC) Bacterial Indicators TMDL, April 27, 2012***

The TMDL identifies flows from urban MS4s as violating applicable water quality objectives for REC I and REC II. Birds and other animals are possible sources of bacteria in the CVSC.

**Final Bacterial Indicator WLA**

Wasteload allocations (WLAs) for bacteria indicator dischargers into CVSC are described below:

| Allocation Type | Discharger | E. Coli Allocations |
|---|---|---|
| Point Source (WLAs) | Department | A log mean (Geomean) of the MPN of ≤126/100ml (based on a minimum of not less than five samples during a 30-day period), or 400 MPN/100ml for a single sample. |

**Final Bacterial Indicator WLA Specific to the Department**

See Final WLA above.

**Final Bacterial Indicator Deadlines**

The final implementation targets in terms of allowable wet-weather exceedance days must be achieved at each individual beach location no later than July 15, 2021.

**Department's Bacterial Indicator Contribution** (relative contribution to pollutant loading)

The Department's relative contribution to bacteria pollutant loading is not known.

## SAN DIEGO REGION BACTERIA TMDL

***Project I – Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek) TMDL, June 22, 2011***

The TMDL identifies dry and wet weather runoff as the source of bacterial loading.

**Final Indicator Bacteria WLA**

In general, controllable point and nonpoint sources generating less than five percent of the total loads (e.g., The Department and/or Agriculture) were assigned WLAs and LAs equal to their existing loads, resulting in no load reduction requirements.

The dry weather mass-load based TMDLs were assigned entirely to discharges from MS4 land uses because the runoff that transports bacteria to surface waters during dry weather is expected to occur in urban areas. The allocation of the dry weather mass-based TMDL assumes that no surface runoff discharge to receiving waters occurs from the Department, Agriculture, or Open Space land use categories (i.e., $WLA_{Caltrans} = 0$, $LA_{Agriculture} = 0$, and $LA_{OpenSpace} = 0$) , meaning the entire dry weather mass-based TMDL (i.e., allowable mass load) is allocated to Municipal MS4 land use categories (i.e., $WLA_{MS4}$ = TMDL).

For the wet weather TMDLs, discharges of surface runoff are expected from all land use types, thus allocations were assigned to each land use category (i.e., Municipal MS4s, the Department, Agriculture, and Open Space). The Department's wet weather WLAs were set equal to existing loads, since the Department's discharges were found to account for less than 1 percent of the wet weather load. Allocations were assigned based on discharges of "existing" bacteria loads predicted with a wet weather watershed model. In general, the Department WLAs, Agriculture LAs (in all but four of the modeled watersheds), and Open Space LAs were set equal to the "existing" bacteria loads predicted by the wet weather watershed model. The remainder of allowable bacteria load that can be discharged to the receiving waters as part of the TMDL was assigned as the Municipal MS4s WLAs (or proportionally divided between the Municipal MS4s and Agriculture land use categories in four of the modeled watersheds).

**Final Indicator Bacteria WLA Specific to Department**
See Final WLA above.

**Final Indicator Bacteria Deadlines**
TMDL Compliance Schedule: Full implementation of the TMDLs for indicator bacteria shall be completed within 10 to 20 years (April 4, 2021 to April 4, 2031) from the effective date of the Basin Plan amendment. The compliance schedule for implementing the load and wasteload reductions required to achieve the wet weather and dry weather TMDLs is phased in over time.

The dry weather TMDLs must be achieved in the receiving waters as soon as possible, but no later than 10 years (April 4, 2021) from the effective date of the Basin Plan amendment that establishes the TMDLs. For dischargers that undertake wet weather load reduction programs only for bacteria, the wet weather TMDLs must be achieved in the receiving waters as soon as possible, but no later than 10 years (April 4, 2021) from the effective date.

For dischargers in watersheds that undertake concurrent wet weather load reduction programs for other pollutant constituents (e.g. metals, pesticides, trash, nutrients, sediment, etc.) together with the bacteria load reduction requirements in these TMDLs, an alternative compliance schedule may be proposed and incorporated by the San Diego Water Board into the implementing orders. The wet weather TMDL compliance schedules may be extended, but no more than a total of 20 years (April 4, 2031) from the effective date of the Basin Plan amendment. The dry weather TMDL compliance schedule cannot be extended to be more than 10 years (April 4, 2021) from the effective date of the Basin Plan amendment.

**Department's Indicator Bacteria Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to bacteria pollutant loading is unknown.

**F. Diazinon TMDL Pollutant Category**

**General Description of Pollutant Category**
Diazinon is an organophosphate insecticide has been banned for residential use; it is still used in agriculture.

**Sources of Pollutant & How it Enters the Waterway**
It is a broad spectrum contact insecticide. Residential use was for general-purpose gardening use and indoor pest control of ants, fleas, cockroaches, silverfish, mosquitos and spiders in residential, non-food buildings.

**Watershed Contribution**
The Department does not use Diazinon. The Department is identified as a source of Diazinon because they own and operate storm water conveyance systems in association with roadways and facilities. In some areas the Department's storm water systems are connected to municipal storm water systems.

**Control Measures**
Attachment IV, Section III.F, prohibits the discharge of Diazinon. This prohibition is consistent with the TMDLs for Diazinon which generally limit the discharge of this pesticide to non-toxic levels. Since the Department does not use Diazinon it is in compliance with the prohibition of discharge. Attachment IV, Part F does not require additional monitoring beyond what is specified in the permit.

## SAN FRANCISCO BAY REGION DIAZINON TMDL

***San Francisco Bay Urban Creeks Diazinon and Pesticide Toxicity May 16, 2007***
The TMDL states that most urban runoff flows through storm drains operated by all storm water entities including the Department. The use of diazinon is prohibited in the Department's NPDES permit, and no additional measures are required.

**Final Diazinon WLA**
The WLA for each storm water entity is 100 ng/L as a one-hour average.

**Final Diazinon WLA Specific to the Department**
The Department's level of responsibility is not identified.

**Final Diazinon Deadlines**
The TMDL does not specify any interim or final compliance dates but states that the requirements included in the permits are inadequate to meet the targets the San Francisco Bay Water Board will require additional control measures or additional actions by others.

**Department's Diazinon Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to the diazinon pollutant loading is not known.

***Chollas Creek Diazinon TMDL, November 3, 2003***

**Final Diazinon WLA**

The below concentration-based waste load allocations are applied equally to all diazinon discharge sources in the Chollas Creek watershed:

| Waterbody | Diazinon Acute (1 hour ave) (ng/L) | Diazinon Chronic (4 day ave) (ng/L) |
|---|---|---|
| Chollas Creek | 72 | 45 |

**Final Diazinon WLA Specific to the Department**

The final WLA for the Department is noted above.

**Final Diazinon Deadlines**

The TMDL states that the phased compliance schedule will apply only to attainment of numeric limitations for diazinon and all other requirements of this TMDL will be immediately effective upon incorporation into applicable NPDES permits.

**Department Diazinon Contribution**

In the supporting technical documentation, the San Diego Regional Water Board stated that the Department is responsible for the major freeways and roadways making up approximately four percent of the land in the watershed; that the Department reports diazinon is not used; and that the Department has an integrated pest management plan. Since the Department does not use Diazinon it is in compliance with the prohibition of discharge.

## G. Selenium TMDL Pollutant Category

**General Description of Pollutant Category**

**Sources of Pollutant & How it Enters the Waterway**

Selenium is naturally occurring in geologic formations, soils and aquatic sediments. Storm water runoff, dewatering, ground water seepage, irrigation of high selenium content soils, and oil refineries are identified as sources of selenium to surface waters in southern California. Generally, atmospheric deposition was determined to be a not significant source. Selenium bioaccumulates to levels that cause severe impacts on invertebrates, fish, birds that prey on fish, and humans.

**Watershed Contribution**

Selenium in soil may be a contributing source, and naturally occurring selenium in groundwater may be a significant source.

**Control Measures**

As discussed under the individual TMDLs below, the TMDLs in this pollutant category generally establish that the Department is a relatively minor source of selenium since the

sources of selenium are not transportation related. The Department is expected to continue its current pollutant control activities in order to remain in compliance with the TMDLs.

## LOS ANGELES REGION SELENIUM TMDL

***Ballona Creek Metals and Selenium TMDL, December 22, 2005 and reaffirmed on October 29, 2008.***

This TMDL addresses dry- and wet-weather discharges of metals and selenium in Ballona Creek and Sepulveda Canyon Channel. There are significant differences in the sources of metals and selenium loadings during dry and wet weather because hardness values and flow conditions in Ballona Creek and Sepulveda Canyon Channel vary between dry and wet weather. A grouped mass-based waste load allocation is developed for the storm water permittees that includes the Department.

**Final Selenium WLA**

The Department and MS4 storm water NPDES permittees will be found to be effectively meeting the dry-weather WLAs if the instream pollutant concentrations or load at the first downstream monitoring location is equal to or less than the corresponding concentration- or load based WLA.

*Selenium Dry-weather Storm Water WLAs Apportioned between Storm Water Permits (grams total recoverable metals/day)*

| Permittee | Waste Load Allocation (grams/day) |
|---|---|
| ***Ballona Creek*** | |
| MS4 Permittees | 169 |
| Department | 2 |
| ***Sepulveda Channel*** | |
| MS4 Permittees | 76 |
| General Industrial | 1 |

*Selenium Wet-weather Storm Water WLAs Apportioned between Storm Water Permits (total recoverable metals)*

| Permittee | Waste Load Allocation (grams/day) |
|---|---|
| MS4 Permittees | 1 ÷ 4.73 E 06 × Daily storm volume (L) |
| Department | 1 ÷ 6.59 E 08 × Daily Storm Volume (L) |
| General Construction | 1 ÷ 1.37 E 07 × Daily storm volume (L) |
| General Industrial | 1 ÷ 3.44 E 08 × Daily storm volume (L) |

The Department and MS4 NPDES permittees will be found to be effectively meeting the wet-weather WLAs if the loading at the most downstream monitoring location is equal to or less than the wet-weather WLA.

**Final Selenium WLA Specific to the Department**
See Tables above for specific Department WLAs.

**Final Deadlines**
The implementation schedule for the MS4 permittees and the Department consists of a phased approach, with compliance to be achieved in prescribed percentages of the watershed, with total compliance to be achieved within 15 years. The Department shall demonstrate that 100 percent of the total drainage area served by the MS4 system is effectively meeting the dry-weather and wet-weather WLAs.

Whereas the Department is responsible for meeting their mass-based waste load allocations they may choose to work with the MS4 Permittees.

**Department's Selenium Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to the selenium loading is not known.

***Calleguas Creek, its Tributaries and Mugu Lagoon Metals and Selenium TMDL, March 26, 2007***

Significant sources were identified as urban runoff, agricultural runoff, groundwater seepage and POTW effluent. The Department is a participant in the watershed-wide water monitoring program.

**Final Selenium WLA**
Dry-weather is defined as days when flows in the stream are less than the 86$^{th}$ percentile flow rate for each reach; wet weather is defined as flows greater than 86$^{th}$ percentile. The daily maximum interim limit is set equal to the 99$^{th}$ percentile of available discharge data, the monthly average interim limit is set equal to the 95$^{th}$ percentile. The interim WLAs for dry-weather in Revolon Slough are 14 μg/L criteria maximum concentration (CMC), and 13 μg/L criteria continuous concentration (CCC) for wet-weather. There is no interim wet-weather WLA because current loads do not exceed the TMDL. In this TMDL interim limits and WLAs are applied to receiving waters.

**Final Selenium WLA Specific to the Department**
Final WLAs for selenium in Revolon Slough are:
Dry weather: In lbs/day are 0.004 low flow, 0.003 average flow, 0.004 elevated flow.
Wet weather: In lbs/day is 0.027 × Q × Q +0.47 × Q, where Q equals the daily storm volume.
Current loads do not exceed the loading capacity during wet weather, therefore no additional action by the Department is needed during wet weather.

**Final Deadlines**
The TMDL states that storm water dischargers are expected to achieve compliance through implementation of BMPs. A group watershed monitoring plan was required and receiving water monitoring compliance points are specified for all dischargers subject to the TMDL. A 25 percent reduction was required by March 2012, and a 50 percent reduction is required by March 2017. Final compliance is required by March 2022. The TMDL states that achievement of required reductions will be evaluated based on progress towards BMP implementation as

outlined in the UWQMPs and in consideration of background loading information. The requirements of Attachment IV, Section III.G are consistent with the requirements of the TMDL.

**Department's Selenium Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to the selenium pollutant loading is not known.

***San Gabriel River and Impaired Tributaries Metals and Selenium TMDL, March 26, 2007***

The San Gabriel River and impaired tributaries metals and selenium TMDL was established by USEPA (and therefore there are no milestones, compliance schedule, or monitoring requirements) and includes a dry-weather TMDL for selenium in San Jose Creek Reach 1. The TMDL notes that selenium is present in local marine sedimentary rocks and presumes that much of the selenium in San Jose Creek results from natural soils, and that this assumption is corroborated by the fact that many of the impairments in San Jose Creek occur after the channel becomes soft-bottomed. Other potential sources were identified as mobilization of groundwater, such as by dewatering, irrigation of soils naturally high in selenium, and discharges from petroleum-related activities.

The requirements of Attachment IV, Section III.G are consistent with the requirements of the TMDL.

**Final WLA for Selenium**
The TMDL sets a dry-weather selenium WLA of five (5) μg/L for all storm water discharges to San Jose Creek. The TMDL states that a review of the storm water permits indicates that the Department discharges entirely to municipal storm water systems.

**Final Selenium WLA Specific to the Department**
No specific selenium WLAs are assigned to the Department. The dry-weather WLAs for the storm water permittees are shared by the MS4 permittees and the Department because there is not enough data on the relative extent of MS4 and the Department's areas.

**Final Deadlines for Selenium**
The MS4 permittees and the Department shall demonstrate that 100 percent of the total drainage area served by the storm drain system is effectively meeting both the dry-weather and wet-weather WLAs and attaining water quality standards for metals and selenium.

**Department's Selenium Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to selenium pollutant loading is not known.

## H. Temperature TMDL Pollutant Category

**General Description of Pollutant Category**
The North Coast Region Basin Plan defines the water quality objective for temperature as follows:

(1) For estuaries, the Basin Plan incorporates by reference the statewide plan entitled "Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays of California."

(2) The following temperature objectives apply to surface waters:

The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses. At no time or place shall the temperature of any COLD water be increased by more than five degrees Fahrenheit above natural receiving water temperature. At no time or place shall the temperature of WARM intrastate waters be increased more than five degrees Fahrenheit above natural receiving water temperature.

The designated beneficial uses affected by thermal pollution of receiving waters include: cold freshwater habitat (COLD); rare, threatened, and endangered species (RARE); migration of aquatic organisms (MIGR); and spawning, reproduction, and/or early development of fish (SPWN); commercial and sport fishing (COMM); and contact and non-contact water recreation (REC-1 and REC-2).

**Sources of Pollutant & How it Enters the Waterway**

Anthropogenic processes that influence water temperature include changes to stream shade, stream flow via changes in groundwater accretion, streamflow via surface water use, changes to local microclimates, and channel geometry. Road construction and maintenance can, for example, involve the removal of some riparian vegetation, thus increasing ambient water temperature along the affected segment of a surface water body unless this impact is minimized via re-planting and/or by reducing the amount of vegetation removed.

Natural sources of sediment which can increase receiving water temperatures include geologically unstable areas that are subject to landslides, as well as smaller sediment sources such as gullies and stream-bank failures. Anthropogenic sources include road-related stream crossing failures, gullies, fill failures, and landslides precipitated by road-related surface erosion and cut bank failures. Road-related activities which can increase sediment discharge to a waterway include the construction and maintenance of paved and unpaved roadways, watercourse crossing construction, reconstruction, maintenance, use, and obliteration, and many activities conducted on unstable slopes. Unstable areas are areas with a naturally high risk of erosion and areas or sites that will not reasonably respond to efforts to prevent, restore or mitigate sediment discharges. Unstable areas are characterized by slide areas, gullies, eroding stream banks, or unstable soils that are capable of delivering sediment to a watercourse. Slide areas include shallow and deep seated landslides, debris flows, debris slides, debris torrents, earthflows, headwall swales, inner gorges and hummocky ground. Unstable soils include unconsolidated, non-cohesive soils and colluvial debris.

**Watershed Contribution**

The Department is a relatively minor source of pollutants and small percentage of the watershed. The Department will address the highest problem areas soonest and therefore address the problem at the appropriate level for the temperature and sediment TMDLs.

**Control Measures**

Dischargers responsible for vegetation removal are encouraged (and sometimes required) to preserve and restore such vegetation where possible. This may include planting riparian trees, minimizing the removal of vegetation that provides shade to a water body, and minimizing activities that might suppress the growth of new or existing vegetation. Reductions in sediment loads are expected to increase the number and depth of pools in streams and rivers, and to reduce wetted channel width/depth ratios. These changes would tend to result in lower stream temperatures overall and in more lower-temperature pool habitat.

The Department is required to implement control measures to prevent erosion and sediment discharge. The measures that control the discharge of sediment can be effective in reducing thermal pollution in receiving waters. This can be achieved by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and avoidance of alterations of natural runoff flow patterns.

The sediment control requirements in Attachment IV are intended to reduce the adverse impacts of excessive sediment discharges to sediment-impaired waters, including impacts to the cold water salmonid fishery and the COLD, COMM, RARE, SPWN, and MIGR beneficial uses. The beneficial uses associated with the cold water salmonids fishery are often the most sensitive to sediment discharges.

The Sediment TMDL Implementation Policy also directs staff to develop: (1) the Work Plan, which describes how and when permitting and enforcement tools are to be used; (2) the Guidance Document on Sediment Waste Discharge Control; (3) the Sediment TMDL Implementation Monitoring Strategy; and (4) the Desired Conditions Report. Of these items, the Guidance Document on Sediment Waste Discharge Control and the Sediment TMDL Implementation Monitoring Strategy are still under development by the North Coast Region.

At present, the requirements in Attachment IV are generally sufficient to address the sediment/temperature TMDLs in the North Coast Region that originate from a comparatively minor pollutant source, and this is accomplished by focusing on the most problematic areas and activities within this relatively low-volume subset of anthropogenic discharges for this pollutant category.

Attachment IV requires continuation of existing monitoring plans, or monitoring consistent with the TMDLs' requirements as approved by the Regional Water Board Executive Officer. A primary focus of the monitoring required by Attachment IV is management practice effectiveness monitoring and "Adaptive Management" for BMP implementation requirements ensures compliance with the sediment/temperature TMDLs.

The North Coast Regional Water Board is also in the process of amending its basin plan for the control of thermal pollution. These revisions will add a policy for implementing the water quality objective for temperature. The amendment will also add additional action plans to implement total maximum daily loads for temperature in the Navarro, and Eel, and Mattole watersheds.

The proposed revisions to the Basin Plan include changes to Chapter 4 –Implementation Plans. The Regional Water Board directed staff to prepare an amendment incorporating a

temperature implementation policy into the Basin Plan by adoption of resolution R1-2012-0013.The proposed Basin Plan amendment will describe the approach to implementing the interstate water quality objective for temperature in one cohesive policy. It will identify the regulatory mechanisms staff will employ to ensure achievement of the water quality objective for temperature, it will describe the significance of stream shade as a factor determining stream temperatures, and it will direct staff to address temperature concerns through existing authorities and processes.

The proposed Basin Plan amendment will also establish implementation plans for the Navarro, Mattole, Upper Main Eel, Middle Main Eel, Lower Eel, Middle Fork Eel, North Fork Eel, and South Fork Eel River temperature TMDLs.

## NORTH COAST REGION TEMPERATURE TMDLS

### *Eel River (Lower HA) Temperature and Sediment TMDL, USEPA Established on December 18, 2007*

**Final Temperature WLA**

For the diffuse permitted sources, such as municipal and industrial storm water discharges, the Department's facilities, construction sites, and municipalities, as well as for discharges that are subject to NPDES permits but are not currently permitted, the waste load allocation (WLA) is expressed as follows: zero net increase in receiving water temperature.

**Final Temperature WLA Specific to the Department**

As stated above, USEPA's wasteload allocation for the temperature TMDL assigned to the Department and other point source dischargers is zero net increase in receiving water temperature.

**Final Temperature Deadlines**

USEPA did not specify deadlines for implementation.

**Department's Contribution (**relative contribution to pollutant loading**)**

USEPA states that although nonpoint sources are responsible for most heat loading in the watershed, point sources may also discharge some heat in the watershed.

### *Eel River (Middle-Fork) Eden Valley, and Round Valley HSAs Temperature and Sediment TMDL, USEPA Established on December 2003*

**Final Temperature WLA**

Although USEPA states that because appropriate heat loads, water temperatures and tree heights cannot be generalized on a basin-wide scale, this reduction is best achieved by allowing trees to grow so as to provide the equivalent amount of shade that would be provided under natural conditions. In addition, measures to reduce sediment discharge and promote establishment or protection of additional refugia pool areas will facilitate attainment of water quality standards. In this sense, the temperature and sediment TMDLs overlap to some degree.

**Final Temperature WLA Specific to the Department**
Please see above discussion of the temperature WLA.

**Final Temperature Deadlines**
USEPA did not specify deadlines for implementation.

**Department's Temperature Contribution** (relative contribution to pollutant loading)
USEPA states that although nonpoint sources are responsible for most heat loading in the watershed, point sources may also discharge some heat in the watershed.

***Eel River (South Fork) HA Temperature and Sediment TMDL, USEPA Established on December 16, 1999***

USEPA's source analysis indicates that the sediment loading due to nonpoint erosion from roads and other anthropogenic activities accounts for a substantial portion of the total sediment loading in this watershed.

The waste load allocation for point sources are for sediment only, i.e., they are not directly related to the temperature portion of the TMDL, nor does USEPA set a waste load allocation for point sources under the temperature portion of the TMDL. However, USEPA also states that any improvements in stream temperature from reduced sedimentation contribute to the cumulative benefits of both sediment and temperature load reductions, and this assumption is accommodated in USEPA's calculations for the margin of safety in this TMDL.

**Final Temperature WLAs**
As stated above, there is no wasteload allocation for point sources.

**Final Temperature WLA Specific to the Department**
As stated above, there is no specific wasteload allocation for the Department.

**Final Temperature Deadlines**
USEPA did not specify deadlines for implementation.

**Department's Temperature Contribution to Thermal Loading** (relative contribution to pollutant loading)
USEPA attributes most sediment and thermal pollutant loading in the TMDL to nonpoint sources, and considers the Department's and other point source contributions to be comparatively minor.

***Eel River (Upper Main HA) Temperature and Sediment TMDL, USEPA Established on December 29, 2004***

**Final Temperature WLA**
USEPA states that there are no point source discharges included in the temperature TMDL for purposes of attaining temperature reductions via "shade allocation," so the waste load allocation is set to zero. USEPA states that permitted sources of increased water temperatures and sediment loading, if they occur in the future, will be attributable only to construction-related storm water discharges.

**Final Temperature WLA Specific to the Department**
As stated above, USEPA stated that there are no point source discharges for thermal pollution, so the wasteload allocation for all point source discharges (including the Department) is set to zero.

**Final Temperature Deadlines**
USEPA did not specify deadlines for implementation.

**Department's Temperature Contribution** (relative contribution to pollutant loading)
USEPA considers all point sources of temperature pollution to be insignificant for purposes of this TMDL.

***Klamath River in California Temperature, Dissolved Oxygen, Nutrients, and Microcystin TMDL, December 28, 2010***

**Final Temperature WLA**
The Iron Gate Fish Hatchery was identified as the only point-source heat load in the Klamath River watershed: The interstate water quality objective for temperature prohibits the discharge of thermal waste to the Klamath River, and therefore the waste load allocation for Iron Gate Hatchery is set to zero, as monthly average temperatures. The TMDL addresses elevated temperatures from natural and non-point anthropogenic sources. The non-point sources include: (1) excess solar radiation, expressed as its inverse, shade; (2) heat loads associated with increased sediment loads; (3) heat loading from impoundments; and (4) heat loads from Oregon. The assigned load allocations for temperature are expressed as follows (as adapted from Table 4-15 in the basin plan):

| Source | Allocation |
|---|---|
| Excess Solar Radiation (expressed as effective shade) | The shade provided by topography and full potential vegetation conditions at a site, with an allowance for natural disturbances such as floods, wind throw, disease, landslides, and fire. |
| Increased Sediment Loads | Zero temperature increase caused by substantial human-caused sediment-related channel alterations. |
| Impoundment Discharges | Zero temperature increase above natural temperatures[1] |
| Excess Solar Radiation (expressed as effective shade) | The shade provided by topography and full potential vegetation conditions at a site, with an allowance for natural disturbances such as floods, wind throw, disease, landslides, and fire. |
| Increased Sediment Loads | Zero temperature increase caused by substantial human-caused sediment-related channel alterations.[2] |
| Impoundment Discharges | Zero temperature increase above natural temperatures |

1. Natural temperatures are those water temperatures that exist in the absence of anthropogenic influences, and are equal to natural background.

2. Substantial human-caused sediment-related channel alteration: “A human-caused alteration of stream channel dimensions that increases channel width, decreases depth, or removes riparian vegetation to a degree that alters stream temperature dynamics and is caused by increased sediment loading.”

**Final Temperature WLA Specific to the Department**
The Department was not assigned a waste load allocation for temperature.

**Final Deadlines**
No deadlines were specified.

**Department’s Pollutant Contribution** (relative contribution to pollutant loading)
The Department is listed as a source of thermal pollution: however, the relative magnitude of the Department’s contribution to thermal pollution was not specified or estimated.

***Navarro River Sediment and Temperature TMDL, USEPA Established on December 27, 2000***

**Final Temperature WLA**
USEPA states that there are no known point sources of heat to the Navarro or its tributaries. The source analysis therefore focused on non-point sources. The wasteload allocation any for point sources which might be present is thus presumed to set to zero.

The Navarro River TMDLs for temperature and sediment are based on separate analyses. Reduced sediment loads could be expected to lead to increased frequency and depth of pools and to reduced wetted channel width/depth ratios. These changes would tend to result in lower stream temperatures overall and in more lower-temperature pool habitat.

Improvements in stream temperature that may result from reduced sedimentation were not considered in the analysis.

**Final Temperature WLA Specific to the Department**
The Department is not specifically mentioned as a source of pollutant loading for temperature, therefore the wasteload allocation for the Department is presumed to be set to zero.

**Final Temperature Deadlines**
USEPA did not specify deadlines for implementation of this TMDL.

**Department’s Temperature Contribution (**relative contribution to pollutant loading**)**
As mentioned above, neither the Department nor other point sources are identified as sources of pollutant loading for temperature or sediment, so USEPA has determined that these potential sources are insignificant in this TMDL.

***Scott River Sediment and Temperature TMDL, August 11, 2006***

**Final Temperature WLA**
USEPA states that there are no point sources for temperature related discharges within the area encompassed by this TMDL, so the waste load allocation is set to zero.

**Final Temperature WLA Specific to the Department**
USEPA directed Regional Water Board staff shall evaluate the effects of the Department's state-wide NPDES permit, storm water permit, and waste discharge requirements (collectively known as the Department's Storm Water Program) by September 8, 2008. The evaluation shall determine the adequacy and effectiveness of the Department's Storm Water Program in preventing, reducing, and controlling sediment waste discharges and elevated water temperatures in the North Coast Region, including the Scott River watershed.

**Final Temperature Deadlines**
USEPA did not establish specific wasteload allocations for point sources, so the wasteload allocations are set to zero.

**Department's Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to the temperature pollutant loading is not known.

***Shasta River Dissolved Oxygen and Temperature TMDL, USEPA Established on December 26, 2007***

**Final Temperature WLA**
There are no point source heat loads in the Shasta River watershed, and therefore no waste load allocations apply.

**Final Temperature WLA Specific to the Department**
The Department was not assigned a waste load allocation for temperature: as stated above, there are no point sources of heat loads in the Shasta River watershed.

**Final Deadlines**
No deadlines were specified.

**Department's Pollutant Contribution**
The Department's relative contribution to the temperature pollutant loading in Shasta River Watershed is not known.

## I. Chloride Pollutant Category

**General Description of Pollutant Category**
The Department is named as a responsible party in the Santa Clara River watershed chloride TMDL.

**Sources of Pollutant & How it Enters the Waterway**
Chloride in the Santa Clara River watershed is principally due to increased salt loadings from imported water and the use of self-regenerating water softeners.

**Watershed Contribution**
The Department does not import water and does not use self-generating water softeners.

**Control Measures**
The Department is expected to be in compliance with the chloride WLA without any additional control actions as long as the Department is in compliance with this Order.

## LOS ANGELES REGION CHLORIDE TMDLS

***Santa Clara River Reach 3 Chloride TMDL, USEPA Established on June 18, 2003***
There are two major sources that discharge into Reach 3, the Santa Paula and Fillmore WRPs, that comprise approximately 80 percent of the total estimated load under flow conditions.

The Department is one of five minor point sources that discharge to Reach 3. Although the Department is a minor source, the minor discharges to the Santa Clara River are typically related to dewatering and construction projects that are covered by other NPDES permits.

**Final Chloride WLA**

**Estimated Chloride Loads to Reach 3 Under Low Flow Conditions**
Note* Although other tributaries to Reach 3 were not included in the linkage analysis above, their contributions to Reach 3 chloride loads and flows are believed to be insignificant.

| Point Sources | Waste Load Allocation (mg/L) |
|---|---|
| Fillmore WRP | 80 |
| Santa Paula WRP | 80 |
| MS4 Stormwater | 80 |
| Construction General Permit | 80 |
| Department | 80 |
| Other Minor Permits | 80 |
| **NonPoint Sources** | **Load Allocation (mg/L)** |
| Other Tributaries to Reach 3* | 80 |
| Sespe Creek | 40 |
| Santa Clara Reach 4 | 100 |
| **Total** | **80** |

**Final Chloride WLA Specific to the Department**
Specific WLA for the Department is 80 mg/L.

**Final Chloride Deadlines**
USEPA established this TMDL and it became effective on June 18, 2003. The Department is expected to be in compliance with the Chloride WLA without any additional control actions as long as the Department is in compliance with this Order.

**Department's Chloride Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to the chloride pollutant loading in the Santa Clara River Reach 3 is not known.

***Upper Santa Clara River Chloride TMDL, April 6, 2010***

The principal source of chloride in the Upper Santa Clara River is discharges from the Saugus WRP and Valencia WRP, which are estimated to contribute 70 percent. These sources of chloride accumulate and degrade groundwater in the lower area east of Piru Creek in the basin.

**Final Chloride WLA**

Other minor NPDES discharges receive conditional WLAs shown below.

| Reach | Concentration-based Conditional WLA for Chloride (mg/L) |
|---|---|
| 6 | 150 (12-month Average) |
| 6 | 230 (Daily Maximum) |
| 5 | 150 (12-month Average) |
| 5 | 230 (Daily Maximum) |
| 4B | 117 (3-month Average) |
| 4B | 230 (Daily Maximum) |

**Final Chloride WLA Specific to the Department**
The Department is assigned the above concentration based WLAs.

**Final Chloride Deadlines**
The interim and final WLAs for TDS and sulfate contained in the Basin Plan Amendment are essentially established for the principal sources. The Department does not import water and does not use self-generating water softeners. The Department is expected to be in compliance with the Chloride WLA without any additional control actions as long as the Department is in compliance with this Order.

**Department's Chloride Contribution** (relative contribution to pollutant loading)
The Department's relative contribution to the chloride pollutant loading in the Upper Santa Clara River is not known.

**Region Specific Requirements**
The Regional Water Boards have identified specific areas within their Regions requiring special conditions (Attachment V). These special conditions are needed to account for the unique value of the resource(s) within the Region, special pollutant or pollution control issues within the Region, or storm water management and compliance issues applicable to the Region. These special requirements need not be applied statewide but are applicable only to Department discharges within the Regions as specified in Attachment V. Region specific

requirements are included for the North Coast, San Francisco Bay, and Lahontan Regional Water Boards.

*North Coast Region*

1. Sediment. Region specific requirements addressing sediment discharges in sediment-impaired watersheds in the North Coast Region are based on the "Total Maximum Daily Load Implementation Policy Statement for Sediment-Impaired Receiving Waters in the North Coast Region," as included in the Basin Plan and Resolution No. R1-2004-0087. The Policy requires the use of NPDES permits and waste discharge requirements to achieve compliance with sediment-related water quality standards. The requirements in Attachment V to systematically inventory, prioritize, control, monitor, and adapt, as well as to include a time schedule in the annual District Workplan, are consistent with region-wide excess sediment control regulations.

   The sediment requirements are intended to reduce the adverse impacts of excessive sediment discharges to sediment-impaired waters, including impacts to the cold water salmonid fishery and the COLD, COMM, RARE, SPWN, and MIGR beneficial uses. The beneficial uses associated with the cold water salmonid fishery are often the most sensitive to sediment discharges. Risks to salmonids from excessive sediment are well documented in scientific literature and include:

   - the filling of pools and subsequent reduction in available in-stream salmonid habitat;
   - burial of spawning gravels;
   - gill abrasion and death due to extremely high turbidity levels;
   - reduction in macroinvertebrate populations available as food for salmonids; and
   - alterations in channel geometry to a wider, shallower channel which is subject to increases in solar heating.

2. Riparian Vegetation Requirements. Region specific requirements to protect and restore riparian vegetation are based on the Water Quality Objective for temperature. The temperature objective states, in part, that the natural receiving water temperature shall not be altered unless it can be demonstrated that such alteration does not adversely affect beneficial uses. Removal of riparian vegetation associated with Department activities has the potential to decrease shade, increase solar radiation, and raise water temperatures, and may therefore cause an exceedance of the temperature objective.

   The requirements in Attachment V direct the Department to protect and restore riparian vegetation to the greatest extent feasible. In many cases, activities involving the removal of riparian vegetation will require a 401 water quality certification, which will contain more specific conditions regarding the removal and/or establishment of vegetation.

   These requirements are intended to prevent alterations to natural receiving water temperature from Department activities. The primary mechanism in which riparian vegetation influences water temperature is through the shade. Loss of riparian vegetation and the shade that it provides can lead to increased solar radiation, hotter water temperatures, and adverse impacts to beneficial uses. The beneficial uses most sensitive to

increases in water temperature are often those associated with the cold water salmonid fishery. Risks to salmonids are well documented in scientific literature and include:

- reduced feeding rates and growth rates;
- impaired development of embryos and alevins;
- changes in the timing of life history events, such as upstream migration, spawning, and seaward migration;
- increased disease infection rates and disease mortality; and
- direct mortality.

*San Francisco Bay Region*

The Urban Runoff Management, Comprehensive Control Program section of the Basin Plan (Chapter 4.14) requires municipalities and local agencies, including the Department, to address existing water quality problems and prevent new problems associated with urban runoff through the development and implementation of a comprehensive control program focused on reducing current levels of pollutant loading to storm drains to the maximum extent practicable.

The Highway Runoff Control Program section of the Basin Plan (Chapter 4.14.2) requires the Department to manage and monitor pollutant sources from its ROW through development and implementation of a highway runoff management plan.

The Basin Plan comprehensive and highway runoff program requirements are designed to be consistent with federal regulations (40 C.F.R., §§ 122-124) and are implemented through issuance of NPDES permits to owners and operators of MS4s. A summary of the regulatory provisions is contained in Title 23 of the California Code of Regulations at section 3912. The Basin Plan identifies beneficial uses and establishes water quality objectives for surface waters in the Region, as well as effluent limitations and discharge prohibitions intended to protect those uses. The region-specific requirements in Attachment V of this Order implement the plans, policies, and provisions of the Regional Water Board's Basin Plan.

1. Trash Load Reduction.

   a. Legal Authority. The following legal authorities apply to the trash load reduction requirements specified in Attachment V:

      - Clean Water Act sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 Code of Federal Regulations sections 122.26(d)(2)(i)(B, C, D, E, and F) and 40 Code of Federal Regulations section 122.26(d)(2)(iv).
      - Federal NPDES regulations 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B) requires, "shall be based on a description of a program, including a schedule, to detect and remove (or require the discharger to the municipal storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer."
      - Federal NPDES regulation 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B)(2) requires, "a description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens."

- Federal NPDES regulation 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B)(3) requires, “a description of procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water.”
- Federal NPDES regulations 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B)(4) requires, “a description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer.”
- San Francisco Bay Basin Plan, Chapter 4 – Implementation, Table 4-1 Prohibitions, Prohibition 7, which is consistent with the State Water Board’s Enclosed Bays and Estuaries Policy, Resolution 95-84, prohibits the discharge of rubbish, refuse, bark, sawdust, or other solid wastes into surface waters or at any place where they would contact or where they would be eventually transported to surface waters, including flood plain areas. This prohibition was adopted by the Regional Water Board in the 1975 Basin Plan, primarily to protect recreational uses such as boating.

b. Extent, Impacts, and Conclusions. Trash[25] and litter are a pervasive problem near and in creeks and in San Francisco Bay having major impacts on the environment, including aquatic life and habitat in those waters. Ubiquitous, unacceptable levels of trash in waters of the San Francisco Bay Region warrant a comprehensive and progressive program of education, warning, and enforcement, and certain areas warrant consideration of structural controls and treatment. Trash in urban waterways of coastal areas can become *marine debris*, known to harm fish and wildlife and cause adverse economic impacts.[26] It accumulates in streams, rivers, bays, and ocean beaches throughout the San Francisco Bay Region, particularly in urban areas.

   Trash adversely affects numerous beneficial uses of waters, particularly recreation and aquatic habitat. Not all litter and debris delivered to streams are of equal concern with regard to water quality. Besides the obvious negative aesthetic effects, most of the harm of trash in surface waters is to wildlife in the form of entanglement or ingestion.[27,28] Some

[25] For the purposes of this provision, trash is defined to consist of litter and particles of litter. Man-made litter is defined in California Government Code section 68055.1 (g): *Litter* means all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or containers constructed of steel, aluminum, glass, paper, plastic, and other natural and synthetic materials, thrown or deposited on the lands and waters of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing.

[26] Moore, S.L., and M.J. Allen. 2000. Distribution of anthropogenic and natural debris on the mainland shelf of the Southern California Bight. *Mar. Poll. Bull*. 40:83-88.

[27] Laist, D. W. and M. Liffmann. 2000. *Impacts of marine debris: research and management needs*. Issue papers of the International Marine Debris Conference, Aug. 6-11, 2000. Honolulu, HI, pp. 16–29.

[28] McCauley, S.J. and K.A. Bjorndahl. 1998. Conservation implications of dietary dilution from debris ingestion: sublethal effects in post-hatchling loggerhead sea turtles. *Conserv. Biol*. 13(4):925-929.

elements of trash exhibit significant threats to human health, such as discarded medical waste, human or pet waste, and broken glass.[29] Also, some household and industrial wastes can contain toxic batteries, pesticide containers, and fluorescent light bulbs containing mercury. Large trash items such as discarded appliances can present physical barriers to natural stream flow, causing physical impacts such as bank erosion. From a management perspective, the persistent accumulation of trash in a waterbody is of particular concern, and signifies a priority for prevention of trash discharges. Also of concern are trash *hotspots* where illegal dumping, littering, and/or accumulation of trash occur.

The narrative water quality objectives applicable to trash are Floating Material (Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses), Settleable Material (Waters shall not contain substances in concentrations that result in the deposition of material that cause nuisance or adversely affect beneficial uses), and Suspended Material (Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses).

The Regional Water Board, at its February 11, 2009 hearing, adopted a resolution proposing that 26 waterbodies be added to the 303(d) list for trash. The adopted Resolution and supporting documents are contained in Attachment 10.1 – 303(d) Trash Resolution and Staff Report, February 2009.

Data collected by Regional Water Board staff using the SWAMP Rapid Trash Assessment (RTA) Protocol,[30] over the 2003–2005 period,[31] suggest that the current approach to managing trash in waterbodies is not reducing the adverse impact on beneficial uses. The levels of trash in the waters of the San Francisco Bay Region are high, even with the Basin Plan prohibitions and potentially large fines. During dry weather conditions, a significant quantity of trash, particularly plastic, is making its way into storm drains and being transported downstream to San Francisco Bay and the Pacific Ocean. On the basis of 85 surveys conducted at 26 sites throughout the Bay Area, staff have found an average of 2.93 pieces of trash for every foot of stream, and all the trash was removed when it was surveyed, indicating high return rates of trash over the 2003–2005 study period.

A number of key conclusions can be made from the RTA study:

- Lower watershed sites have higher densities of trash.
- All watersheds studied in the San Francisco Bay Region have high levels of trash.
- There are trash source hotspots, usually associated with parks, schools, or poorly kept commercial facilities.

[29] Sheavly, S.B. 2004. *Marine Debris: An Overview of a Critical Issue for our Oceans*. 2004 International Coastal Cleanup Conference, San Juan, Puerto Rico. The Ocean Conservancy.

[30] SWAMP Rapid Trash Assessment Protocol, Version 8

[31] SWAMP S.F. Bay Region Trash Report, January 23, 2007

- Dry season deposition of trash, associated with wind and dry season runoff, contributes measurable levels of trash to downstream locations.
- The majority of trash is plastic at lower watershed sites where trash accumulates in the wet season. This suggests that urban runoff is a major source of floatable plastic found in the ocean and on beaches as marine debris.
- Parks that have more evident management of trash by city staff and local volunteers, including cleanup within the creek channel, have measurably less trash and higher RTA scores.

c. Trash Reduction measures shall demonstrate compliance through timely implementation of controls in all high trash generating areas for the prohibition of discharge of trash and include the following:

- Implementation of full capture systems, treatment controls, and/or enhanced maintenance controls for storm drains or catchment that service the significant trash generating areas.
- Coordinate with neighboring MS4 permittees to construct, operate and maintain those controls listed above.
- Assess for the effectiveness of enhanced maintenance controls implemented in high generating trash areas, as well as coordination with local municipalities.
- Abate trash from construction and reconstruction projects.
- Include trash capture devices on the outlets of treatment systems for new and redeveloped highway projects to achieve the full trash capture standard.
- Report in each Annual Report, as part of the TMDL STATUS REVIEW REPORT a per District summary of trash reduction controls and their effectiveness.

d. Costs of Trash Control. Costs for either enhanced trash management measure implementation or installation and maintenance of trash capture devices are significant, but when spread over several years, and when viewed on a per-capita basis, are reasonable. To meet Basin Plan and local MS4 requirements, trash capture devices have already been installed by other municipalities in the Bay Area.

Cost information on various trash capture devices is included in the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) BMP Trash Toolbox (July 2007). The Toolbox contains cost information for both trash capture devices and enhanced trash management measure implementation, covers a broad range of options, and also discusses operation and maintenance costs.

2. Storm Water Pump Stations. In late 2005, Regional Water Board staff investigated an occurrence of low salinity and dissolved oxygen conditions in Old Alameda Creek (Alameda County) and Alviso Slough (Santa Clara County). In the case of Old Alameda Creek, discharge of black-colored water from the Alvarado pump station to the slough was observed at the time of the data collection on September 7, 2005, confirming dry weather urban runoff as the source of the violations of the five (5) mg/L dissolved oxygen water quality objective. Such conditions were measured again on September 21, 2005.

On October 17, 2005, waters in Alviso Slough were much less saline than the salt ponds and had the lowest documented dissolved oxygen of the summer, suggesting a dry weather urban runoff source. The dissolved oxygen sag was detected surface to bottom at 2.3 mg/L at a salinity of less than one part per thousand (ppt), mid-day, when oxygen levels should be high at the surface. The sloughs have a typical depth of six feet.

Board staff's investigations of these incidents, documented in a memorandum,[32] found that "storm water pump stations, universally operated by automatic float triggers, have been confirmed as the cause in at least one instance, and may represent an overlooked source of controllable pollution to the San Francisco Bay Estuary and its tidal sloughs... [that] discharges of dry weather urban runoff from these pump stations are not being managed to protect water quality, and [that] surveillance monitoring has detected measurable negative water quality consequences of this current state of pump station management."

Pump station discharges of dry weather urban runoff can cause violations of water quality objectives. These discharges are controllable point sources of pollution that are virtually unregulated. The Regional Water Board has determined that the measures included in Attachment V are necessary to address these discharges and water quality problems.

*Lahontan Region*

1. The Lahontan Basin Plan encourages the infiltration of storm water runoff to treat pollutants in discharges and mitigate the effects of increased runoff to surface waters from the addition of impervious surfaces. The 20-year, one-hour design storm has been historically applied and accepted as an effective requirement to mitigate discharges of storm water to surface waters in the sensitive high mountain watersheds of the Lahontan Region. Water Board staff has estimated that facilities designed to treat or infiltrate the 20-year, one-hour storm event effectively capture approximately 85 percent of the average annual runoff volume in the Lake Tahoe Basin. However, it is recognized that the natural environment provides adequate infiltration and/or treatment in areas where there is little or no connectively to surface waters. Therefore the Lahontan Water Board encourages the Department to focus implementation of storm water treatment facilities in those areas that discharge directly to surface waters to maximize water quality benefits. This requirement is applicable to existing highways and facilities in the Mammoth Lakes Area Hydrologic Unit.
2. The Natural Environment as Treatment (NEAT) study has helped identify the priority areas within the Lake Tahoe Hydrologic Unit where storm water treatment and control measure implementation has the most benefit for water quality protection. Similarly, the NEAT study has helped identify those areas where there may be limited water quality benefits associated with implementing structural treatment and control measures. The NEAT approach is also applicable in other areas. This provision is needed to focus available resources on the areas where the most water quality benefit can be achieved.
3. The October 15 to May 1 grading prohibition is necessary to reduce erosion and sedimentation from disturbed areas within the sensitive high elevation areas within the

[32] Internal Water Board Memo dated December 2, 2005: "Dry Weather Urban Weather Urban Runoff Causing or Contributing to Water Quality Violations: Low Dissolved Oxygen (DO) in Old Alameda Creek and Alviso Slough."

Lahontan Region. These are areas where snow fall restricts the ability to control storm water pollution through the winter months. This requirement mitigates winter erosion issues by requiring disturbed soil areas to be winterized prior to the onset of snow, and allows for exceptions where there is a compelling need.

**Regional Water Board Authorities**

Regional Water Boards and their staff will oversee implementation and compliance with this Order. As appropriate, they will review reports, conduct inspections, and take enforcement actions on violations of this Order.

**Cost of Compliance and Other MEP Considerations**

*General Cost Considerations in Storm Water Regulation and Management*

The Department will incur incremental costs in implementing this Order, such as the cost of complying with the Order's storm water treatment BMP, post-construction, hydromodification, Low Impact Development, and monitoring and reporting requirements. The Department will also incur additional costs in following the iterative process as required by the Order. The cost of complying with TMDL waste load allocations is not considered since TMDLs are not subject to the MEP standard.

In adopting Order WQ 2000-11, the State Water Board found that cost is a relevant factor, among others such as feasibility and public acceptance that should be considered in determining MEP. The State Water Board considered the costs in preparing this Order and has determined that the costs reflect the MEP standard. The State Water Board further found in adopting Order WQ 2000-11 that in considering the cost of compliance, it is also important to consider the costs of impairment; that is, the negative impact of pollution on the economy and the positive impact of improved water quality. So, while it is appropriate and necessary to consider the cost of compliance, it is also important to consider the larger economic impacts of implementation of the storm water management program.

Many studies have been undertaken to assess the cost of compliance with storm water permits. Most studies have focused on municipal programs as opposed to "linear MS4s" or Departments of Transportation. A study by the Los Angeles Regional Water Board reported wide variability in the cost of compliance among municipal permit holders which was not easily explained (LARWQCB, 2003).

In 1999, USEPA reported on multiple studies it conducted to determine the cost of urban runoff management programs. A study of Phase II municipalities determined that the annual cost of the Phase II program was expected to be $9.16 per household. USEPA also studied 35 Phase I municipalities, finding costs to be similar to those anticipated for Phase II municipalities, at $9.08 per household annually (USEPA, 1999a).

A program cost study was also conducted by the Los Angeles Regional Water Board, where program costs reported in the municipalities' annual reports were assessed. The Water Board estimated the average per household cost to implement the MS4 program in Los Angeles County was $12.50.

The State Water Board also commissioned a study by California State University, Sacramento to assess costs of the Phase I MS4 program. This study is current and includes an

assessment of costs incurred by the City of Encinitas in implementing its program. Annual cost per household ranged from $18-46, with the City of Encinitas representing the upper end of the range (SWRCB, 2005). The cost of the City of Encinitas' program is understandable, given the city's coastal location, reliance on tourism, and additional costs resulting from a consent decree with environmental groups regarding its program. For these reasons, as well as the general recognition the city receives for implementing a superior program, the city's program cost can be considered as the high end of the spectrum for municipal storm water management program costs.

The California Department of Finance (Finance, 2003) conducted a comprehensive review of the Department's storm water program. Finance noted widely divergent compliance cost estimates produced by regulators and environmental organizations versus consultant's estimates. Finance also had difficulty identifying compliance costs because of the way storm water activities are integrated with other functions and allocated among the different divisions within the Department, and because they are funded from different sources. Finance made three findings related to cost:

- The projected costs of compliance are escalating.
- Storm water compliance costs are integrated into many of the Department's business processes and are not accurately tracked.
- As storm water compliance costs increase, the amount of funding available for highway projects decreases, which reduces the number of projects that can be constructed.

The review concluded that balancing costs and benefits is a difficult policy decision and there should be a recognition of the trade-offs associated with resource allocation decisions given the Department's limited resources.

It is important to note that storm water program costs are not all attributable to compliance with MS4 permits. Many program components and their associated costs existed before any MS4 permits were issued. For example, for the Department, storm drain maintenance, street sweeping and trash/litter collection costs cannot be solely or even principally attributable to MS4 permit compliance since these practices have long been implemented before the MS4 permit was issued. Even many structural BMPs (erosion protection, energy dissipation devices, detention basins etc.) are standard engineering practice for many projects and are not implemented solely to comply with permit provisions. Therefore, the true cost resulting from MS4 permit requirements is some fraction of the cost to operate and maintain the highway system.

The California State University, Sacramento study found that only 38 percent of program costs are new costs fully attributable to MS4 permits. The remainder of program costs was either pre-existing or resulted from enhancement of pre-exiting programs (SWRCB, 2005). The County of Orange found that even lesser amounts of program costs are solely attributable to MS4 permit compliance, reporting that the amount attributable to implement its Drainage Area Management Plan is less than 20 percent of the total budget. The remaining 80 percent is attributable to pre-existing programs (County of Orange, 2007). Any increase in cost to the Department by the requirements of this Order will be incremental in nature.

Storm water management programs cannot be considered solely in terms of their costs. The programs must also be viewed in terms of their value to the public. For example, household willingness to pay for improvements in fresh water quality for fishing and boating has been estimated by USEPA to be $158-210 per household (USEPA, 1999a). This estimate can be considered conservative, since it does not include important considerations such as marine waters benefits, wildlife benefits, or flood control benefits. The California State University, Sacramento study corroborates USEPA's estimates, reporting annual household willingness to pay for statewide clean water to be $180 (SWRCB, 2005). Though these costs may be assessed differently at the state level (for the Department) than at the municipal level, the results indicate that there is public support for storm water management programs and that costs incurred by the Department to implement its storm water management program remain reasonable.

It is also important to consider the cost of not implementing a storm water management program. Urban runoff in southern California has been found to cause illness in people bathing near storm drains (Haile et al.,1996). A study of south Huntington Beach and north Newport Beach found that an illness rate of about 0.8 percent among bathers at those beaches resulted in about $3 million annually in health-related expenses (Lin, 2005). Extrapolation of such numbers to the beaches and other water contact recreation areas in the state would increase these numbers significantly.

Storm water runoff and its impact on receiving waters also impacts the tourism industry. The California Travel and Tourism Commission (2009) estimated that in 2008 direct travel spending in California was $97.6 billion directly supporting 924,000 jobs, with earnings of $30.6 billion. Travel spending in 2008 generated $1.6 billion in local taxes and $2.8 billion in state taxes. Impacts on tourism from storm water runoff (e.g. beach closures) can have a significant impact on the economy. The experience of Huntington Beach provides an example of the potential economic impact of poor water quality. Approximately eight miles of Huntington Beach were closed for two months in the middle of summer of 1999, impacting beach visitation and the local economy.

*Cost Considerations Relative to the Department*

In written comments and before the Board, the Department has stated that the requirements of the first public drafts would impose prohibitive costs on the Department at a time of economic difficulty and limited resources. State Water Board staff has carefully considered the Department's comments and revised the draft Tentative Order to continue to address critical water quality problems in consideration of the cost of compliance.

State Water Board staff completed a Draft Tentative Order and submitted it to the Department, USEPA, and the Natural Resources Defense Council for informal stakeholder review in the fall of 2010. Further review was provided by the Regional Water Boards. Staff revised the Draft Tentative Order to address the informal comments received and released it for public review on January 7, 2011 (Draft Tentative Order). Approximately 330 comments from 16 commenters were received on the Draft Tentative Order, and a public hearing was held on July 19, 2011. Staff further revised the Draft Tentative Order and released a Revised Draft Tentative Order on August 18, 2011 (Revised Draft Tentative Order). Approximately 220

comments from 33 commenters were received on the Revised Draft Tentative Order, and a State Water Board workshop was held on September 21, 2011. In each set of comments and before the Board, the Department expressed significant concerns with the cost of compliance with the Tentative Orders.

On October 6, 2011, the California Senate Select Committee on California Job Creation and Retention held a hearing on the economic impacts of the State Water Board's three general or statewide storm water permits that were under renewal: the Phase II Small MS4 permit, the Industrial General Permit, and the Department's MS4 permit. The Executive Director of the State Water Board testified at the hearing that the comments regarding cost of compliance with the permits were being considered carefully and that the three permits required substantial revision to address the comments. State Water Board staff held bi-weekly meetings with the Department in October through December 2011 to discuss their concerns. Revisions resulting from these meetings are contained in the Second Revised Draft Tentative Order which was released for public review on April 27, 2012 (Second Revised Draft Tentative Order).

This section is a general discussion of the cost of compliance with the Second Revised Draft Tentative Order and of current expenditures by the Department to comply with the existing permit (Order 99-06-DWQ) (Existing Permit). It also discusses the more significant changes between the Revised Draft and Second Revised Draft Tentative Orders.

It is very difficult to precisely determine the true cost of implementation of the Department's storm water management program as affected by this Order. Due to the extensive, distributed nature of the Department's MS4, permit requirements that involve an unknown level of implementation or that depend on environmental variables that are as yet undefined, and the difficulty in isolating program costs attributable to permit compliance, only general conclusions can be drawn from this information.

The Department has made a number of estimates of the cost of complying with the Draft and Revised Draft Tentative Orders. Generally, the Department's estimates are based on worst-case scenarios or the most restrictive interpretation of the Tentative Orders. In a presentation to a meeting of the American Association of State Highway and Transportation Officials (AASHTO) on June 22, 2011,[33] the Department's Chief Environmental Engineer, Scott McGowen estimated the annual cost of compliance at $281million. This estimate was based on the January 7, 2011 Draft Tentative Order. At the July 19, 2011 public hearing, the Department estimated the annual compliance cost at approximately $450 million, based on the same January 7, 2011 Draft Tentative Order. At the September 21, 2011 State Water Board workshop, the Department estimated an annual compliance cost of $904 million, based on the requirements of the August 18, 2011 Revised Draft Tentative Order. It should be noted that the August 18 draft removed or modified a number of provisions that were expected to reduce the cost of compliance.

[33] Caltrans NPDES Tentative Order, Natural Systems and Ecological Communities Subcommittee at the National Planning and Environmental Practitioners Meeting. AASHTO, June 22, 2011.

Annual expenditures for the Department's storm water management program under the Existing Permit (DWQ 99-06) are provided in the Department's annual reports. For fiscal years 2007-08 through 2010-11, the Department reported annual personal services and operating expenses of $93.8 million, $93.6 million, $75.2 million, and $89.2 million. These figures do not include the cost of capital improvements needed to comply with the permit.

State Water Board staff estimated the capital expenditures for the Existing Permit in two ways. First, the Department provided the number of post-construction storm water treatment BMPs installed in 2009-10 and 2010-11 along with typical unit costs for each BMP. In 2007-08, the Department spent approximately $74.7 million for 396 treatment BMPs, $104.5 million in 2009-10 for 667 treatment BMPs, and $75.7 million in 2010-11 for 506 treatment BMPs. The Department indicated that anomalies in the data for 2008-09 make them unreliable and they are therefore not included. The Department also indicated that the unit cost factors do not include costs for design, ROW and other related elements. The estimates therefore can be considered on the low side.

Second, capital expenditures were estimated from budget appropriations from the Department's State Highway Operation and Protection Program (SHOPP) as reported in the 2008-09 annual report. The SHOPP account is the primary source of funding for storm water-related capital expenses. Storm water compliance costs are not consistently reported in the annual reports; however, the 2008-09 annual report contains sufficient information to make an estimate. The capital value of the SHOPP "storm water mitigation element" for fiscal years 2009-10 through 2012-13 is $640 million, including capital outlay support, or about $160 million per year.

Using average personal services and operating expenses for the last four years ($88 million) and average annual programmed SHOPP funding, the Department's expenditures to comply with the Existing Permit amount to approximately $248 million.

As stated above, the Department has estimated cost of compliance with the Draft Tentative and Revised Draft Tentative Orders variously at $281 to $904 million. These estimates are based on "worst case scenarios" and on the most restrictive interpretations of the Orders' requirements. In preparing the Second Revised Tentative Order, staff worked to provide greater clarity and certainty to the Department on the scope of permit obligations and to eliminate compliance costs that were not expected to yield significant water quality benefits. With the exception of a lowering of the post-construction treatment threshold for non-highway facility projects from 10,000 square feet of new impervious surface to 5,000 square feet[34], no requirements have been added to the Second Revised Draft Tentative Order that would materially increase the cost of compliance over the Revised Draft Tentative Order. In contrast, a number of substantive requirements have been removed, replaced or modified from the Revised Draft Tentative Order with the goal of focusing the Department's limited resources on the most significant water quality issues. These changes are expected to result in a lower cost

[34] The threshold was lowered for consistency with the draft statewide Phase II Small MS4 General Permit and with regional MS4 permits.

of compliance with the Second Revised Draft Tentative Order as compared to the Revised Tentative Order. These include:

1. Water quality monitoring program.
   a. Replaced random compliance-driven monitoring approach with a tiered approach focusing on ASBS and TMDL watersheds, and deferring to the monitoring requirements specified in the ASBS Special Protections and TMDLs.
   b. Deleted sampling pool, water quality action levels, and response process flow chart.
   c. Removed 29 constituents from the monitoring constituent list.
   d. Limited the monitoring for new constituents to TMDL watersheds.
   e. For sites with existing monitoring data, limited BMP retrofits to 15 percent of the highest priority sites.
   f. Deleted the long-term monitoring program.
   g. Deleted maintenance facility compliance monitoring.
2. Project Planning and Design.
   a. Raised the treatment threshold for highway projects from 5,000 square feet of new impervious surface to one acre.
   b. Deleted the requirement for pilot Low Impact Development retrofits and effectiveness evaluations.
3. Hydromodification.
   a. Removed requirement for programmatic stream stability assessments and a retrofit implementation schedule.
   b. Raised the risk assessment threshold for non-highway facility projects from 10,000 square feet of new impervious surface to one acre.
4. Region Specific Requirements – removed, modified or scaled back requirements for the San Francisco Bay, Los Angeles, Central Valley, Lahontan, and San Diego Regional Water Boards with the goal of maximizing statewide consistency of requirements for the Department.
5. Construction Program – replaced requirement to inspect contractor operations outside the ROW with a requirement to include compliance language in its construction contracts.
6. TMDLs – Revised Attachment IV to more precisely identify the TMDLs applicable to the Department and shifted responsibility to prepare TMDL implementation plans from the Department to the Regional Water Boards.
7. ASBS – Added Attachment III to identify priority Department ASBS outfalls for installation of controls.
8. Maintenance Program.
   a. Deleted the requirement to report the amount of waste and debris removed from drainage inlets.
   b. Replaced the site-by-site characterization of waste management sites with a programmatic characterization.
   c. Deleted the requirement to prepare and implement a storm drain system survey plan.
   d. Replaced quantitative measurements of trash and litter removal with estimated annual volumes.
9. Non-Storm Water.
   a. Deleted surveillance monitoring of agricultural return flows.

b. Deleted characterization monitoring of slope lateral drains.

Though no firm conclusions or precise estimates can be drawn from this analysis, it is expected that the revisions to the Revised Draft Tentative Order will significantly reduce the cost of compliance.

## ATTACHMENT I

*UNOFFICIAL DRAFT — Not Certified by Clerk*

## Incident Report Form

The certification shall be completed for all incidents. For Field incidents, complete Sections 2 and 4. For Administrative incidents complete Section 3.
See **Non-Compliance Notification Schedule**, page 4.

### Section 1

Type of incident: ☐ Field ☐ Administrative
Name of Person Completing this Form:_____
Person's agency name and address: _____
Person's phone and e-mail:_____

### Section 2: Field Incidents

1. Incident Date(s) _____ Time(s) _____
2. Location of Incident, County: _____
   a. Nearest city/town:_____
   b. Street address/nearest cross street:_____
   c. Latitude/Longitude:_____
   d. Additional location detail: _____
3. Name(s) of material(s) discharged:_____
4. Approximate quantity discharged (specify units): _____
5. Approximate concentration of material: _____
6. Discharge to surface water? ☐Yes ☐No
   a. Name of implicated waterbody: _____
   b. Apparent effects (if any) on waterbody: _____
   c. Estimated extent of impacts to waterbody:_____
7. Was Cal OES notified? ☐Yes ☐No
   a. Date and time of notification: _____
   b. Name of person making the notification: _____
   c. Phone number of persons making the notification:_____
8. Was the Regional Water Board (RWB) notified? ☐Yes ☐No
   a. Name of RWB contact:_____
   b. RWB contact's phone/e-mail:_____
   c. Name of person making the notification: _____
9. Were downgradient communities/appropriate person(s) notified? ☐Yes ☐No
   a. Date and time of notification: _____
   b. Name of person making the notification: _____
   c. Phone number of persons making the notification:_____
   d. Name of downgradient community/persons: _____
10. Field Non-Compliance (check all that apply)
    a. Lack of, ineffective implementation of, or failure of best management practices that resulted in a discharge of pollutants to surface water. ☐Yes ☐No

b. Monitoring data indicates an exceedance of a defined standard. Defined standards include Total Maximum Daily Load waste load allocation, water quality standards in the Water Quality Control Plans, and promulgated policies and regulations of the State and Regional Water Boards, including California Ocean Plan limitations and prohibitions. ☐Yes ☐No

c. Discharge of prohibited non-storm water. ☐Yes ☐No

d. Failure to comply with Facility Pollution Prevention Plan requirements. ☐Yes ☐No

e. Failure to comply with inspection, monitoring, and reporting requirements and protocols. ☐Yes ☐No

f. Other (If your response to any question above is no, please explain - use Comments Section on page 4 if needed):_____

**Section 3: Administrative Non-Compliance (check all that apply)**

1. Failure to timely submit reports, documents, or information required by this Order and/or Storm Water Management Plan: ☐Yes ☐No
2. Failure to develop and/or maintain a site-specific Facility Pollution Prevention Plan or to implement any other procedural requirement of this Order: ☐Yes ☐No
3. Other (If your response to either question above is no, please explain - use Comments Section on page 4 if needed):_____

_____

**Section 4: Description of Incident**

Activities in the area prior to the incident (If any): _____

_____

Initial assessment of any impact caused by the discharge (If any):_____

_____

_____

Samples collection and analysis requested (If any): _____

_____

Steps taken to mitigate damage and prevent reoccurrence (If any): _____

_____

_____

Current Status: _____

_____

_____

Schedule for proposed mitigation/abatement (If any): _____

_____

## Non-Compliance Notification Schedule

Note 1: Sudden, unexpected, unpreventable incidents that threaten public health, public safety, property, or the environment that pose a clear and imminent danger requiring immediate action to prevent or mitigate the damage or threat, and that result in a discharge or potential discharge.

Note 2: Failure to meet any non-administrative requirement of the SWMP or Permit or to meet any applicable water quality standard. This includes failure to install required BMPs or conduct required monitoring or maintenance. It also includes discharges or prohibited non-storm water that do not meet the definition of emergency incidents. It does not include determinations by the Department or a Regional Water Board Executive Officer that a discharge is causing or contributing to an exceedance of an applicable WQS. See provision E.2.c.6)c).

Note 3: Failure to meet any administrative or procedural requirement of the SWMP or Permit including submission of required reports, notifications and certifications. The report of non-compliance shall be submitted to the same organization (State or Regional Water Board) to which the required report was originally due.

| Type of Incident | Within 5 Working Days (Verbal) | Within 10 Working Days (Written) | Within 30 Calendar Days (Written) | In Annual Report |
|---|---|---|---|---|
| Emergency Incidents Note 1 | | | | Chronological summary and status of all incidents |
| Field Note 2 | Notify RWB Executive Officer | To RWB Executive Officer and copies to Dept. HQ | | Chronological summary and status of all incidents |
| Administrative Note 3 | Notify RWB Executive Officer or SWB Contact Note 3 | | To RWB Executive Officer, SWB Executive Director, and copies to Dept. HQ. | Chronological summary and status of all incidents |

Acronyms:
SWB: State Water Resources Control Board;
RWB: Regional Water Quality Control Board

Other Comments: _____

**Certification** – *I certify that under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

| _____ | _____ | _____ | _____ |
|---|---|---|---|
| Signature of Contractor (if applicable) | Title | Telephone | Date |
| _____ | _____ | _____ | _____ |
| Signature of Department Representative | Title | Telephone | Date |

## Monitoring Constituent List *(Not Applicable to ASBS Discharges)*

| Constituent | Analytical Method | Reporting Limit[35] | Units |
|---|---|---|---|
| *WATER COLUMN CHEMISTRY* | | | |
| ***Conventional Pollutants*** | | | |
| Hardness as CaCO3 | SM 2340 B or C | 5 | mg/L |
| pH | Calibrated Field Instrument | | pH Units |
| Temperature | Calibrated Field Instrument | | C +/- |
| Flow Rate | Calibrated Field Instrument | | $ft^3/s$ |
| Total Dissolved Solids | EPA 160.1 | 1 | mg/L |
| Total Suspended Solids | EPA 160.2 | 1 | mg/L |
| ***Hydrocarbons*** | | | |
| Oil & Grease | EPA 1664B | 1.4 | mg/L |
| Polycyclic Aromatic Hydrocarbons (Total) | EPA 8310 | 0.05 | µg/L |
| ***Nutrients*** | | | |
| Total Kjeldahl Nitrogen (TKN) | EPA 351.2 | 100 | µg/L |
| Nitrate as Nitrogen ($NO_3$-N) | EPA 300.0 | 100 | µg/L |
| Phosphorous (Total) | EPA 365.1 | 30 | µg/L |
| ***Metals*** | | | |
| Aluminum (Total) | EPA 200.8 | 25 | µg/L |
| Chromium (Total) | EPA 200.8 | 1 | µg/L |
| Copper (Total) | EPA 200.8 | 1 | µg/L |
| Iron (Total) | EPA 200.8 | 1 | µg/L |
| Lead (Total) | EPA 200.8 | 1 | µg/L |
| Zinc (Total) | EPA 200.8 | 5 | µg/L |
| ***Microbiological*** | | | |
| Fecal Coliform | SM 9221 C E | 2 | MPN/100 mL |
| Enterococcus[36] | Enterolert® | 2 | CFU/100 mL |
| *WATER COLUMN TOXICITY* | | | |
| Chronic[37] | EPA 821-R-02-013 | Pass/Fail | |

[35] Reporting limits should be sufficient enough to detect the presence of a constituent based on the applicable Regional Water Board Basin Plan. If no limit is specified in the Basin Plan, the reporting limit specified in this table will be used. If no limit is specified in this table, then the Regional Boards shall be consulted.

[36] Only applicable for direct discharges to marine waters. See definition of direct discharges and indirect discharges in Attachment VIII (glossary).

[37] To calculate either a Pass or Fail of the effluent concentration chronic toxicity test at the IWC, the instructions in Appendix A in the National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA/833-R-10-003) shall be used.

## ASBS Monitoring

**TABLE A — Monitoring Constituent List**
**(excerpted from California Ocean Plan dated 2009)**

| Constituent | Units |
|---|---|
| Grease and Oil | mg/L |
| Suspended Solids | mg/L |
| Settleable Solids | mL/L |
| Turbidity | NTU |
| pH | |

**TABLE B — Monitoring Constituent List**
**(excerpted from California Ocean Plan dated 2009)**

| Constituent | Units |
|---|---|
| Arsenic | µg/L |
| Cadmium | µg/L |
| Chromium | µg/L |
| Copper | µg/L |
| Lead | µg/L |
| Mercury | µg/L |
| Nickel | µg/L |
| Selenium | µg/L |
| Silver | µg/L |
| Zinc | µg/L |
| Cyanide | µg/L |
| Total Chlorine Residual | µg/L |
| Ammonia (as N) | µg/L |
| Acute Toxicity | TUa |
| Chronic Toxicity | TUc |
| Phenolic Compounds (non-chlorinated) | µg/L |
| Chlorinated Phenolics | µg/L |
| Endosulfan | µg/L |
| Endrin | µg/L |
| HCH | µg/L |

Analytical Chemistry Methods: All constituents shall be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, shall be analyzed by the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

## ASBS PRIORITY DISCHARGE LOCATIONS

| Sample ID | Regional Board | ASBS Name | Longitude | Latitude |
|---|---|---|---|---|
| SAU020A | 1 | Saunders Reef | -123.65273 | 38.85916 |
| SAU019A | 1 | Saunders Reef | -123.6528 | 38.86067 |
| SAU016A | 1 | Saunders Reef | -123.65237 | 38.85849 |
| SAU015 | 1 | Saunders Reef | -123.65178 | 38.85612 |
| SAU013A | 1 | Saunders Reef | -123.6514 | 38.85451 |
| SAU014 | 1 | Saunders Reef | -123.6517 | 38.8551 |
| SAU011A | 1 | Saunders Reef | -123.64853 | 38.8527 |
| SAU008 | 1 | Saunders Reef | -123.6478 | 38.8521 |
| SAU006A | 1 | Saunders Reef | -123.64777 | 38.85186 |
| SAU009A | 1 | Saunders Reef | -123.64809 | 38.85254 |
| RED023 | 1 | Redwoods National Park | -124.1017 | 41.60527 |
| RED027 | 1 | Redwoods National Park | -124.10126 | 41.59657 |
| RED028 | 1 | Redwoods National Park | -124.10101 | 41.59729 |
| RED018A | 1 | Redwoods National Park | -124.1061 | 41.613 |
| RED015 | 1 | Redwoods National Park | -124.11257 | 41.62928 |
| RED014 | 1 | Redwoods National Park | -124.11296 | 41.63059 |
| RED017A | 1 | Redwoods National Park | -124.10571 | 41.61195 |
| FIT012 | 2 | James V. Fitzgerald | -122.516861 | 37.531406 |
| ANO030 | 3 | Ano Nuevo | -122.30121 | 37.11334 |
| ANO033 | 3 | Ano Nuevo | -122.29881 | 37.11202 |
| ANO001 | 3 | Ano Nuevo | -122.306364 | 37.121672 |
| ANO002 | 3 | Ano Nuevo | -122.30534 | 37.11987 |
| ANO035 | 3 | Ano Nuevo | -122.29297 | 37.10714 |
| ALT004 | 4 | Laguna Point to Latigo Point | -119.059097 | 34.08609 |
| MUG005 | 4 | Laguna Point to Latigo Point | -119.03821 | 34.083896 |
| ALT005 | 4 | Laguna Point to Latigo Point | -119.054291 | 34.085415 |
| ALT006 | 4 | Laguna Point to Latigo Point | -119.048653 | 34.085361 |

| Sample ID | Regional Board | ASBS Name | Longitude | Latitude |
|---|---|---|---|---|
| ALT007 | 4 | Laguna Point to Latigo Point | -119.047752 | 34.085297 |
| MUG010 | 4 | Laguna Point to Latigo Point | -119.014826 | 34.070804 |
| MUG013 | 4 | Laguna Point to Latigo Point | -118.993551 | 34.065445 |
| MUG016 | 4 | Laguna Point to Latigo Point | -118.987069 | 34.062852 |
| ALT008 | 4 | Laguna Point to Latigo Point | -118.985931 | 34.062325 |
| MUG028 | 4 | Laguna Point to Latigo Point | -118.974165 | 34.058928 |
| ALT009 | 4 | Laguna Point to Latigo Point | -118.975975 | 34.059978 |
| MUG014 | 4 | Laguna Point to Latigo Point | -118.989433 | 34.063880 |
| MUG041 | 4 | Laguna Point to Latigo Point | -118.964271 | 34.053461 |
| MUG046 | 4 | Laguna Point to Latigo Point | -118.960862 | 34.052112 |
| MUG048 | 4 | Laguna Point to Latigo Point | -118.9594833 | 34.05172 |
| MUG049 | 4 | Laguna Point to Latigo Point | -118.9594333 | 34.05165 |
| MUG051 | 4 | Laguna Point to Latigo Point | -118.957316 | 34.050937 |
| ALT011 | 4 | Laguna Point to Latigo Point | -118.939404 | 34.045355 |
| MUG053 | 4 | Laguna Point to Latigo Point | -118.95539 | 34.050248 |
| MUG059 | 4 | Laguna Point to Latigo Point | -118.9515 | 34.048835 |
| MUG058 | 4 | Laguna Point to Latigo Point | -118.95042 | 34.048355 |
| ALT010 | 4 | Laguna Point to Latigo Point | -118.948184 | 34.047873 |
| MUG061 | 4 | Laguna Point to Latigo Point | -118.94834 | 34.047675 |
| MUG077 | 4 | Laguna Point to Latigo Point | -118.9345833 | 34.04513 |
| MUG078 | 4 | Laguna Point to Latigo Point | -118.934358 | 34.045431 |
| MUG070 | 4 | Laguna Point to Latigo Point | -118.9320000 | 34.04600 |
| MUG066 | 4 | Laguna Point to Latigo Point | -118.924654 | 34.04714 |
| MUG073 | 4 | Laguna Point to Latigo Point | -118.922723 | 34.046418 |
| MUG135 | 4 | Laguna Point to Latigo Point | -118.897426 | 34.041983 |
| MUG147 | 4 | Laguna Point to Latigo Point | -118.894154 | 34.041553 |
| MUG150 | 4 | Laguna Point to Latigo Point | -118.889212 | 34.040872 |
| MUG187 | 4 | Laguna Point to Latigo Point | -118.869505 | 34.039285 |

| Sample ID | Regional Board | ASBS Name | Longitude | Latitude |
|---|---|---|---|---|
| SAD0950 | 4 | Laguna Point to Latigo Point | -118.8385500 | 34.02699 |
| SAD0960 | 4 | Laguna Point to Latigo Point | -118.8375000 | 34.02619 |
| SAD0970 | 4 | Laguna Point to Latigo Point | -118.8364600 | 34.02535 |
| SAD0980 | 4 | Laguna Point to Latigo Point | -118.8348600 | 34.02435 |
| MUG318 | 4 | Laguna Point to Latigo Point | -118.834316 | 34.023879 |
| SAD0990 | 4 | Laguna Point to Latigo Point | -118.8326600 | 34.02302 |
| SAD1000 | 4 | Laguna Point to Latigo Point | -118.8303400 | 34.02123 |
| MUG355 | 4 | Laguna Point to Latigo Point | -118.829258 | 34.02122 |
| SAD1030 | 4 | Laguna Point to Latigo Point | -118.827049 | 34.018711 |
| SAD1040 | 4 | Laguna Point to Latigo Point | -118.8256600 | 34.01748 |
| SAD1050 | 4 | Laguna Point to Latigo Point | -118.8249200 | 34.01700 |
| SAD1060 | 4 | Laguna Point to Latigo Point | -118.8225400 | 34.01559 |
| ALT017 | 4 | Laguna Point to Latigo Point | -118.777059 | 34.025805 |
| MUG346 | 4 | Laguna Point to Latigo Point | -118.783588 | 34.02508 |
| MUG283 | 4 | Laguna Point to Latigo Point | -118.765915 | 34.02589 |
| MUG010 | 4 | Laguna Point to Latigo Point | -119.014826 | 34.070804 |
| IRV001 | 8 | Irvine Coast | -117.81777 | 33.55749 |
| CAR007B | 3 | Carmel Bay | -121.923798 | 36.52499 |
| CAR006 | 3 | Carmel Bay | -121.92457 | 36.52469 |

# Total Maximum Daily Load Requirements

Attachment IV prescribes the implementation requirements for the Total Maximum Daily Loads (TMDLs) in which the Department of Transportation (Department) has been identified as a responsible party. The TMDLs in this attachment have been (1) adopted by the Regional Water Quality Control Boards (Regional Water Boards) and approved by the State Water Resources Control Board (State Water Board) and the Office of Administrative Law or the United States Environmental Protection Agency (USEPA), or (2) established by USEPA.

Section I of this attachment provides directions and general guidance on development of a prioritized list of reaches for implementation actions. Section II identifies the applicable TMDLs and implementation requirements. Section II also contains TMDL-specific permit requirements for the Lake Tahoe Sediment/Nutrients TMDL, Napa River Sediment TMDL, Sonoma Creek Sediment TMDL, and the Lake Elsinore and Canyon Lake Nutrients TMDL. Section III prescribes the general implementation requirements applicable to all TMDLs, and the specific requirements applicable to each pollutant category.

The TMDLs addressed in this attachment were developed by numerous parties over many years, and vary widely in their implementation requirements. As explained in further detail in the Fact Sheet for this Order, Attachment IV establishes consistent implementation requirements among the TMDLs by separating them into one of eight categories by pollutant type, based upon the common treatment and control actions associated with each pollutant type. Each impaired waterbody will be prioritized for implementation by reach, with a fixed number of “compliance units” that must be achieved each year so that all TMDLs are addressed in 20 years. Effectiveness monitoring of the treatment and control actions is required to inform an adaptive management process.

The following eight TMDL pollutant categories have been established for TMDL implementation[38]:

1. Sediment/Nutrients/Mercury/Siltation/Turbidity
2. Metals/Toxics/Pesticides
3. Trash
4. Bacteria
5. Diazinon
6. Selenium
7. Temperature
8. Chloride

The Department shall comply with the requirements of Attachment IV. These requirements are directly enforceable through Order 2012-0011-DWQ (Order).

[38] Some TMDLs containing multiple pollutants have been separated according to the categories that best address the individual pollutants.

## Section I. TMDL Prioritization and Implementation

### A. Reach Prioritization for Pollutant Categories

The Department shall prioritize all TMDLs for implementation of source control measures and best management practices (BMPs). Prioritization shall be consistent with the final TMDL deadlines to the extent feasible. Prioritization shall be conducted separately for each pollutant category and shall be based on an evaluation of each reach of applicable receiving waters within the watershed with a TMDL. The Department shall conduct the prioritization using the following five steps:

1. Complete an inventory of reaches. If reaches are defined in a TMDL, the Department may use that delineation for developing the inventory. If no reaches are specified in the TMDL, the Department shall delineate the receiving water into reaches.
2. Segregate the inventory of reaches according to the pollutant categories listed below in Section III, B through I (Categorical Inventories of Reaches). Individual reaches may be present in multiple pollutant categories.
3. Rank the reaches in each TMDL category in accordance with a procedure similar to that presented in Table IV.1. below.
4. Submit the prioritized Categorical Inventories of Reaches to the State Water Board **by October 1, 2014**, for Regional Water Board and State Water Board consideration. The State Water Board will provide public notice of the submission and the submission will be subject to a 30-day public comment period.
5. The Department shall collaborate with the State Water Board and Regional Water Boards on a final prioritization for each of the Categorical Inventories of Reaches. Factors that may be considered in the final prioritization will include, but not be limited to:
    a. Opportunities for synergistic benefits with existing or anticipated projects or activities within the reach, e.g., cooperative efforts with other dischargers or projects within an ASBS,
    b. Multiple TMDLs that can be addressed by a single BMP or a suite of BMPs within a reach,
    c. TMDL deadlines specified in a Basin Plan,
    d. Regional Water Board and State Water Board priorities,
    e. Accessibility for construction and/or maintenance (e.g., safety considerations), and
    f. Multi-benefit projects that provide benefits in addition to water quality improvement, such as groundwater recharge or habitat enhancement.

**B. Implementation**

Following completion of the process described in Section I.A, the State Water Board Executive Director will approve, with any changes, the final prioritized Categorical Inventories of Reaches. The Department shall then select and begin implementation actions, as specified in Sections II and III, within the highest priority reaches to achieve at least the minimum number of compliance units as described below.

1. The Department shall include the following information regarding implementation of control measures in the selected reaches for the upcoming reporting period in the ***TMDL STATUS REVIEW REPORT***, as required in Section E.4.b. of the Order:
   a. Name of the waterbody,
   b. Associated TMDL(s),
   c. Proposed control measures,
   d. Proposed number of compliance units per control measure, and
   e. Projected schedule for installation of control measures with anticipated beginning and ending dates***.***

2. The Department shall also include in the ***TMDL STATUS REVIEW REPORT***[39] a discussion of previous years' activities including:
   a. The status of implementation activities,
   b. The location of the control measures,
   c. The size and type of BMPs that were installed,
   d. The effectiveness of the BMPs installed, including any pertinent monitoring data (e.g., influent vs. effluent data),
   e. A summary update of any cooperative implementation agreements (see Attachment IV, section II.B.1), including those that are solely for each TMDL,
   f. A summary update of activities and/or actions that have been completed for any cooperative implementation agreement for each TMDL,
   g. A summary update of projects initiated under the cooperative implementation grant program (see Attachment IV, section II.B.2),
   h. A summary update of activities and/or actions that have been completed for any projects under the cooperative implementation grant program,
   i. A summary of institutional control measures implemented to comply with Attachment IV,
   j. A summary of TMDLs adopted during the past year where the Department is assigned a WLA or the Department is identified as a responsible party in the implementation plan,
   k. A discussion, supported by data and analysis, of whether the Department considers work in the reach complete because it has met WLAs and other TMDL performance criteria, and

[39] Per section III.A.3.a of this attachment, by January 1, 2015, the Department shall submit the required information regarding planned implementation of control measures for the first upcoming reporting period (after permit amendment per Order WQ 2014-0077-DWQ) of January 1, 2015 – October 1, 2015.

l. Any other information requested by the State Water Board Executive Director or designee.

Control measures and implementation schedules proposed for the upcoming year are subject to the approval of the Executive Director of the State Water Board or designee.

3. Each year the Department shall select and begin implementation activities within the highest priority reaches to achieve a minimum of 1650 compliance units. A compliance unit is defined as one acre of the Department's Right-of-Way (ROW) from which the runoff is retained, treated, and/or otherwise controlled prior to discharge to the relevant reach. Compliance units may be credited to the Department for the following actions:

- stand-alone BMP retrofits,
- cooperative implementation,
- monitoring program-related retrofits,
- post-construction treatment beyond permit requirements, and
- other pollution reduction practices necessary to comply with the TMDL.

Compliance units, unless specifically stated below, are credited only when the Department begins implementation of an action listed above.[40] Once compliance units have been credited for a site, the Department may not receive credit for additional compliance units at that location for additional activities or corrective measures needed to bring the site into compliance. See Section III.A.2. Credit may be received, however, for new activities within the same reach that do not treat the runoff from a site that has already received treatment.

4. The Department may receive credit for compliance units by contributing funds to Cooperative Implementation Agreements and/or the Cooperative Implementation Grant Program (see Section II.B. below). The Department may receive credit for one compliance unit for each $88,000 that it contributes. For Cooperative Implementation Agreements, the credit will be received when the Department transfers the funds to a responsible party. For the Cooperative Implementation Grant Program, the credit will be received when the Department transfers the funds to the State Water Board.

5. No credit will be given to post-construction BMPs that only meet the minimum requirements of this Order (Section E.2.d.2)a)). Other projects within a TMDL watershed where treatment is provided above and beyond the post-construction requirements in this Order, may receive compliance units according to the following formula:

$$[(V_t - V_o) \div p_{85}] \times 12 = \text{acres treated (compliance units calculated to the nearest 0.1)}$$

Where,

$V_t$ = Planned volume of runoff to be treated (acre-ft.),

[40] For purposes of Section I.B of this attachment, implementation means that a project has entered the Project Initiation Document (PID) phase, the process used by the Department to explain the scope, funding commitment, and approval of a transportation project (http://www.dot.ca.gov/hq/oppd/pdpm/other/PDPM-Chapters.pdf).

$V_o$ = Volume of runoff from 85th percentile, 24-hour storm event (acre-ft.),
$p_{85}$ = depth of the 85th percentile, 24-hour storm event (inches).

6. Upon approval by the applicable Regional Water Board Executive Officer, the Department may receive compliance units for acreage outside of the Department's ROW, when treating TMDL pollutant-laden storm water originating from that acreage that flows into the Department's storm water treatment systems within the Department's ROW.
7. On June 2, 2017, the State Water Board issued the Department an Order pursuant to Clean Water Act (CWA) section 13383 requiring submission of an implementation plan to comply with the Trash Provisions. The implementation of trash control measures listed in the implementation plan per the CWA section 13383 Order (as approved by the State Water Board) is eligible for TMDL compliance unit credits in accordance with this Order. Implementation of trash control measures to comply with the San Francisco Bay Region-specific requirements for trash in Attachment V, Part 2, sections 1-6 is also eligible for compliance unit credits in accordance with this Order.

## Table IV.1 – Reach Prioritization Scoring Matrix

The rating factors in this table are intended as guidance. Each pollutant category will be ranked separately.

| Rating Factor | Criteria: High | Criteria: Medium | Criteria: Low |
|---|---|---|---|
| Impairment Status: Percent reduction needed | Over 75% | 25% – 75% | Below 25% |
| Department's Drainage Area Contributing to the Reach | Over 5% of drainage area | Between 1% and 5% of drainage area | Less than 1% of drainage area |
| Proximity to Receiving Waters | Over 75% of ROW within 0.25 miles of reach | Between 25% and 75% of ROW within 0.25 miles of reach | Less than 25% of ROW within 0.25 miles of reach |
| Community Environmental Health Impact | Top 3 categories | Middle 4 categories | Lower 3 categories |

**Impairment Status**
The degree of impairment of the waterbody, measured by the percent pollution reduction needed to achieve the WLA. Reaches with higher degrees of impairment will be given higher priority. Consider all sources of impairment when making this determination.

**Department's Contributing Drainage Area**
The contributing drainage area from the Department's ROW is relative to the watershed draining to the reach.

**Proximity to Receiving Waters**
This rating factor measures the relative proximity of the Department's ROW to the reach of the water that receives runoff from the Department's ROW. Sites discharging through conveyances within 0.25 miles of the pertinent reach are considered to have greater potential to contribute pollutants and receive a higher rating.

**Community Environmental Health Impact**
This rating factor requires use of the California Office of Health Hazard Assessment (OEHHA) evaluation tool "Enviroscreen" which can be found at http://oehha.ca.gov/ej/ces11.html. This tool should be used to assess environmental justice issues. Outcomes are segregated into 10 categories ranging from low to high environmental justice scores. Higher scores indicate that there is a higher potential for environmental justice issues to be present at a site.

## Section II. Applicable TMDLs and Implementation Requirements

**A.** For each reach for which the Department has committed to begin implementation actions in accordance with Section I of this attachment, the Department shall do one of the following:

1. Implement the requirements in Table IV.2 applicable to that reach ensuring that all BMPs installed meet the minimum requirements specified in the following permit sections:
   - E.2.d.1) (Design Pollution Prevention Best Management Practices),
   - E.2.d.2)b) (Numeric Sizing Criteria for Storm Water Treatment Control BMPs),
   - E.2.e.1) (BMP Development and Implementation, Vector Control),
   - E.2.e.2) (BMP Development and Implementation, Storm Water Treatment BMPs),
   - E.2.e.3) (BMP Development and Implementation, Wildlife), and
   - E.2.e.4) (BMP Development and Implementation, Biodegradable Materials) of this Order.

   In addition, the Department shall ensure that all BMPs installed do not cause a decrease in lateral (bank) or vertical (channel bed) stability in receiving stream channels.
2. Demonstrate that it has entered into or intends to enter into a Cooperative Implementation Agreement with other parties having responsibility for the TMDL, as specified below under Cooperative Implementation Agreements.
3. Identify cooperative implementation grants that have been awarded to other parties having responsibility for the TMDL, as specified below under Cooperative Implementation Grant Program.

**B. Cooperative Implementation**

**1. Cooperative Implementation Agreements**

a. The Department is encouraged to establish agreements for cooperative implementation efforts, such as joint implementation actions and/or special implementation studies with other parties that have responsibility for the TMDL, except where precluded by a TMDL or where specific implementation requirements are prescribed in Table IV.2. Cooperative agreements that only involve monitoring are not eligible for compliance units.

b. Where the Department has existing cooperative implementation agreements with other responsible parties, it shall fulfill the commitments and requirements of those agreements.

c. Where the Department has not yet committed to cooperative implementation efforts, but intends to do so, the Department must provide written notification, including the anticipated date of commitment, to the State Water Board in its ***TMDL STATUS REVIEW REPORT***.

d. Cooperative agreements relative to the TMDL implementation activity are subject to approval by the applicable Regional Water Board Executive Officer. Cooperative agreements shall describe the terms of the mutually agreed activities to be performed, and at a minimum shall include:

   i. The date the cooperative agreement was approved by the Regional Water Board,
   ii. A map showing the location of work to be performed in the reach,
   iii. Any monitoring program parameters and responsibilities,
   iv. Any implementation responsibilities, including BMP Operation and Maintenance,
   v. Any funding commitments that correspond with the implementation responsibilities, and
   vi. A termination clause upon failure to comply with the terms and conditions of the agreement, as applicable.

e. The Department shall submit sufficient information to document the progress in achieving the requirements of the TMDL for each cooperative implementation agreement in its annual ***TMDL STATUS REVIEW REPORT***. (See Section I.B.2.)

f. If the Department is not participating or has not given notice of its intent to participate in cooperative implementation efforts, or the Department is not fulfilling its cooperative implementation responsibilities under an agreement, it shall immediately comply with applicable TMDL Control Requirements listed in Table IV-2 below and report the corresponding status in the ***TMDL STATUS REVIEW REPORT***.

**2. Cooperative Implementation Grant Program**

a. The Department may establish a cooperative implementation grant program to be administered by the State Water Board for TMDL watersheds.

b. If the Department elects to establish a grant program, the Department and State Water Board will prepare an agreement specifying the terms of the grant program and the commitments and responsibilities of the parties. The Department will be responsible for paying the State Water Boards' cost of administering the grant program.

c. Cooperative implementation grants will be used to fund capital projects undertaken by other responsible parties in impaired watersheds in which the Department has been assigned a WLA or otherwise has responsibility for implementation of the TMDL. Cooperative implementation grant applications that are consistent with the final prioritized Categorical Inventories of Reaches (Section I.A.5) will be given a higher priority for funding. Cooperative implementation grants will not be awarded for projects that only involve monitoring, where precluded by a TMDL, or where specific implementation requirements are prescribed in Table IV.2.

**C. Consideration for Factors Affecting Implementation**

Implementation may require environmental approvals and permitting from local, State, and/or federal resource agencies (e.g., California Coastal Commission, California Department of Fish and Wildlife, U.S. Army Corps of Engineers, local Flood Control agencies, local County, etc.). Other factors such as safety concerns and technical infeasibility may affect project implementation. Delays or cancellations due to environmental or permitting factors beyond the Department's control must be reported in its annual ***TMDL STATUS REVIEW REPORT***.

The State Water Board will revoke compliance units for projects not completed within the implementation schedule approved under Section I.B.1 of this attachment, unless the delay in the implementation schedule is additionally approved by the Executive Director. Partial credit may be allowed if a portion of the project is completed and functioning.

The State Water Board will revoke compliance units for unrecovered grant funds for projects that are not completed under Section II.B.2 of this attachment. Partial credit may be allowed if a portion of the project is completed and functioning. If the grant program is discontinued, any unexpended funds will be returned to the Department and the corresponding compliance units will be revoked.

Compliance units revoked shall be added to the total number of the required compliance units in following years. For example, if a project which claimed 20 compliance units is cancelled, 1670 compliance units (1650 + 20) are required to be implemented in the following year. If the grant program is discontinued, additional time may be allowed for the Department to implement the corresponding compliance units.

## Table IV.2. TMDL Summary Table and Control Requirements

** OAL Approved, USEPA Approval Pending

| Impaired Waterbody | Pollutant(s) | Approved or USEPA Established TMDLs<br>Effective Date<br>Basin Plan Amendment<br>Resolution No. | Implementation Requirements |
|---|---|---|---|
| **R1 — North Coast Regional Water Board** | | | |
| **Albion River** | Sediment | ***USEPA Established TMDL***<br>Effective Date: December 2001<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A. and Section III.B. |
| **Big River** | Sediment | ***USEPA Established TMDL***<br>Effective Date: December 2001<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A. and Section III.B. |
| **Lower Eel River** | Temperature and Sediment | ***USEPA Established TMDL***<br>Effective Date: December 18, 2007<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A., Section III.B., and Section III.H. |
| **Middle Fork Eel River** | Temperature and Sediment | ***USEPA Established TMDL***<br>Effective Date: December 2003<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A., Section III.B., and Section III.H. |
| **South Fork Eel River** | Sediment and Temperature | ***USEPA Established TMDL***<br>Effective Date: December 16, 1999<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A., Section III.B., and Section III.H. |

| Impaired Waterbody | Pollutant(s) | Approved or USEPA Established TMDLs<br>Effective Date<br>Basin Plan Amendment<br>Resolution No. | Implementation Requirements |
|---|---|---|---|
| **Upper Main Eel River and Tributaries (including Tomki Creek, Outlet Creek and Lake Pillsbury)** | Temperature and Sediment | ***USEPA Established TMDL***<br>Effective Date: December 29, 2004<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A., Section III.B., and Section III.H. |
| **Garcia River** | Sediment | Effective Date: March 16, 1998<br>BPA: 4-37.00 Action Plan for the Garcia River Watershed<br>Resolution: | Implement Section III.A. and Section III.B. |
| **Gualala River** | Sediment | ***USEPA Established TMDL***<br>Effective Date: November 29, 2004<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A. and Section III.B. |
| **Klamath River in California** | Temperature, Dissolved Oxygen, Nutrients, and Microcystin | Effective Date: December 28, 2010<br>BPA: Action Plan for Klamath River TMDLs<br>Resolution: R1-2010-0026 | Implement, Section III.A., Section III.B., Section III.H. In addition, the Department shall refer to the Section E.2.d.4) of this Order for locating, assessing, and remediating barriers to fish passage. |

| Impaired Waterbody | Pollutant(s) | Approved or USEPA Established TMDLs<br>Effective Date<br>Basin Plan Amendment<br>Resolution No. | Implementation Requirements |
|---|---|---|---|
| **Lost River** | Nitrogen, Biochemical Oxygen Demand to address Dissolved Oxygen and pH Impairments | Effective Date: December 30, 2008<br>BPA: Action Plan for Lost River TMDL<br>Resolution: R1-2010-0026 | Implement Section III.A. and Section III.B. |
| **Mad River** | Sediment and Turbidity | ***USEPA Established TMDL***<br>Effective Date: December 21, 2007<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A. and Section III.B. |
| **Navarro River** | Sediment and Temperature | ***USEPA Established TMDL***<br>Effective Date: December 27, 2000<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A., Section III.B., and Section III.H. |
| **Noyo River** | Sediment | ***USEPA Established TMDL***<br>Effective Date: December 16, 1999<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A. and Section III.B. |
| **Redwood Creek** | Sediment | ***USEPA Established TMDL***<br>Effective Date: December 30, 1998<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A. and Section III.B. |

| Impaired Waterbody | Pollutant(s) | Approved or USEPA Established TMDLs<br>Effective Date<br>Basin Plan Amendment<br>Resolution No. | Implementation Requirements |
|---|---|---|---|
| **Scott River** | Sediment and Temperature | Effective Date: August 11, 2006<br>BPA: Action Plan for Scott River.<br>Resolutions: R1-2005-0113 &R-2010-0026 | Implement Section III.A., Section III.B., and Section III.H. |
| **Shasta River** | Dissolved Oxygen and Temperature | Effective Date: January 26, 2007<br>BPA: Action Plan for the Shasta River Watershed<br>Resolution: R1-2006-0052 | Implement Section III.A., Section III.B., and Section III.H. |
| **Ten Mile River** | Sediment | ***USEPA Established TMDL***<br>Effective Date: December 2000<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A. and Section III.B. |
| **Trinity River** | Sediment | ***USEPA Established TMDL***<br>Effective Date: December 20, 2001<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A. and Section III.B. |
| **South Fork Trinity River and Hayfork Creek** | Sediment | ***USEPA Established TMDL***<br>Effective Date: December 1998<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A. and Section III.B. |
| **Van Duzen River and Yager Creek** | Sediment | ***USEPA Established TMDL***<br>Effective Date: December 16, 1999<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A. and Section III.B. |

| Impaired Waterbody | Pollutant(s) | Approved or USEPA Established TMDLs<br>Effective Date<br>Basin Plan Amendment<br>Resolution No. | Implementation Requirements |
|---|---|---|---|
| **R2 — San Francisco Bay Regional Water Board** | | | |
| **Napa River** | Sediment | Effective Date: January 20, 2011<br>BPA: Chapter 7, Water Quality Attainment Strategies including TMDLs<br>Resolution: R2-2009-0064 | Implement Section III.A., Section III.B., and the following:<br>Conduct a survey of stream crossings associated with Department roadways, and develop a prioritized implementation plan and schedule for repair and/or replacement of high priority crossings/culverts.<br>Submit plan and schedule for conducting stream crossings surveys with *TMDL STATUS REVIEW REPORT* in accordance with Section I.B. above.<br>Submit implementation plan and schedule for repair and/or replacement of high priority crossings/culverts with *TMDL STATUS REVIEW REPORT* in accordance with Section I.B. above. |
| **Richardson Bay** | Pathogens | Effective Date: December 18, 2009<br>BPA: Pathogens in Richardson Bay<br>Resolution: R2-2008-0061 | Implement Section III.A. and Section III.E. |
| **San Francisco Bay** | PCBs | Effective Date: March 29, 2010<br>BPA: Exhibit A & TMDL & Implementation Plan for PCBs<br>Resolution: R1-2008-0012 | Implement Section III.A. and Section III.C. |
| **San Francisco Bay** | Mercury | Effective Date: February 12, 2008<br>BPA: Chapter 7, SF Bay Mercury TMDL<br>Resolution: R2-2006-0052 | Implement Section III.A, Section III.B., and the following:<br>The Department shall work out an equitable mercury WLA scheme in consultation with the San Francisco Bay Area Urban Runoff Management Agencies. |

| Impaired Waterbody | Pollutant(s) | Approved or USEPA Established TMDLs<br>Effective Date<br>Basin Plan Amendment<br>Resolution No. | Implementation Requirements |
|---|---|---|---|
| **San Pedro and Pacifica State Beach** | Bacteria | Effective Date: August 1, 2013<br>BPA – Chapter 3, Section 3.3.1 Bacteria<br>Resolution: R2-2012-0089 | Implement Section III.A. and Section III.E. |
| **Sonoma Creek** | Sediment | Effective Date: September 8, 2010<br>BPA: Exhibit A & Implementation Plan<br>Resolution: R2-2008-0103 | Implement Section III.A., Section III.B, and the following:<br>Conduct a survey of stream crossings associated with Department roadways, and develop a prioritized implementation plan and schedule for repair and/or replacement of high priority crossings/culverts.<br>Submit plan and schedule for conducting stream crossings surveys with *TMDL STATUS REVIEW REPORT* in accordance with Section I.B. above.<br>Submit implementation plan and schedule for repair and/or replacement of high priority crossings/culverts with *TMDL STATUS REVIEW REPORT* in accordance with Section I.B. above. |
| **San Francisco Bay Urban Creeks** | Diazinon & Pesticide-Related Toxicity | Effective Date: May 16, 2007<br>BPA: Chapter 3, Toxicity<br>Resolution: R2-2005-0063 | Implement Section III.A., Section III.C., and Section III.F. |

| Impaired Waterbody | Pollutant(s) | Approved or USEPA Established TMDLs<br>Effective Date<br>Basin Plan Amendment<br>Resolution No. | Implementation Requirements |
|---|---|---|---|
| **R3 — Central Coast Regional Water Board** | | | |
| **San Lorenzo River (includes Carbonera, Lompico, and Shingle Mill Creeks)** | Sediment | Effective Date: February 19, 2004<br>BPA: Attachment to R3-2002-0063<br>Resolution: R3-2002-0063 | Implement Section III.A. and Section III.B. |
| **Morro Bay (includes Chorro Creek, Los Osos Creek, and the Morro Bay Estuary)** | Sediment | Effective Date: January 20, 2004<br>BPA: Attachment A to R3-2002-0051<br>Resolution: R3-2003-0051 | Implement Section III.A. and Section III.B. |
| **R4 — Los Angeles Regional Water Board** | | | |
| **Ballona Creek** | Metals (Ag, Cd, Cu, Pb, & Zn) and Selenium | Effective Date: December 22, 2005 and reaffirmed on October 29, 2008<br>BPA: Attachment A, Chapter 7-12<br>Resolution: R2007-015 | Implement Section III.A., Section III.C., and Section III.G. |
| **Ballona Creek** | Trash | Effective Date: August 1, 2002 & February 8, 2005<br>BPA: Attachment A, Chapter 7-3.<br>Resolution: 2004-0023 | Implement Section III.A. and Waste Load Allocation requirements and schedule as set forth in the Ballona Creek Trash TMDL. |

| Impaired Waterbody | Pollutant(s) | Approved or USEPA Established TMDLs<br>Effective Date<br>Basin Plan Amendment<br>Resolution No. | Implementation Requirements |
|---|---|---|---|
| **Ballona Creek Estuary** | Toxic Pollutants (Ag, Cd, Cu, Pb, Zn, Chlordane, DDTs, Total PCBs, & Total PAHs) | Effective Date: December 22, 2005<br>BPA: Attachment A, Chapter 7-14<br>Resolution: R4-2005-008 | Implement Section III.A. and Section III.C. |
| **Ballona Creek, Ballona Estuary, and Sepulveda Channel** | Bacteria | Effective Date: March 26, 2007 and November 18, 2013<br>BPA: Attachment A, Chapter 7-21<br>Resolution: R4-2006-011 | Implement Section III.A. and Section III.E. |
| **Ballona Creek Wetlands** | Sediment and Invasive Exotic Vegetation | *USEPA Established*<br>Effective Date: March 26, 2012<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A. and Section III.B. |
| **Calleguas Creeks, its Tributaries and Mugu Lagoon** | Metals and Selenium | Effective Date: March 26, 2007<br>BPA: Attachment A, Chapter 7-19<br>Resolution: R4-2006-012 | Implement Section III.A., Section III.C., and Section III.G. |
| **Calleguas Creeks its Tributaries and Mugu Lagoon** | Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation | Effective Date: March 14, 2006<br>BPA: Attachment A, Chapter 7-17<br>Resolution: R4-2005-010 | Implement Section III.A., Section III.B, and Section III.C. |

| Impaired Waterbody | Pollutant(s) | Approved or USEPA Established TMDLs<br>Effective Date<br>Basin Plan Amendment<br>Resolution No. | Implementation Requirements |
|---|---|---|---|
| **Colorado Lagoon** | Organochlorine Pesticides, PCBs, Sediment Toxicity, PAHs, and Metals (Pb & Zn) | Effective Date: June 14, 2011<br>BPA: Attachment K, Chapter 7-38<br>Resolution: R09-005 | Implement Section III.A. and Section III.C. |
| **Dominguez Channel & Greater Los Angeles & Long Beach Harbor Waters** | Toxic Pollutants: Metals (Cu, Pb, Zn), DDT, PAHs, and PCBs | Effective Date: March 23, 2012<br>BPA: Attachment A, Chapter 7-40<br>Resolution: R11-008 | Implement Section III.A. and Section III.C. |
| **Legg Lake** | Trash | Effective Date: February 27, 2008<br>BPA: Attachment A, Chapter 7-27<br>Resolution: R4-2007-10 | Implement Section III.A. and Section III.D. |
| **Long Beach City Beaches and Los Angeles River Estuary** | Indicator Bacteria | *USEPA Established*<br>Effective Date: March 26, 2012<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A., and Section III.E. |
| **Los Angeles Area (Echo Park Lake)** | Nitrogen, Phosphorus, Chlordane, Dieldrin, PCBs, & Trash | *USEPA Established*<br>Effective Date: March 26, 2012<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A., Section III.B., Section III.C., and Section III.D. |

| Impaired Waterbody | Pollutant(s) | Approved or USEPA Established TMDLs<br>Effective Date<br>Basin Plan Amendment<br>Resolution No. | Implementation Requirements |
|---|---|---|---|
| **Los Angeles Area (Lake Sherwood)** | Mercury | *USEPA Established*<br>Effective Date: March 26, 2012<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A. and Section III.B. |
| **Los Angeles Area (North, Center, & Legg Lakes)** | Nitrogen & Phosphorus | *USEPA Established*<br>Effective Date: March 26, 2012<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A. and Section III.B. |
| **Los Angeles Area (Peck Road Park Lake)** | Nitrogen, Phosphorus, Chlordane, DDT, Dieldrin, PCBs, and Trash | *USEPA Established*<br>Effective Date: March 26, 2012<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A., Section III.B., Section III.C, and Section III.D. |
| **Los Angeles Area (Puddingstone Reservoir)** | Nitrogen, Phosphorus, Chlordane, DDT, PCBs, Hg, and Dieldrin | *USEPA Established*<br>Effective Date: March 26, 2012<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A., Section III.B., and Section III.C. |
| **Los Angeles River and Tributaries** | Metals | Effective Date: December 22, 2005, October 29, 2008, & Reopened and Modified on November 3, 2011<br>BPA: Attachment A, Chapter 7-13 to 7-13 and Attachment B<br>Resolution: R2007-014 & R10-003 | Implement Section III.A. and Section III.C. |

| Impaired Waterbody | Pollutant(s) | Approved or USEPA Established TMDLs<br>Effective Date<br>Basin Plan Amendment<br>Resolution No. | Implementation Requirements |
|---|---|---|---|
| **Los Angeles River** | Trash | Effective Date: December 24, 2008<br>BPA: Attachment A, Chapter 7-2<br>Resolution: R4-2007-012 | Implement Section III.A. and Waste Load Allocation requirements and schedule as set forth in the Los Angeles River Watershed Trash TMDL. |
| **Los Angeles River Watershed** | Bacteria | Effective Date: March 23, 2012<br>BPA: Attachment A, Chapter 7-39<br>Resolution: R10- 007 | Implement Section III.A and Section III.E. |
| **Los Cerritos** | Metals | *USEPA Established*<br>Effective Date: March 17, 2010<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A. and Section III.C. |
| **Machado Lake** | Eutrophic, Algae, Ammonia, and Odors (Nutrients) | Effective Date: March 11, 2009<br>BPA: Attachment A, to R09-006<br>Resolution: R08-006 | Implement Section III.A. and Section III.B. |
| **Machado Lake** | Pesticides and PCBs | Effective Date: March 20, 2012<br>BPA: Attachment A, Chapter 7-38<br>Resolution: R10- 008 | Implement Section III.A. and Section III.C. |
| **Machado Lake** | Trash | Effective Date: February 27, 2008<br>BPA: Attachment A, Chapter 7-26<br>Resolution: R4-2007-06 | Implement Section III.A. and Section III.D. |
| **Malibu Creek Watershed** | Bacteria | Effective Date: January 10, 2006, Revised on November 8, 2013 **<br>BPA: Attachment A, Chapter 7-10<br>Resolution: 2004-019R & R12-009 | Implement Section III.A. and Section III.E. |

| Impaired Waterbody | Pollutant(s) | Approved or USEPA Established TMDLs<br>Effective Date<br>Basin Plan Amendment<br>Resolution No. | Implementation Requirements |
|---|---|---|---|
| **Malibu Creek and Lagoon** | Sedimentation and Nutrients to address Benthic Community Impairments | ***USEPA Established TMDL***<br>Effective Date: July 2, 2013<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A. and Section III.B. |
| **Malibu Creek Watershed** | Trash | Effective Date: June 26, 2009<br>BPA: Attachment A, Chapter 7-31<br>Resolution: R4-2008-007 | Implement Section III.A. and Section III.D. |
| **Marina del Rey Harbor** | Toxic Pollutants (Cu, Pb, Zn, Chlordane, and Total PCBs) | Effective Date: March 16, 2006<br>BPA: Attachment A, Chapter 7-18<br>Resolution: R4-2005-012 | Implement Section III.A. and Section III.C. |
| **Marina del Rey Harbor Mothers' Beach and Back Basins** | Bacteria | Effective Date: March 18, 2004, Revised on November 7, 2013 **<br>BPA: Attachment A, Chapter 7-5<br>Resolution: 2003-012, R12-007 | Implement Section III.A. and Section III.E. |
| **Revolon Slough and Beardsley Wash** | Trash | Effective Date: August 1, 2002 & February 8, 2005<br>BPA: Attachment A, Chapter 7-3<br>Resolution: 2004-0023 | Implement Section III.A. and Section III.D. |
| **San Gabriel River** | Metals (Cu, Pb, Zn) and Selenium | ***USEPA Established TMDL***<br>Effective Date: March 26, 2007<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A., Section III.C., and Section III.G. |

| Impaired Waterbody | Pollutant(s) | Approved or USEPA Established TMDLs<br>Effective Date<br>Basin Plan Amendment<br>Resolution No. | Implementation Requirements |
|---|---|---|---|
| **Santa Clara River Estuary and Reaches 3, 5, 6, and 7** | Coliform | Effective Date: January 13, 2012<br>BPA: Attachment A, Chapter 7-36<br>Resolution: R10-006 | Implement Section III.A. and Section III.E. |
| **Santa Clara River Reach 3** | Chloride | Effective Date: December 11, 2008<br>BPA: Attachment B to Resolution No. R4-2008-012 & R4-2008-012 | Implement Section III.A. and Section III.I. |
| **Santa Monica Bay Beaches** | Bacteria | Effective Date: June 19, 2003, Revised November 7, 2013 **<br>BPA: Attachment A, Revised in Chapter 7-4<br>Resolution: 2003-012, R12-007 | Implement Section III.A. and Section III.E. |
| **Santa Monica Bay** | DDTs and PCBs | ***USEPA Established TMDL***<br>Effective Date: March 26, 2012<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A. and Section III.C. |
| **Santa Monica Bay Nearshore & Offshore** | Debris (trash & plastic pellets) | Effective Date: March 20, 2012<br>BPA: Attachment A, Chapter 7<br>Resolution: | Implement Section III.A. and Section III.D. |
| **Upper Santa Clara River** | Chloride | Effective Date: April 6, 2010<br>BPA: Attachment B.<br>Chapter 7-6<br>Resolution: R4-2008-012 | Implement Section III.A. and Section III.I. |

| Impaired Waterbody | Pollutant(s) | Approved or USEPA Established TMDLs<br>Effective Date<br>Basin Plan Amendment<br>Resolution No. | Implementation Requirements |
|---|---|---|---|
| **Ventura River Estuary** | Trash | Effective Date: February 27, 2008<br>BPA: Attachment A, Chapter 7-25<br>Resolution: R4-2007-008 | Implement Section III.A. and Section III.D. |
| **Ventura River and its Tributaries** | Algae, Eutrophic Conditions, and Nutrients | Effective Date: June 28, 2013<br>BPA: Attachment A, Chapter 7-35<br>Resolution: R12-011 | Implement Section III.A. and Section III.B. |
| **R5 — Central Valley Regional Water Board** | | | |
| **Clear Lake** | Nutrients | Effective Date: September 21, 2007<br>BPA: Attachment 1 to R5-2006-0060<br>Resolution No.: R5-2006-0060 | Implement Section III.A. and Section III.B. |
| **Cache Creek, Bear Creek, Sulphur Creek and Harley Gulch** | Mercury | Effective Date: February 7, 2007<br>BPA: Attachment 1 to R5-2005-0146<br>Resolution: R5-2005-0146 | Implement Section III.A. and Section III.B. |
| **Sacramento-San Joaquín River Delta Estuary** | Methyl mercury | Effective Date: October 20, 2011<br>BPA: Sacramento River and San Joaquin River Basins for the Control of Methylmercury and Total Mercury in the Sacramento – San Joaquin River Delta Estuary<br>Resolution: R5-2010-0043. | Implement Section III.A. and Section III.B. |
| **R6 — Lahontan Regional Water Board** | | | |

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| **Lake Tahoe** | Sediment and Nutrients | Effective Date: August 16, 2011<br>BPA: WQ Amendment May 2008<br>Resolution: 2009-0028 | **Lake Tahoe Sediment Requirements**<br>A. Pollutant Load Reduction Requirements<br>The Department must reduce fine sediment particle (FSP), total phosphorus (TP), and total nitrogen (TN) loads by 10%, 7%, and 8%, respectively, by September 30, 2016. Pollutant load reductions shall be measured in accordance with the processes outlined in the most recent version of Lake Clarity Crediting Program Handbook. To demonstrate compliance with the average annual fine sediment particle pollutant load reduction requirements, the Department must earn and maintain 298 Lake Clarity Credits for the water year October 1, 2015 to September 30, 2016, and for subsequent water years.<br>B. Pollutant Load Reduction Plans<br>The Department shall prepare a Pollutant Load Reduction Plan (PLRP) describing how it expects to meet the pollutant load reduction requirements described in Section A above. The Department shall submit a plan no later than July 15, 2014 that shall include, at a minimum, the following elements:<br>*1. Catchment registration schedule*<br>The PLRP shall include a list of catchments that the Department plans to register pursuant to the approved Lake Clarity Crediting Program to meet load reduction requirements. The list shall include catchments where capital improvement projects have been constructed since May 1, 2004 that the Department expects to claim credit for, and catchments where projects will be constructed and other load reduction activities (capital improvements, institutional controls, and other measures/practices implement) taken during the term of this Order.<br>*2. Proposed pollutant control measures* |

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| | | | The PLRP shall generally describe storm water program activities to reduce fine sediment particle, total phosphorus, and total nitrogen loading that the Department will implement in identified catchments.<br>*3. Pollutant load reduction estimates*<br>The Department shall conduct pollutant load reduction analyses on a representative catchment subset to demonstrate that proposed implementation actions are expected to achieve the pollutant load reduction requirements specified in Section A. above. For representative catchments, the analysis shall include detailed estimates of both baseline pollutant loading and expected pollutant loading resulting from implementation actions and provide justification why the conducted load reduction analysis is adequate for extrapolation to other catchments.<br>The pollutant loading estimates shall differentiate between estimates of pollutant load reductions achieved since May 1, 2004 and pollutant load reductions from actions not yet taken.<br>*4. Load reduction schedule*<br>The PLRP shall describe a schedule for achieving the pollutant load reduction requirements described in the Lake Tahoe Sediment TMDL Section A above. The schedule shall include an estimate of expected pollutant load reductions for each year of this Permit term based on preliminary numeric modeling results. The schedule shall also describe which catchments the Department anticipates it will register for each year of this Permit term.<br>*5. Annual adaptive management*<br>The PLRP shall include a description of the processes and procedures to annually assess storm water management activities and associated load reduction progress. The plan |

| Impaired Waterbody | Pollutant(s) | Approved or USEPA Established TMDLs Effective Date Basin Plan Amendment Resolution No. | Implementation Requirements |
|---|---|---|---|
| | | | shall describe how the Department will use information from the monitoring and implementation or other efforts to improve operational effectiveness and for achieving the pollutant load reduction requirements specified in Section A.<br>6. *Pollutant Load Reduction Plan Update*<br>By March 15, 2017, the Department shall update its Pollutant Load Reduction Plan to describe how it will achieve the pollutant load reduction requirements for the second five-year TMDL implementation period, defined as the ten-year load reduction milestone in the Lake Tahoe TMDL. Specifically, the updated Pollutant Load Reduction Plan shall demonstrate how the Department will reduce baseline fine sediment particle, total nitrogen, and total phosphorus loads by 21 percent, 14 percent, and 14 percent, respectively, by water year 2021.<br>C. Pollutant Load Reduction Progress<br>To demonstrate pollutant load reduction progress, the Department shall submit a Progress Report by July 15, 2014 documenting pollutant load reductions accomplished between May 1, 2004 (baseline year) and October 15, 2011.<br>D. Pollutant Load Reduction Monitoring and Water Quality Monitoring Requirements<br>The Department shall prepare and submit a Storm water Monitoring Plan for review and approval by the Regional Water Board by July 15, 2013 and implement the approved plan. |

| Impaired Waterbody | Pollutant(s) | Approved or USEPA Established TMDLs<br>Effective Date<br>Basin Plan Amendment<br>Resolution No. | Implementation Requirements |
|---|---|---|---|
| **Truckee River** | Sediment | Effective Date: September 16, 2009<br>BPA: WQ Amendment May 2008<br>Resolution: 2009-0028 | Implement Sections III.A. and Section III.B. |
| **R7 — Colorado River Regional Water Board** | | | |
| **Coachella Valley Storm Water Channel** | Bacterial Indicators | Effective Date: April 27, 2012<br>BPA: Attachment 1: Final CVSC Bacteria TMDL<br>Resolution: R7-2010-0028 | Implement Section III.A. and Section III.E. |
| **R8 — Santa Ana Regional Water Board** | | | |
| **Big Bear Lake** | Nutrients for Dry Hydrological Conditions | Effective Date: September 25, 2007<br>BPA: Attachment to R8-2006-0023<br>Resolutions: R8-2006-0023, and R8-2008-0070 | Implement Section III.A. and Section III.B. |

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| **Lake Elsinore and Canyon Lake** | Nutrients | Effective Date: September 30, 2005<br>BPA: Attachment to R8-2004-0037 & R8-2006- 0031<br>Resolution: R8-2007-0083 | Implement Section III.A., Section III.B., and the following:<br>**Lake Elsinore/Canyon Lake Nutrient TMDL Joint Responsibility Options**<br>a. The Department has already committed to cooperative implementation actions, monitoring actions, special studies and implementation actions jointly with other responsible agencies as an active paying member of the Lake Elsinore/Canyon Lake TMDL Task Force. The Department shall continue with those actions and remain an active paying Task Force member.<br>b. If the State Water Board is notified that the Department is not fulfilling its Lake Elsinore/Canyon Lake Task Force obligations or if Department chooses to opt out of the cooperative approach with the TMDL Task Force for implementation actions, monitoring actions, and/or special studies the Department shall make a formal decision six months after the adoption of the Permit Amendment. These decisions must be approved/adopted by the State Board. The Department will then be required to conduct the following activities:<br>1) Within 30 days of such notification, implement a Lake Elsinore and Canyon Lake in-lake monitoring consistent with the TMDL Task Force monitoring program.<br>2) Within 30 days of such notification, submit a proposed Department facilities monitoring program to evaluate nutrient discharges from the Department's facilities in the Lake Elsinore/Canyon Lake watershed.<br>3) Within 30 days of notification, develop and implement a Lake Elsinore in-lake sediment nutrient reduction program to mitigate Department facilities in-lake nutrient sediment load. Develop and implement a monitoring program to evaluate the |

| Impaired Waterbody | Pollutant(s) | Approved or USEPA Established TMDLs<br>Effective Date<br>Basin Plan Amendment<br>Resolution No. | Implementation Requirements |
|---|---|---|---|
| | | | success of in-lake sediment reduction strategies that will be implemented.<br>4) Within 60 days of notification, develop and implement a Canyon Lake in-lake sediment nutrient reduction program to mitigate Department facilities in-lake nutrient sediment load. Develop and implement a monitoring program to evaluate the success of in-lake sediment reduction strategies that will be implemented.<br>5) Within 60 days of notification, submit an annual monitoring report by August 15th of each year.<br>6) Submit an annual in-lake nutrient reduction program status report by August 15th of each year |
| **Rhine Channel Area of Lower Newport Bay** | Chromium and Mercury | ***USEPA Established TMDL***<br>Effective Date: June 14, 2002<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A., Section III.B., and Section III.C. |
| **San Diego Creek and Newport Bay, including Rhine Channel** | Metals (Copper, Lead, & Zinc) | ***USEPA Established TMDL***<br>Effective Date: June 14, 2002<br>BPA: N/A<br>Resolution: N/A | Implement Section III.A. and Section III.C. |
| **San Diego Creek and Upper Newport Bay** | Cadmium | ***USEPA Established TMDL***<br>Effective Date: June 14, 2002<br>BPA: N/A | Implement Section III.A. and Section III.C |

| Impaired Waterbody | Pollutant(s) | Approved or USEPA Established TMDLs<br>Effective Date<br>Basin Plan Amendment<br>Resolution No. | Implementation Requirements |
|---|---|---|---|
| **San Diego Creek Watershed** | Organochlorine Compounds (DDT, Chlordane, PCBs, & Toxaphene) | Effective Date: November 12, 2013<br>BPA: Attachment 2<br>Resolution: R8-2011-0037 | Implement Section III.A. and Section III.C. |
| **Upper & Lower Newport Bay** | Organochlorine Compounds (DDT, Chlordane & PCBs) | Effective Date: November 12, 2013<br>BPA: Attachment 2<br>Resolution: R8-2011-0037 | Implement Section III.A. and Section III.C. |
| **R9 — San Diego Regional Water Board** | | | |
| **Chollas Creek** | Diazinon | Effective Date: November 3, 2003<br>BPA: Attachment A to Resolution: R9-2002-0123 | Implement Section III.A. and Section III.F. |
| **Chollas Creek** | Dissolved Copper, Lead and Zinc | Effective Date: December 18, 2008<br>BPA: Attachment A<br>Resolution: R9-2007-0043 | Implement Section III.A and Section III.C. |
| **Rainbow Creek** | Total Nitrogen and Total Phosphorus | Effective Date: March 22, 2006<br>BPA: Attachment A<br>Resolution: R9-2005-0036 | Implement Section III.A. and Section III.B. |
| **Project 1 — Revised Twenty Beaches & Creeks in the San Diego Region (including Tecolote Creek)** | Indicator Bacteria | Effective Date: June 22, 2011<br>BPA: Attachment A<br>Resolution: R9-2010-001 | Implement Section III.A. and Section III.E. |

## Section III. General and Categorical Requirements

### A. General Requirements for All TMDLs:

1. **Comprehensive TMDL Monitoring Plan**

   a. The Department shall continue to implement existing TMDL water quality monitoring plans, including cooperative water quality monitoring plans that the Department is party to that have already received approval from the Regional Water Board Executive Officer.

   b. The Department shall develop and implement a comprehensive TMDL monitoring plan to be submitted to the State Water Board by January 1, 2015. The comprehensive TMDL monitoring plan shall include existing approved water quality monitoring plans as described in Section III.A.1.a. above, and shall also include monitoring for all TMDLs that do not have existing approved water quality monitoring plans. The proposed comprehensive TMDL monitoring plan shall be designed to inform selection of BMPs, to inform future reach prioritization submittals, and to assess the effectiveness of BMP implementation. The Department may propose monitoring by pollutant category and may rely on representative monitoring for BMP effectiveness assessment. The comprehensive TMDL monitoring plan shall include a time-schedule for the implementation of the monitoring plan. The comprehensive TMDL monitoring plan is subject to approval by the Executive Director of the State Water Board.

2**. Adaptive Management**
   The Department shall use monitoring data to conduct an on-going assessment of the performance and effectiveness of BMPs. The assessment shall include necessary modifications to control measures to achieve WLAs and other applicable performance standards. Where an assessment indicates that control measures are inadequate to achieve WLAs and other performance standards in a reach, the Department must implement improved control measures/BMPs.

3. **Reporting**

   a. By January 1, 2015, the Department shall submit the required information in section I.B. of this attachment regarding planned implementation of control measures for the upcoming reporting period (January 1, 2015 – October 1, 2015).

   b. The Department shall summarize the previous year's TMDL monitoring results, deliverables and other actions as specified in its annual ***TMDL STATUS REVIEW REPORT***.

   c. The Department shall prepare and submit a ***TMDL PROGRESS REPORT*** by January 1, 2018, to the State Water Board as part of its report of waste discharge under Provision E.13.c. The ***TMDL PROGRESS REPORT*** shall be presented to the State Water Board as an informational item and include the following information:

      i. A summary of the effectiveness of the control measures installed for each reach that has been addressed, as a result of the BMP effectiveness assessment,

ii. A determination as to whether the control measures have been or will be sufficient to achieve WLAs and other performance standards by the final compliance deadlines,
iii. Where the control measures are determined not to be sufficient to achieve WLAs or other performance standards by the final compliance deadlines, a proposal for improved control measures to address the relevant pollutants,
iv. A summary of the estimated quantified amount of pollutants prevented from entering into the receiving waters as a result of BMPs, cooperative agreements, or other source control measures taken, and
v. An analysis demonstrating that the level of effort (1650 compliance units/year) during the present permit cycle will be sufficient to achieve WLAs and other performance standards for all TMDLs listed in Table IV.2 by 2034. The analysis must utilize monitoring data if available, pertinent analytical tools, including modeling where appropriate, and provide a reasonable assurance that applicable WLAs and performance criteria will be met.

The ***TMDL PROGRESS REPORT*** will be subject to public review and comment and will be used in the development of the reissued permit.

**B. Sediment/Nutrients/Mercury/Siltation/Turbidity TMDL Control Requirements**

Sediment, nutrient and mercury TMDLs identify sediment from roads as a significant or primary source of these pollutants. Measures that control the discharge of sediment can be effective in controlling releases of nutrients and mercury. Therefore, the Department shall implement control measures to prevent or minimize erosion and sediment discharge. This can be achieved by protecting hillsides, intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying natural runoff flow patterns.

**C. Metals/Toxics/Pesticides TMDL Control Requirements**

1. **Fine Particulates**

Toxic pollutants and/or heavy metals have a high affinity for adherence to fine sediment, such as particles from tires, brake parts, and the road surfaces. Therefore, the appropriate control measures for metals and toxics are to control erosion and prevent or minimize the discharge of fine sediment. The Department shall implement control measures to prevent the discharge of fine sediment. This can be achieved by intercepting and filtering runoff, avoiding concentrated flows in natural channels and drains, and not modifying runoff flow patterns.

2**. Dissolved Fraction Metals**

The fraction of metals that are not bound to particulates exists in a dissolved state as free metal ions, as inorganic complexes, or bound to dissolved organic chemicals. Although fine particulate removal also reduces dissolved fraction metals, additional control measures may be necessary for the control of dissolved metals. Typically, treatment for dissolved fraction metals requires physical structures that prevent contaminated runoff

from reaching receiving waters, such as infiltration systems that allow runoff water to percolate into soil.

The Department shall propose and implement appropriate control measures to reduce the discharge of dissolved fraction metals to comply with this Order.

3**. Pesticides**

The Department shall comply with Provision E.2.h.3)b) of this Order which specifies practices for the safe handling and use of pesticides, including compliance with federal, State and local regulations, and label directions. This provision also requires site assessments, applicator training, and implementation of integrated pest and vegetation management practices in its vegetation control program.

**D. Trash TMDL Control Requirements**

Trash in waterbodies reduces habitat for aquatic life, directly impacts wildlife from ingestion or entanglement, impacts human health from pathogens, and impacts the aesthetics of waterbodies.

1. The discharge of trash to receiving waters is prohibited. The Department shall comply with this prohibition in all significant trash generating areas in the watersheds subject to trash TMDL controls, identified as the following:
   a. Highway on-ramps and off-ramps in high density residential, commercial, and industrial land use areas.
   b. Rest area and park-and-ride facilities.
   c. State highways in commercial and industrial land use areas.
   d. Mainline highway segments identified through pilot studies and/or surveys.
2. The Department shall comply with the discharge prohibition of trash through one of the following control measures:
   a. Install, operate, and maintain a full capture system, treatment controls, and/or institutional controls for storm drains that service the significant trash generating areas; or
   b. Coordinate with neighboring municipalities that have jurisdiction over significant trash generating areas and/or priority land use areas (high density residential, industrial, commercial, mixed urban, and public transportation stations) to implement Section III.D.2.a above.
3. The Department shall submit as part of its ***TMDL STATUS REVIEW REPORT*** a determination of the highway characteristics that may qualify as significant trash generating areas by October 1, 2015, and
4. The Department shall submit as part of its ***TMDL STATUS REVIEW REPORT*** the status of each of the applicable control measures specified in Section III.D.2 above.

The constituents of Attachment II are not applicable for this pollutant category; therefore the Department is exempted from monitoring for the constituents listed in Attachment II for the waterbodies listed only for trash impairments.

**E. Bacteria TMDL Control Requirements**

The constituents of Attachment II are not applicable for this pollutant category; therefore the Department is exempted from monitoring for the constituents listed in Attachment II for the waterbodies listed only for bacteria impairments.

1. Dry-Weather Flows

   Dry weather non-storm water discharges may significantly increase bacteria loading to receiving waters. Therefore, the Department shall implement control measures to ensure that the effective prohibition of non-storm water discharges (Provision B.2. of this Order) is implemented according to the prioritized work schedule specified in Section I of this attachment. The prohibition of non-storm water discharges can be achieved through infiltration, diversion, or other methods.

2. Wet-Weather Flows

   Wet weather storm water discharges also contribute significant bacteria loads to receiving waters. The principal impact is to the water contact recreation beneficial use (REC-1). The Department shall implement control measures/BMPs to prevent or eliminate the discharge of bacteria from its ROW. Source control and preemptive activities such as street sweeping, clean-up of illegal dumping, public education on littering; and BMPs such as retention/detention, infiltration, diversion of storm water prevent or eliminate the discharge of bacteria to receiving waters.

**F. Diazinon TMDL Control Requirements**

Diazinon is an organophosphate pesticide used in agriculture. It is no longer registered by the California Department of Pesticide Regulation for non-agricultural uses. The Department does not use diazinon on its ROW. The discharge of diazinon is prohibited.

**G. Selenium TMDL Control Requirements**

Selenium is naturally occurring in geologic formations, soils and aquatic sediments. Storm water runoff, dewatering, ground water seepage, irrigation of high selenium content soils, and oil refineries are identified as significant sources of selenium. The Department shall implement control measures to control the discharge of selenium, unless the Department can demonstrate one of the following:

1. There is no exceedance of an applicable receiving water limitation for selenium in the receiving water(s) at, or immediately downstream of, the Department's outfall(s), or
2. There is no direct or indirect discharge from the Department's outfall(s) to the receiving water during the time period subject to the WLA.

The Department does not have to comply with the monitoring requirements of Attachment II in demonstrating non-exceedance or no discharge of selenium.

**H. Temperature TMDL Control Requirements**

Maintenance activities may increase receiving water temperatures as a result of vegetation removal and/or erosion and sedimentation. Sedimentation and erosion control measures for temperature impairments are being required in accordance with Section III.B. Therefore, the Department shall:

1. Preserve existing riparian biotic conditions immediately adjacent to receiving waters susceptible to temperature increases,
2. Provide effective shade near receiving waters susceptible to temperature increases, and
3. Maintain site potential effective shade near receiving waters susceptible to temperature increases.

Alteration of riparian biotic conditions that may increase sedimentation or reduce effective shade shall receive prior written authorization by the applicable Regional Water Board Executive Officer or designee.

Site-specific Potential Effective Shade is defined as the shade equivalent to that provided by topography and potential vegetation conditions at a site. Effective shade is the percentage of direct beam solar radiation that attenuated and scattered before reaching the ground or stream surface from topographic and vegetation conditions. The term “site-specific potential” is defined as the vegetation conditions possible at a location, considering the vegetation species present, and any natural factors that limit vegetation size and density.

**I. Chloride TMDL Control Requirements**

Elevated levels of chloride in receiving waters affect their beneficial use for agricultural irrigation. Chloride in the Santa Clara River watershed is principally due to increased salt loadings from imported water and the use of self-regenerating water softeners. The Department does not discharge significant amounts of chloride and any minimal discharges are expected to be addressed under the requirements of this Order. No additional TMDL implementation actions for control of chloride are required in this attachment.

# REGIONAL WATER BOARD SPECIFIC REQUIREMENTS

## PART 1
## NORTH COAST REGION

1. North Coast Regional Water Board Resolution R1-2004-0087 directs its staff to utilize existing regulatory programs to address sources of sediment within sediment impaired watersheds. The Department owns road right-of-way and other property within watersheds that are listed as impaired for sediment. Some of these facilities have sources of sediment (eroding shoulders, failed culverts, unstabilized cut and fill slopes, etc.) that discharge into sediment impaired waterbodies. Consistent with Resolution R1-2004-0087 and the Water Quality Control Plan for the North Coast Region, the Department shall take the following steps in watersheds listed for sediment to identify, prioritize and control sources of sediment that discharge anthropogenic amounts of sediment into impaired waters. These requirements are in addition to any watershed-specific TMDL implementation requirements listed in Attachment IV of this Order. Steps to be taken include:

   a. Inventory: Identify sources of excess sediment or threatened discharge, and quantify the discharge or threatened discharges from the source(s).

   b. Prioritize: Prioritize efforts to control discharge of excess sediment based on, but not limited to, severity of threat to water quality and beneficial uses, the feasibility of source control, and source site accessibility. The inventory and prioritized steps shall be completed within two (2) years of the adoption of this Order and updated annually. This step is not required if the Department is implementing the requirements of Attachment IV for sediment TMDLs as the given reaches have already been prioritized within the context of statewide implementation.

   c. Implement: Develop and implement feasible sediment control practices to prevent, minimize, and control the discharge.

   d. Monitor and Adapt: Use monitoring results to direct adaptive management measures in order to refine and adjust erosion control practices and implementation schedules, until sediment discharge is reduced and no longer causes a violation of any sediment related narrative or numeric objective.

   Each District within the North Coast Region shall include a time schedule for the above-referenced activities within the District Workplan for Regional Water Board approval. The time schedule shall implement the required activities as quickly as feasible. An annual update on activities and compliance with the projected time schedule shall be included in each subsequent annual report.

2. Removal of riparian vegetation may result in a threatened discharge or an exceedance of a water quality objective. The North Coast Region has many watersheds that are impaired for excess sediment and temperature. Riparian vegetation shall be protected and restored to the greatest extent feasible and removal may require permitting by the Regional Water Board.

## PART 2
## SAN FRANCISCO BAY REGION

**1. High Trash Generation Areas**

The Department shall demonstrate compliance with Discharge Prohibition 7, Table 4-1 of the San Francisco Bay Regional Water Board Basin Plan through the timely implementation of control measures in all high trash generating areas in the San Francisco Bay Region, identified as the following:

a. Freeway on- and off-ramps in high density residential, commercial and industrial land uses.
b. Rest areas and park-and-rides.
c. State highways in commercial and industrial land use areas.
d. Other freeway segments as identified by maintenance staff and/or trash surveys.

**2. Control Measures**

The Department shall comply with the prohibition of discharge for trash through implementation of the following control measures:

a. Install, operate, and maintain full trash capture systems, treatment controls, and/or enhanced maintenance controls for storm drains or catchments that service the significant trash generating areas.
b. Coordinate with neighboring MS4 permittees to construct, operate, and maintain full trash capture systems, treatment controls, and/or enhanced maintenance controls in high trash generating areas and/or priority land use areas (high density residential, industrial, commercial, and public transportation stations).

All installed devices that meet the full trash capture definition (See “Full Capture System”, Attachment VIII) may be counted toward this requirement regardless of date of installation.

**3. Coordination with Local Entities**

The Department may choose to establish a municipal coordination plan to design, build, operate, and/or maintain controls in conjunction with other watershed stakeholders. The Minimum Full Trash Capture requirement may be met with the Department specific activities and devices, or from load reduction resulting from municipal coordination implementation, or any combination thereof, so long as the municipal coordination activities meet the full trash capture standard.

**4. Assessment**

The Department shall assess the effectiveness of enhanced maintenance controls implemented in high trash generation areas. This assessment will include controls implemented in coordination with local municipalities.

**5. Additional**

a. Abate trash from construction and reconstruction projects.
b. Include trash capture devices on the outlets of treatment systems for new and redeveloped highway projects to achieve the full trash capture standard.

**6. Reporting**

In each Annual Report, as part of the *TMDL STATUS REVIEW REPORT,* the Department shall provide a per District summary of the following:

a. Trash load reduction actions.
b. Full trash capture installation and maintenance.
c. Implementation of enhanced maintenance controls.
d. A map and list of high trash generation areas and the installed controls addressing each area.
e. The reporting of trash load shall be in a manner approved by the Executive Officer.
f. Municipal coordination implementation.

**7. Storm Water Pump Stations**

The Department shall comply with the following implementation measures to reduce polluted water discharges from its pump stations:

a. Complete an inventory of pump stations within the Department's jurisdiction in the San Francisco Bay Region, including locations and key characteristics[41] and submit to the Regional Water Board by October 1, 2015.
b. Inspect and collect dissolved oxygen (DO) data from 20 percent of the pump stations once a year (100 percent in five years) after a minimum of a two week antecedent period with no precipitation. DO monitoring is exempted where all discharge from a pump station remains in the storm water collection system or infiltrates into a dry creek immediately downstream.
c. If DO levels are at or below three milligrams per liter (3 mg/L), apply corrective actions, such as continuous pumping at a low flow rate, aeration, or other appropriate methods to maintain DO concentrations of the discharge above 3 mg/L.
d. Report inspection and monitoring results in the Annual Report.

[41] Characteristics include name of pump station, latitude and longitude in NAD83, number of pumps, drainage area in acres, dominant land use(s), first receiving water body, maximum pumping capacity of station in gallons per minute (gpm), flow measurement capability (Y or N), flow measurement method, average wet season discharge rate in gpm, dry season discharge (Y, N, or unknown), nearest municipal wastewater treatment plant, wet well storage capacity in gallons, trash control (Y or N), trash control measure, and date built or last updated.

## PART 3
## LAHONTAN REGION

The Water Quality Control Plan for the Lahontan Region (Basin Plan) has additional requirements which have been historically applied to the Department's permits and which apply to this NPDES Permit in the Lahontan Region. These requirements include:

1. For projects meeting the criteria specified in Provision E.2.d.of the permit (Project Planning and Design), the following numeric sizing criteria for storm water treatment control BMPs apply:

   Where storm water runoff is determined to have connectivity to surface waters and/or is not adequately infiltrated or treated by the natural environment, storm water/urban runoff collection, treatment, and/or infiltration disposal facilities shall be designed, installed, and maintained for the discharge of storm water runoff from all impervious surfaces generated by the 20-year, one-hour design storm (1) within the Truckee River Hydrologic Unit (3/4-inch of rain), (2) within the East Fork Carson River and West Fork Carson River Hydrologic Units (one inch of rain), and (3) within the Mammoth Creek Hydrologic Unit above 7,000-foot elevation (one inch of rain). Hydrologic evaluations may be required or may be conducted consistent with the NEAT study described in item No. 2 below to help determine areas where infiltration of the 20-year, one-hour storm is required.

2. In 2009, the Department completed the Natural Environment as Treatment (NEAT) study and report for 38 miles of roadway within the Lake Tahoe Hydrologic Unit. The NEAT approach is consistent with the strategic approach required by this permit. Projects developed within the NEAT study area shall be designed and constructed based on the priority areas identified by the study.

3. Unless granted a variance by the Lahontan Regional Water Board Executive Officer, there shall be neither removal of vegetation nor disturbance of existing ground surface conditions between October 15 of any year and May 1 of the following year, except when there is an emergency situation that threatens the public health or welfare. This prohibition period applies to the Lake Tahoe, Truckee River, East Fork Carson River, and West Fork Carson River Hydrologic Units and above the 5,000-foot elevation in the portions of Mono and Inyo Counties within the Lahontan Region.

4. Project Review Requirements
   a. The Department shall participate in early project design consultation for all projects within the Lake Tahoe, Truckee River, East and West Forks Carson River and Mammoth Creek Hydrologic Units.
   b. The Department must solicit Lahontan Regional Water Board staff review when project development/design is at the 20 to 30 percent design level (prior to Project "Approval" and Environmental Document), 60 percent design level, and 90 percent design level (Plans, "Specifications" and Estimates).

*UNOFFICIAL DRAFT — Not Certified by Clerk*

# ATTACHMENT VI — STANDARD PROVISIONS

1. **Duty to Comply.** The Department shall comply with all of the conditions of this Order. Any permit noncompliance constitutes a violation of the CWA and the Porter-Cologne Water Quality Control Act, which may be grounds for enforcement action or denial of permit coverage. [40 C.F.R. § 122.41(a)]

   The Department shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. [40 C.F.R. § 122.41(a)(1)]

2. **Modification, Revocation and Reissuance, or Termination.** This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Department for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any General Permit condition.

3. **Enforcement**
   a. The provision contained in this enforcement section shall not act as a limitation on the statutory or regulatory authority of the State and Regional Water Board.

   b. Any violation of the Order constitutes violation of the California Water Code and regulations adopted hereunder and the provisions of the Clean Water Act, and is the basis for enforcement action, permit termination, permit revocation and reissuance, denial of an application for permit reissuance; or a combination thereof.

   c. The State and Regional Water Boards may impose administrative civil liability may refer a discharger to the State Attorney General to seek civil monetary penalties, may seek injunctive relief or take other appropriate enforcement action as provided in the California Water Code or federal law.

   d. All applications, reports, or information submitted to the State Water Board or Regional Water Boards shall be signed and certified. The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both. [40 C.F.R. § 122.41(k)]

4. **Need to Halt or Reduce Activity not a Defense.** It shall not be a defense for the Department in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. [40 C.F.R. § 122.41(c)]

5. **Duty to Mitigate.** The Department shall take all reasonable steps to minimize or prevent any discharge in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. [40 C.F.R. § 122.41(d)]

6. **Proper Operation and Maintenance.** The Department at all times shall properly operate and maintain any facilities and systems of treatment and control (and related

appurtenances) which are installed or used by the Department to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems installed by the Department only when necessary to achieve compliance with the conditions of this Order. [40 C.F.R. § 122.41(e)]

7. **Property Rights.** This Order does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, State, or local laws or regulations. [40 C.F.R. § 122.41(g)]

8. **Duty to Provide Information.** Within a reasonable time specified by the State Water Board, Regional Water Boards, or U.S. EPA, the Department shall furnish records, reports, or information required to be kept by this Order, and shall furnish any information requested to determine whether cause exists for modifying, revoking, and reissuing, or terminating this Order or to determine compliance with this Order. [40 C.F.R. § 122.41(h)]

9. **Inspection and Entry.** [40 C.F.R. § 122.41(i)] Upon the presentation of credentials and other documents as may be required by law, the Department shall allow the State and Regional Water Boards, or U.S. EPA to:

   a. Enter upon the Department's premises where a regulated facility or activity is located or conducted or where records are required to be kept under the conditions of this Order;

   b. Have access to and copy at reasonable times any records that must be kept under the conditions of this Order;

   c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

   d. Sample or monitor at reasonable times for the purposes of assuring ensuring permit compliance, or as otherwise authorized by the Clean Water Act.

10. **Monitoring and Records.** [40 C.F.R. § 122.41(j)]

   a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

   b. The Department shall retain records of all monitoring information for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the State Water Board's Executive Director or Regional Water Board's Executive Officer at any time.

   c. Records of monitoring information shall include:

      i. The date, exact place, and time of sampling or measurements;
      ii. The individual(s) who performed the sampling or measurements;
      iii. The date(s) analyses were performed;
      iv. The individual(s) who performed the analyses;
      v. The analytical techniques or methods used; and
      vi. The results of such analyses.

   d. Monitoring must be conducted according to test procedures approved under 40 C.F.R. § 136 unless another method is required under 40 C.F.R. subchapters N or O.

e. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both.

11. **Signatory Requirements.** All reports, certifications, and records required by this Order or requested by the State Water Board and Regional Water Boards or USEPA shall be signed by either a principal executive officer or by a duly authorized representative. A person is a duly authorized representative only if [40 C.F.R. §§ 122.22 & 122.41(k)]:

    a. The authorization is made in writing by the principal executive officer; and

    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the Department. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

    If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, the Department shall provide a new authorization prior to submittal of any reports, certifications, or records signed by the newly authorized representative.

12. **Certification.** Any person signing documents under Provision 11 above shall make the following certification [40 C.F.R. § 122.22(d)]:

    *"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

13. **Reporting Requirements.**
    a. *Planned changes*. The Department shall give advance notice to the State Water Board and the appropriate Regional Water Board of any planned physical alteration or additions to the permitted facility. Notice is required under this provision only when the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged; [40 C.F.R. § 122.41(l)(1)]

    b. *Anticipated noncompliance*. The Department shall give advance notice to the appropriate Regional Water Board of any planned changes at the permitted facility or activity which may result in noncompliance with Permit requirements; [40 C.F.R. § 122.41(l)(2)]

c. *Compliance Schedules*. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order shall be submitted no later than 14 days following each scheduled date; [40 C.F.R. § 122.41(l)(5)]

d. *Other Information*. Where the Department becomes aware that it failed to submit any relevant facts, or submitted incorrect information in a permit application or in any required report, it shall promptly submit such facts or information [40 C.F.R. § 122.41(l)(8)].

e. The Department shall submit, except for the Annual Report, one copy of each report required by the permit to the State Water Board. The Department shall also submit one copy to each of the appropriate Regional Water Boards. The Department may choose to submit its properly signed reports electronically into SMARTS in the Portable Document Format (PDF) and submit hard copies only upon request of the State or Regional Water Board staff.

14. **Oil and Hazardous Substance Liability.** Nothing in this Order shall be construed to preclude the institution of any legal action or relieve the Department from any responsibilities, liabilities, or penalties to which the Department is or may be subject to under Section 311 of the CWA.

15. **Severability.** The provisions of this Order are severable; and if any provision of this Order or the application of any provision of this Order to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected thereby.

16. **Availability.** A copy of this Order shall be maintained at the facility and be available at all times to the appropriate facility personnel and to representatives of the Regional Water Boards, State Water Board, or USEPA.

17. **Education.** The Department shall ensure that all personnel whose decisions or activities could affect storm water quality are familiar with the requirements of this NPDES Permit.

## ATTACHMENT VII — LIST OF ACRONYMS & ABBREVIATIONS

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|---|---|
| ASBS | Areas of Special Biological Significance |
| BAT | Best Available Technology Economically Achievable |
| Basin Plans | Regional Water Quality Control Plans |
| BCT | Best Conventional Pollutant Control Technology |
| BMPs | Best Management Practices |
| CCR | California Code of Regulations |
| CEQA | California Environmental Quality Act |
| CFR | Code of Federal Regulations |
| CGP | Construction General Permit - NPDES General Permit for Storm Water Discharges Associated with Construction Activities |
| CTR | California Toxics Rule |
| CWA | Clean Water Act |
| CWC | California Water Code |
| Department | California Department of Transportation (Caltrans) |
| EC | Electrical Conductivity |
| EMA | Emergency Management Agency |
| ESA | Environmentally Sensitive Area |
| FPPP | Facility Pollution Prevention Plan |
| GPS | Global Positioning System |
| Hydromodification | Hydrograph Modification |
| IC/ID | Illegal Connection/ Illicit Discharge |
| IGP | Industrial General Permit - NPDES General Permit for Discharges Associated with Industrial Activities Excluding Construction Activities |
| LA | Load Allocation |
| LID | Low Impact Development |
| MEP | Maximum Extent Practicable |
| MRP | Monitoring and Reporting Program |
| MS4 | Municipal Separate Storm Sewer System |
| NCIR | Non-Compliance Incident Report |
| NOI | Notice of Intent |
| NPDES | National Pollutant Discharge Elimination System |
| Ocean Plan | California Ocean Plan |
| PAHs | Polycyclic Aromatic Hydrocarbons |
| POTW | Publicly Owned Treatment Works |
| Regional Water Board | Regional Water Quality Control Board |
| ROW | Department Right-of-Way |
| State Water Board | State Water Resources Control Board |
| SUSMP | Standard Urban Storm Water Mitigation Plan |
| SWAMP | Surface Water Ambient Monitoring Program |

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|---|---|
| SWMP | Storm Water Management Plan |
| SWPPP | Storm Water Pollution Prevention Plan |
| TCGP | Tahoe Construction General Permit |
| TDS | Total Dissolved Solids |
| TMDL | Total Maximum Daily Load |
| TPH | Total Petroleum Hydrocarbon |
| TSS | Total Suspended Solids |
| USEPA | United States Environmental Protection Agency |
| WDRs | Waste Discharge Requirements |
| WLA | Waste Load Allocation |
| WQBEL | Water Quality-Based Effluent Limitation |
| WQO | Water Quality Objective |
| WQS | Water Quality Standard |
| Workplans | District Workplans |

# ATTACHMENT VIII - GLOSSARY

**Acute Toxicity.** A chemical stimulus severe enough to rapidly induce an effect; in aquatic toxicity tests, an effect observed within 96 hours or less is considered acute. When expressed as toxic units acute (TUa), TUa=100/96-hour LC 50 percent. Acute toxicity can also be expressed as lethal concentration 50 percent (LC 50).

**Administrative Noncompliance.** Failure to comply with the procedural requirements of this Order. Examples include but are not limited to: failure to submit required reports or documents required by the Permit and/or SWMP, missed deadlines or late submittal, and/or failure to submit required information, failure to develop and/or maintain site-specific FPPP or to implement any other procedural requirement of the Permit.

**Areas of Special Biological Significance (ASBS).** Ocean or estuarine areas designated by the State Water Board that require special protection of species or biological communities to the extent where alteration of natural water quality is undesirable. The California Ocean Plan describes ASBSs as “those areas containing biological communities of such extraordinary value that no risk of change in their environment as the result of man's activities can be entertained". ASBSs are a subset of State Water Quality Protection Areas.

**Basin Plans.** Basin Plans (regional water quality control plans) are the principal regulatory mechanisms for protection of water quality in California. Basin plans describe the beneficial uses that each water body supports, e.g. drinking, swimming, fishing, and agricultural irrigation; the water quality objectives necessary to protect those uses; and the program implementation needed to achieve the objectives, such as waste discharge permits and enforcement actions.

**Batch Plant.** A processing plant where concrete or asphalt is mixed before transport to a construction site. Batch plants are considered to be industrial activities as defined in 40 CFR 122.26(b)(14) (iii) and are regulated under the Industrial General Permit.

**Beneficial Uses.** The uses of the water protected against degradation including, but not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

**Best Available Technology Economically Achievable (BAT).** Technology-based compliance standard established by the Clean Water Act. BAT is based on consideration of the age of the equipment and facilities involved, the processes employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements) and other factors as deemed appropriate. BAT effluent limitations guidelines, in general, represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

**Best Conventional Pollutant Control Technology (BCT).** Technology-based compliance standard for the discharge from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, oil and grease. BCT is established by a two-part “cost reasonableness” test, which compares the cost for an industry to reduce its pollutant discharge with the cost to a POTW for similar levels of reduction of a pollutant loading. The

second test examines the cost-effectiveness of additional industrial treatment beyond BCT. Limits must be reasonable under both tests.

***Best Management Practices* (BMPs).** Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs include structural and nonstructural controls, treatment requirements, operation and maintenance procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

***Non-Approved BMP.*** Any BMP for maintenance, construction, design pollution prevention, and treatment that are not in the Department's SWMP (CTSW-RT-02-008) or Statewide Storm Water Quality Practice Guidelines (CTSW-RT-02-009) approved for statewide use.

***Post-Construction BMPs.*** Any structural or non-structural controls that detain, retain, or filter storm water to prevent the release of pollutants to receiving waters after final site stabilization is attained.

***Structural BMPs.*** Any structural facility designed and constructed to mitigate the adverse impacts of storm water runoff (e.g. canopy, structural enclosure). The category may include both Treatment Control BMPs and Source Control BMPs.

***Source Control BMPs.*** Any schedules of activities, prohibitions of practices, maintenance procedures, managerial practices or operational practices that aim to prevent storm water pollution by reducing the potential for contamination at the source. Examples include treatment techniques that use natural measures to reduce pollution levels, do not require extensive construction efforts, and/or promote pollutant reduction by controlling the pollutant source.

***Treatment Control BMPs.*** Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

**California Ocean Plan (Ocean Plan).** The water quality control plan for California near-coastal waters, first adopted by the State Water Resources Control Board in 1972. The purpose of the Ocean Plan is to protect the beneficial uses of the State's ocean waters by identifying water quality objectives, setting general waste discharge requirements, and listing discharge prohibitions. In addition, the Ocean Plan is used to develop and update statewide water quality control plans, policies, and standards involving marine waters.

**California Toxics Rule.** The Federal regulation, found at 40 CFR § 131.38. Establishes water quality criteria (limits) for heavy metals and other toxic compounds for the protection of beneficial uses of surface waters in California.

**Catch Basins.** A storm drain inlet having a sump below the outlet to capture settled solids, debris, sediment, and prevent clogging.

**Chronic Toxicity.** The ability of a substance or a mixture of substances to cause harmful effects over an extended period of time. Expressed as toxic units chronic (TUc), TUc=100/NOEL, where NOEL is the No Observed Effect Level.

**Construction Activity.** Any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that results in a land disturbance. Construction does not include emergency construction activities required to immediately protect public health and

safety or routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.

**Cut and Fill.** The process of moving earth by excavating part of an area and using the excavated material for adjacent embankment of fill areas.

**Department Airspaces.** Any area within the Department's operating right-of-way that can safely accommodate a privately managed use such as: parking lots, self storage units, commercial businesses, light industry, and cellular telephone towers. The Department executes airspace leases with third parties for these uses.

**Department Facility.** A Maintenance Facility, Non-maintenance Facility, Highway Facility, Industrial Facility, or Vehicle Maintenance.

***Maintenance Facility.*** A facility under Department ownership or control that contains fueling areas, maintenance stations/yards, waste storage or disposal facilities, wash racks, equipment or vehicle storage and materials storage areas.

***Non-maintenance Facility*.** Laboratories or office buildings used exclusively for administrative functions.

***Highway Facility.*** Highways are linear facilities designed to carry vehicular and pedestrian traffic. These include freeways, highways, and expressways as designated by the California Streets and Highway Code and the California legislature. These facilities also include all support infrastructure associated with these freeways, including bridges, toll plazas, inspection and weigh stations, sound walls, retaining walls, culverts, vegetated slopes, shoulders, intersections, off ramps, on ramps, over passes, lights, signal lights, gutter, guard rail, and other support facilities. The support infrastructure is considered a Highway Facility only when accompanied by an increase in highway impervious surface. Otherwise, it is considered a non-highway.

***Industrial Facility*.** A collection of industrial processes discharging storm water associated with industrial activity within the property boundary or operational unit.

***Non-Highway Facility*.** For purposes of this permit, a Non-Highway Facility is any facility not meeting the definition of a Highway Facility, including but not limited to rest stops, park and ride facilities, maintenance stations, vista points, warehouses, laboratories, and office buildings.

***Discharge.*** When used without qualification means the discharge of a pollutant.

***Direct Discharge.*** Any discharge from the MS4 that does not meet the definition of an indirect discharge.

***Indirect Discharge.*** Any discharge from the MS4 that is conveyed to the receiving water through 300 feet or more of an unlined ditch or channel as measured between the discharge point from the MS4 and the receiving water.

**Discharge of a Pollutant.** The addition of any pollutant or combination of pollutants to waters of the United States from any point source, or any addition of any pollutant or combination of pollutants to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. The term includes additions of pollutants to waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a

treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works.

**District Workplans (DWPs).** Annual workplans prepared by each District containing descriptions of all activities and projects to be undertaken in the District that are necessary to implement the SWMP and comply with the requirements of this Order. DWPs are submitted annually with the Annual Report. Formerly known as the Regional Work Plans.

**Drainage Inlet.** A location where water runoff enters a storm water drainage system that includes streets, gutters, conduits, natural or artificial drains, channels and watercourses, or other facilities that are owned, operated, maintained and used for the purpose of collecting, storing, transporting or disposing of storm water

**Effluent.** Any discharge from the MS4.

**Emergency.** Any sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. "Emergency" includes such occurrences as fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage.

**Erosion.** The diminishing or wearing away of land due to wind, or water. Often the eroded material (silt or sediment) becomes a pollutant via stormwater runoff.

Erosion occurs naturally, but can be intensified by land disturbing and grading activities such as farming, development, road building, and timber harvesting.

**Facility Pollution Prevention Plan** (**FPPP**)**.** A plan that identifies the functional activities specific to the maintenance facility and the applicable BMPs and other procedures utilized by facility personnel to control the discharge of pollutants in storm water. Facilities subject to FPPPs include: maintenance yards/stations; material storage facilities/permanent stockpile locations (if not totally enclosed); equipment storage and repair facilities, roadside rest areas, agricultural and highway patrol weigh stations, decant storage or disposal locations, and permanent and temporary solid and liquid waste management sites.

FPPPs are not required for temporary stockpile locations (in continuous use for less than one year). All temporary stockpile locations shall implement the applicable best management practices defined in the Caltrans Stormwater Quality Handbook Maintenance Staff guide. Any stockpile location in continuous use for more than one year is deemed permanent and requires a Facility Pollution Prevention Plan.

**Full Capture System.** A full capture system is any single device or series of devices that traps all particles retained by a five (5) mm mesh screen and has a design treatment capacity of not less than the peak flow rate Q resulting from a one-year, one-hour, storm in the subdrainage area.

The Rational equation is used to compute the peak flow rate: $Q = C \times I \times A$

Where:

Q = design flow rate (cubic feet per second, cfs);
C = runoff coefficient (dimensionless);
I = design rainfall intensity (inches per hour, as determined per a rainfall isohyetal map), and
A = subdrainage area (acres).

**Hydrograph Modification (Hydromodification).** The alteration of the hydrologic characteristics of surface waters through watershed development. Under past practices, new and re-development construction activities resulted in urbanization, which in turn modified natural watershed and stream processes. The impacts of hydromodification include, but are not limited to, increased bed and bank erosion, loss of habitat, increased sediment transport and deposition, and increased flooding. Urbanization does this by altering the terrain, modifying the vegetation and soil characteristics, introducing impervious surfaces such as pavement and buildings, and altering the condition of stream channels through straightening, deepening, and armoring. These changes affect hydrologic characteristics in the watershed and affect the supply and transport of sediment in the stream system.

**Hydromodification Management Plan.** A plan to control and reduce the impacts of hydrograph modification from development activities in a watershed.

**Illegal Connection/Illicit Discharge (IC/ID).**

***Illegal Connection.*** An engineered conveyance that is connected to an MS4 without authorization by local, state, or federal statutes, ordinances, codes, or regulations.

***Illicit Discharge.*** Any discharge to an MS4 that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. It includes all non-storm water discharges except conditionally exempt non-storm water discharges.

***Illegal Dumping*.** Discarding or disposal within the Department's right-of-way, properties or facilities, either intentionally or unintentionally, of trash and other wastes in non-designated areas that may contribute to storm water pollution.

**Impervious Cover.** Any surface in the landscape that cannot effectively absorb or infiltrate rainfall; for example, sidewalks, rooftops, roads, and parking lots.

**Incidental Runoff.** Unintended small amounts (volume) of runoff from landscape irrigation, such as minimal over-spray from sprinklers that escapes the irrigated area. Water leaving an irrigated area is not considered incidental if it is due to improper (e.g. during a precipitation event) or excessive application, if it is due to intentional overflow or application, or if it is due to negligence. Leaks and other discharges (e.g. broken sprinkler heads) are not considered incidental if not corrected within 72 hours of learning of the discharge or if the discharge exceeds 1000 gallons.

**Land Use.** How land is managed or used by humans (e.g., residential and industrial development, roads, mining, timber harvesting, agriculture, grazing, etc.). Land use is generally regulated at the local level in the U.S. based on zoning and other regulations. Land use mapping differs from land cover mapping in that it is not always obvious what the land use is from visual inspection.

**Load Allocation.** The portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources. Load allocations are best estimates of the loading, which can range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting the loading (40 CFR 130.2(g)).

**Low Impact Development (LID).** An approach to land development with the goal of mimicking or replicating the pre-project hydrologic regime through the use of design techniques to create a functionally equivalent hydrologic site design. Hydrologic functions

of storage, infiltration and ground water recharge, as well as the volume and frequency of discharges are maintained through the use of integrated and distributed micro-scale storm water retention and detention areas, reduction of impervious surfaces, and the lengthening of runoff flow paths and flow time. Other strategies include the preservation/protection of environmentally sensitive site features such as riparian buffers, wetlands, steep slopes, mature trees, flood plains, woodlands, and highly permeable soils.

**Maximum Extent Practicable (MEP).** The minimum required performance standard for implementation of municipal storm water management programs to reduce pollutants in storm water. Clean Water Act § 402(p)(3)(B)(iii) requires that municipal permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." MEP is the cumulative effect of implementing, evaluating, and making corresponding changes to a variety of technically appropriate and economically feasible BMPs, ensuring that the most appropriate controls are implemented in the most effective manner. To achieve the MEP standard, municipalities must employ whatever BMPs are technically feasible and are not cost-prohibitive. Reducing pollutants to the MEP means choosing effective BMPs, and rejecting applicable BMPs only where other effective BMPs will serve the same purpose, or the BMPs would not be technically feasible, or the costs would be prohibitive. A final determination of whether a municipality has reduced pollutants to the MEP can only be made by the State or Regional Water Boards.

**Municipal Separate Storm Sewer System (MS4).** A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is: (1) Owned or operated by a state, city, town, village, or other public entity that discharges to waters of the U.S.; (2) Designed or used to collect or convey storm water; (3) Not a combined sewer; and (4) Not part of a Publicly Owned Treatment Works.

**Natural Ocean Water Quality.** The water quality (based on selected physical, chemical and biological characteristics) that is required to sustain marine ecosystems, and which is without apparent human influence, i.e., an absence of significant amounts of: (a) man-made constituents (e.g., DDT); (b) other chemical (e.g., trace metals), physical (temperature/thermal pollution, sediment burial), and biological (e.g., bacteria) constituents at concentrations that have been elevated due to man's activities above those resulting from the naturally occurring processes that affect the area in question; and (c) non-indigenous biota (e.g., invasive algal bloom species) that have been introduced either deliberately or accidentally by man. Discharges "shall not alter natural ocean water quality" as determined by a comparison to the range of constituent concentrations in reference areas agreed upon via the regional monitoring program(s). If monitoring information indicates that natural ocean water quality is not maintained, but there is sufficient evidence that a discharge is not contributing to the alteration of natural water quality, then the Regional Water Board may make that determination. In this case, sufficient information must include runoff sample data that has equal or lower concentrations for the range of constituents at the applicable reference area(s).

**New Development.** Any newly constructed facility, street, road, highway or contiguous road surface installed as part of a street, road or highway project within the Department's right-of-way.

**Non-Department Activities.** Third party activities that are primarily controlled by encroachment permits, leases, and rental agreements. They include both construction activities and non-construction activities.

**Non-Department Projects.** Same as Non-Department Activities.

**Non-storm Water.** Discharges that are not induced by precipitation events and are not composed entirely of storm water. These discharges include, but are not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, vehicle wash water, concrete washout water, paint wash water, irrigation water, pipe testing water, lawn watering overspray, hydrant flushing, and fire fighting activities.

**Nonpoint Source.** Pollution that is not released through a discrete conveyance but rather originates from multiple sources over a relatively large area. Nonpoint sources can be divided into source activities related to either land or water use, including failing septic tanks, animal agriculture, forest practices, and urban and rural runoff.

**Nuisance.** Anything that meets all of the following requirements: (1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; (2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; (3) occurs during, or as a result of, the treatment or disposal of wastes.

**Perennial Stream.** Any stream shown as a solid blue line on the latest version of the U.S. Geological Survey (USGS) 7.5 minute series quadrangle map (sometimes referred to as a blue-line stream). Where 7.5 minute series maps have not been prepared by USGS, 15 minute series maps are used.

**Pesticide.** Substances intended to repel, kill, or control any species designated a "pest" including weeds, insects, rodents, fungi, bacteria, or other organisms. The family of pesticides (https://www.epa.gov/pesticides) includes herbicides, insecticides, rodenticides, fungicides, algicides, and bactericides.

***Algicide.*** A pesticide that controls algae in swimming pools and water tanks.

***Herbicide.*** A pesticide designed to control or kill plants, weeds, or grasses.

***Insecticide.*** A pesticide compound specifically used to kill or prevent the growth of insects.

***Rodenticide.*** A pesticide or other agent used to kill rats and other rodents or to prevent them from damaging food, crops, or forage.

***Fungicide.*** A pesticide used to control or destroy fungi on food or grain crops.

***Bactericide.*** A pesticide used to control or destroy bacteria, typically in the home, schools, or on hospital equipment.

**pH.** A measure of the degree of acidity or alkalinity in a water sample. The pH of natural waters tends to range between six (6) and nine (9), with neutral being seven (7). Extremes of pH can have deleterious effects on aquatic systems.

***Point source.*** Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged.

**Pollutant.** Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 *et seq.*)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.

**Pollutants of Concern.** Pollutants in a discharge with potential to cause a condition of pollution or nuisance due to the discharge of excessive amounts, proximity to receiving waters, or the properties of the pollutant. Pollutants that impair waterbodies listed under CWA section 303(d) are also Pollutants of Concern. Pollutants in the Department's discharge that may be Pollutants of Concern include, but are not limited to, total suspended solids; sediment; pathogens (e.g., bacteria, viruses, protozoa); heavy metals (e.g., copper, lead, zinc, and cadmium); petroleum products and polynuclear aromatic hydrocarbons; synthetic organics (e.g., pesticides, herbicides, and PCBs); nutrients (e.g., nitrogen and phosphorus fertilizers); oxygen-demanding substances (e.g., decaying vegetation and animal waste), and litter and trash.

***Pollution.*** An alteration of the quality of the waters of the state by waste to a degree which unreasonably affects the beneficial uses of the water or facilities which serve those beneficial uses (Porter-Cologne Water Quality Control Act, section 13050(l)(1)).

**Redevelopment.** The creation, addition, and/or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road widening, the addition or replacement of a structure, and creation or addition of impervious surfaces. Replacement of impervious surfaces includes any activity that removes impervious materials and exposes the underlying soil or pervious subgrade. Redevelopment does not include trenching and resurfacing associated with utility work; pavement grinding and resurfacing of existing roadways; construction of new sidewalks, pedestrian ramps, or bike lanes on existing roadways; or routine replacement of damaged pavement such as pothole repair or replacement of short, non-contiguous sections of roadway. Redevelopment does include replacement of existing roadway surfaces where the underlying soil or pervious subgrade is exposed during construction. Replaced impervious surfaces of this type shall be considered "new impervious surfaces" for purposes of determining the applicability of post-construction treatment controls as provided in provision E.2.d.2).

**Roadway.** Any road within the Department's right-of-way.

**Routine Maintenance.** Activities intended to maintain the original line and grade, hydraulic capacity, or original purpose of a facility. Routine maintenance does not include replacement of existing roadway surfaces where the underlying soil or pervious subgrade is exposed.

**Right-of-Way (ROW).** Real property that is either owned or controlled by the Department or subject to a property right of the Department. Right-of-way that is in current use is referred to as operating ROW.

**Sediment.** Soil, sand, and minerals washed from land into water, usually after rain.

**Slope Lateral Drainage.** Horizontal drains placed in hillside embankments to intercept groundwater and direct it away from slopes to provide stability.

**Spill.** The sudden release of a potential pollutant to the environment.

***Storm Water.*** *Storm water runoff, snowmelt runoff, and surface runoff and drainage, as defined in 40 CFR 122.26 (b)(13).*

**Storm Water Runoff.** The portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, channels or pipes.

**Standard Urban Storm Water Mitigation Plan (SUSMP).** Plans designating the Best Management Practices that must be used in specified categories of development and redevelopment. The State Water Board adopted a precedential decision (Order WQ 2000-11) upholding a SUSMP requirement imposed under a Phase I MS4 permit and requiring SUSMPs in all MS4 permits.

**Storm Water Management Plan (SWMP).** Description of the procedures and practices used to reduce or eliminate the discharge of pollutants to storm drain systems and receiving waters.

**Surface Water Ambient Monitoring Program (SWAMP).** The State Water Board's monitoring, assessment, and reporting program for ambient surface water.

**Threshold Drainage Area (TDA).** The area draining to a location 20 channel widths downstream (representative reach) of a stream crossing (pipe, swale, culvert, or bridge) within Project Limits.

**Threatened Non-compliance.** Any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

**Total Dissolved Solids (TDS).** A quantitative measure of the residual minerals dissolved in water that remain after evaporation of a solution and used to evaluate the quality of freshwater systems.

**Total Kjeldahl Nitrogen (TKN).** The sum of organic nitrogen and total ammonia nitrogen.

**Total Maximum Daily Load (TMDL).** The sum of the individual WLAs for point sources and LAs for nonpoint sources and natural background. If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs (40 CFR 130.2(i)).

**Total Petroleum Hydrocarbon (TPH).** A measure of the concentration or mass of petroleum hydrocarbons in a given amount of soil or water. TPH is a mixture of different compounds from different sources.

**Total Suspended Solids (TSS).** Suspended particulate matter: Fine material or soil particles that remain suspended by the water column. They create turbidity and, when deposited, can smother fish eggs or alevins.

**Toxicity.** The adverse response(s) of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.

**Trash.** All improperly discarded waste material associated with human habitation, of human origin; or from any producing, manufacturing, or processing operation including, but not limited to, product packaging or containers constructed of steel, aluminum, glass, paper,

plastic, and other natural and synthetic materials that are thrown or deposited in waters or where it could be transported, as floating, suspended, and/or settleable materials, to waters of the State, including watersheds. (SWRCB Trash Policy).

**Turbidity.** Murkiness or cloudiness of water, indicating the presence of suspended solids.

**United States Environmental Protection Agency (USEPA).** USEPA works to develop and enforce regulations that implement environmental laws enacted by the United States Congress. USEPA is responsible for researching and setting national standards for the Storm Water Program.

**Waste.** Includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

**Wasteload Allocation (WLA).** The portion of a receiving water's total maximum daily load that is allocated to one of its existing or future point sources of pollution. Waste load allocations constitute a type of water quality-based effluent limitation.

**Water Quality Objectives (WQO).** The limits or levels of water quality elements or biological characteristics established to reasonably protect the beneficial uses of water or to prevent nuisance within a specific area. Water quality objectives may be numeric or narrative.

**Water Quality Standards (WQS).** State-adopted and U.S. EPA-approved water quality standards for surface water bodies. The standards prescribe the beneficial uses (swimmable, fishable, drinkable, etc.) of the water body and establish the WQOs that must be met to protect designated uses.

**Waters of the State.** Any surface water or groundwater, including saline waters, within boundaries of the state, as defined in CWC 13050(e). This Order contains requirements to protect the beneficial uses of waters of the State.

**Waters of the United States.** All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide. Waters of the United States [as defined in 40 CFR 230.3(s)] include all interstate waters and intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use of which would affect or could affect interstate or foreign commerce. The definition also applies to tributaries of the aforementioned waters. See 40 CFR 122.2 for the complete definition, which is hereby incorporated by reference.

**Watershed.** A drainage area or basin in which all water drains or flows toward a central collector such as a stream, river, or lake at a lower elevation.

**Wetlands.** Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

**Workplans.** See District Workplans.

# ATTACHMENT IX: REPORTING REQUIREMENTS

Notes: This table is a partial list of reporting requirements. The Department shall submit all required reports as provided in the Order. Any discrepancy between the text of the NPDES Permit and this table will be resolved in favor of the Permit.
Effective Date of this Order is July 1, 2013
Effective Date of the ASBS Special Protections (General Exception) is March 20, 2012

| Reporting Requirement | Permit Section | Due Date | Frequency |
|---|---|---|---|
| Annual Report | E.3. | October 1, 2013 | Annually |
| Draft ASBS Compliance Plan | E.5.c.2) | September 20, 2013 | 18 months after the General Exception effective date |
| Final ASBS Compliance Plan | E.5.c.2) | September 20, 2015 | 30 months after the General Exception effective date |
| Budget Analysis | E.2.b.3)c) | October 1, 2017 | Year 4 of Permit Cycle |
| Certification of the Adequacy of Legal Authority | E.2.b.2)b) | October 1, 2013 | Annually as part of the Annual Report |
| District Workplans | E.3.b. | October 1, 2013 | Annually as part of the Annual Report |
| Facility Pollution Prevention Plan (FPPP) | E.2.h.2) | October 1, 2013 | Annually as part of the Annual Report and as required by the Regional Water Board |
| Fiscal Analysis | E.2.b.3)b) | October 1, 2013 | Annually as part of the Annual Report |
| IC/ID & Illegal Dumping Response Plan | E.2.h.4)b)ii) | December 31, 2013 | Update as needed annually |
| Incident Report Form | E.2.b.6) and Attachment I | October 1, 2013 | As Needed |
| Landslide Management Plan | E.2.h.3)d) | October 1, 2013 | Year 1 Annual Report |
| Monitoring Results Report (MRR) | E.2.c.5) | October 1, 2013 | Annually |
| Monitoring Site Prioritization (Tier 2) | E.2.c.1) | March 1, 2014 | Within 8 months of the effective date |
| Municipal Coordination Plan | E.2.b.1)b) | October 1, 2013 | To be Included in the SWMP and Progress Report as part of the Annual Report |

| Reporting Requirement | Permit Section | Due Date | Frequency |
|---|---|---|---|
| Overall Program Effectiveness Evaluation | E.2.m.3) | October 1, 2013 | Annually as part of the Annual Report |
| Public Education Program Progress Report | E.2.l.2) | October 1, 2013 | Annually as part of the Annual Report |
| Self-Audit — (includes construction activities) | E.2.m.2) | October 1, 2013 | Annually as part of the Annual Report |
| Stormwater Monitoring & BMP Development Status Report | E.2.e. | October 1, 2013 | Annually as part of the Annual Report |
| Stormwater Treatment BMP Technology Report | E.2.e. | October 1, 2013 | Annually as part of the Annual Report |
| TMDL Status Review Report | E.4.b. | October 1, 2015 | Annually as part of the Annual Report |
| Updated Stormwater Management Plan (SWMP) | E.1.a. | October 1, 2013 | Revisions as part of the Annual Report |
| Waste Management Plan | E.2.h.3)c)iii) | July 1, 2014 | Within 1 year of the Effective Date |

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Linda S. Adams
*Secretary for*
*Environmental Protection*

# State Water Resources Control Board

**Division of Water Quality**
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Mailing Address: P.O. Box 100 • Sacramento, California • 95812-0100
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**Arnold Schwarzenegger**
*Governor*

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR
STORM WATER DISCHARGES
ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE
ACTIVITIES

ORDER NO. 2009-0009-DWQ
NPDES NO**. CAS000002**

| | |
|---|---|
| This Order was adopted by the State Water Resources Control Board on: | **September 2, 2009** |
| This Order shall become effective on: | **July 1, 2010** |
| This Order shall expire on: | **September 2, 2014** |

IT IS HEREBY ORDERED, that this Order supersedes Order No. 99-08-DWQ [as amended by Order No. 2010-0014-DWQ] except for enforcement purposes. The Discharger shall comply with the requirements in this Order to meet the provisions contained in Division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act and regulations and guidelines adopted thereunder.

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board, on September 2, 2009.

AYE: Vice Chair Frances Spivy-Weber
Board Member Arthur G. Baggett, Jr.
Board Member Tam M. Doduc

NAY: Chairman Charles R. Hoppin

ABSENT: None

ABSTAIN: None

Jeanine Townsend
Clerk to the Board

Linda S. Adams
*Secretary for*
*Environmental Protection*

# State Water Resources Control Board

**Division of Water Quality**
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**Arnold Schwarzenegger**
*Governor*

## NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES

## ORDER NO. 2010-0014-DWQ
## NPDES NO. CAS000002

| | |
|---|---|
| Order No. 2009-0009-DWQ was adopted by the State Water Resources Control Board on: | **September 2, 2009** |
| Order No. 2009-0009-DWQ became effective on: | **July 1, 2010** |
| Order No. 2009-0009-DWQ shall expire on: | **September 2, 2014** |
| This Order, which amends Order No. 2009-0009-DWQ, was adopted by the State Water Resources Control Board on: | **November 16, 2010** |
| This Order shall become effective on: | **February 14, 2011** |

IT IS HEREBY ORDERED that this Order amends Order No. 2009-0009-DWQ. Additions to Order No. 2009-0009-DWQ are reflected in blue-underline text and deletions are reflected in red-strikeout text.

IT IS FURTHER ORDERED that staff are directed to prepare and post a conformed copy of Order No. 2009-0009-DWQ incorporating the revisions made by this Order.

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board, on **November 16, 2010.**

AYE: Chairman Charles R. Hoppin
Vice Chair Frances Spivy-Weber
Board Member Arthur G. Baggett, Jr.
Board Member Tam M. Doduc

NAY: None

ABSENT: None

ABSTAIN: None

Jeanine Townsend
Clerk to the Board

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

**State Water Resources Control Board**

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR
STORM WATER DISCHARGES
ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES

ORDER NO. 2012-0006-DWQ
NPDES NO. **CAS000002**

| | |
|---|---|
| Order No. 2009-0009-DWQ was adopted by the State Water Resources Control Board on: | **September 2, 2009** |
| Order No. 2009-0009-DWQ became effective on: | **July 1, 2010** |
| Order No. 2010-0014-DWQ became effective on: | **February 14, 2011** |
| Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ shall expire on: | **September 2, 2014** |
| This Order, which amends Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ, was adopted by the State Water Resources Control Board on: | **July 17, 2012** |
| This Order No. 2012-0006-DWQ shall become effective on: | **July 17, 2012** |

IT IS HEREBY ORDERED that this Order amends Order No. 2009-0009-DWQ. Additions to Order No. 2009-0009-DWQ are reflected in blue-underline text and deletions are reflected in red-strikeout text.

IT IS FURTHER ORDERED that staff are directed to prepare and post a conformed copy of Order No. 2009-000-DWQ incorporating the revisions made by this Order.

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board, on July 17, 2012.

| | |
|---|---|
| AYE: | Chairman Charles R. Hoppin<br>Vice Chair Frances Spivy-Weber<br>Board Member Tam M. Doduc<br>Board Member Steven Moore<br>Board Member Felicia Marcus |
| NAY: | None |
| ABSENT: | None |
| ABSTAIN: | None |

Jeanine Townsend
Clerk to the Board

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## LIST OF ATTACHMENTS



## LIST OF APPENDICES

**STATE WATER RESOURCES CONTROL BOARD**
**ORDER NO. 2009-0009-DWQ**
**[AS AMENDED BY ORDER NO. 2010-0014-DWQ]**
**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**
**GENERAL PERMIT NO. CAS000002**

**WASTE DISCHARGE REQUIREMENTS**
**FOR**
**DISCHARGES OF STORM WATER RUNOFF ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES**

# I. FINDINGS

## A. General Findings

The State Water Resources Control Board (State Water Board) finds that:

1. The federal Clean Water Act (CWA) prohibits certain discharges of storm water containing pollutants except in compliance with a National Pollutant Discharge Elimination System (NPDES) permit (Title 33 United States Code (U.S.C.) §§ 1311 and 1342(p); also referred to as Clean Water Act (CWA) §§ 301 and 402(p)). The U.S. Environmental Protection Agency (U.S. EPA) promulgates federal regulations to implement the CWA's mandate to control pollutants in storm water runoff discharges. (Title 40 Code of Federal Regulations (C.F.R.) Parts 122, 123, and 124). The federal statutes and regulations require discharges to surface waters comprised of storm water associated with construction activity, including demolition, clearing, grading, and excavation, and other land disturbance activities (except operations that result in disturbance of less than one acre of total land area and which are not part of a larger common plan of development or sale), to obtain coverage under an NPDES permit. The NPDES permit must require implementation of Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or eliminate pollutants in storm water runoff. The NPDES permit must also include additional requirements necessary to implement applicable water quality standards.

2. This General Permit authorizes discharges of storm water associated with construction activity so long as the dischargers comply with all requirements, provisions, limitations and prohibitions in the permit. In addition, this General Permit regulates the discharges of storm water associated with construction activities from all Linear

Underground/Overhead Projects resulting in the disturbance of greater than or equal to one acre (Attachment A).

3. This General Permit regulates discharges of pollutants in storm water associated with construction activity (storm water discharges) to waters of the United States from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface.

4. This General Permit does not preempt or supersede the authority of local storm water management agencies to prohibit, restrict, or control storm water discharges to municipal separate storm sewer systems or other watercourses within their jurisdictions.

5. This action to adopt a general NPDES permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21100, et seq.), pursuant to Section 13389 of the California Water Code.

6. Pursuant to 40 C.F.R. § 131.12 and State Water Board Resolution No. 68-16,[1] which incorporates the requirements of § 131.12 where applicable, the State Water Board finds that discharges in compliance with this General Permit will not result in the lowering of water quality standards, and are therefore consistent with those provisions. Compliance with this General Permit will result in improvements in water quality.

7. This General Permit serves as an NPDES permit in compliance with CWA § 402 and will take effect on July 1, 2010 by the State Water Board provided the Regional Administrator of the U.S. EPA has no objection. If the U.S. EPA Regional Administrator objects to its issuance, the General Permit will not become effective until such objection is withdrawn.

8. Following adoption and upon the effective date of this General Permit, the Regional Water Quality Control Boards (Regional Water Boards) shall enforce the provisions herein.

9. Regional Water Boards establish water quality standards in Basin Plans. The State Water Board establishes water quality standards in various statewide plans, including the California Ocean Plan. U.S. EPA establishes water quality standards in the National Toxic Rule (NTR) and the California Toxic Rule (CTR).

[1] Resolution No. 68-16 generally requires that existing water quality be maintained unless degradation is justified based on specific findings.

10. This General Permit does not authorize discharges of fill or dredged material regulated by the U.S. Army Corps of Engineers under CWA § 404 and does not constitute a waiver of water quality certification under CWA § 401.

11. The primary storm water pollutant at construction sites is excess sediment. Excess sediment can cloud the water, which reduces the amount of sunlight reaching aquatic plants, clog fish gills, smother aquatic habitat and spawning areas, and impede navigation in our waterways. Sediment also transports other pollutants such as nutrients, metals, and oils and greases.

12. Construction activities can impact a construction site's runoff sediment supply and transport characteristics. These modifications, which can occur both during and after the construction phase, are a significant cause of degradation of the beneficial uses established for water bodies in California. Dischargers can avoid these effects through better construction site design and activity practices.

13. This General Permit recognizes four distinct phases of construction activities. The phases are Grading and Land Development Phase, Streets and Utilities Phase, Vertical Construction Phase, and Final Landscaping and Site Stabilization Phase. Each phase has activities that can result in different water quality effects from different water quality pollutants. This General Permit also recognizes inactive construction as a category of construction site type.

14. Compliance with any specific limits or requirements contained in this General Permit does not constitute compliance with any other applicable requirements.

15. Following public notice in accordance with State and Federal laws and regulations, the State Water Board heard and considered all comments and testimony in a public hearing on 06/03/2009. The State Water Board has prepared written responses to all significant comments.

16. Construction activities obtaining coverage under the General Permit may have multiple discharges subject to requirements that are specific to general, linear, and/or active treatment system discharge types.

17. The State Water Board may reopen the permit if the U.S. EPA adopts a final effluent limitation guideline for construction activities.

## B. Activities Covered Under the General Permit

18. Any construction or demolition activity, including, but not limited to, clearing, grading, grubbing, or excavation, or any other activity that results in a land disturbance of equal to or greater than one acre.

19. Construction activity that results in land surface disturbances of less than one acre if the construction activity is part of a larger common plan of development or the sale of one or more acres of disturbed land surface.

20. Construction activity related to residential, commercial, or industrial development on lands currently used for agriculture including, but not limited to, the construction of buildings related to agriculture that are considered industrial pursuant to U.S. EPA regulations, such as dairy barns or food processing facilities.

21. Construction activity associated with Linear Underground/Overhead Utility Projects (LUPs) including, but not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.

22. Discharges of sediment from construction activities associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities.[2]

23. Storm water discharges from dredge spoil placement that occur outside of U.S. Army Corps of Engineers jurisdiction (upland sites) and that disturb one or more acres of land surface from construction activity are covered by this General Permit. Construction sites that intend to disturb one or more acres of land within the jurisdictional boundaries of

[2] Pursuant to the Ninth Circuit Court of Appeals' decision in *NRDC v. EPA* (9th Cir. 2008) 526 F.3d 591, and subsequent denial of the U.S. EPA's petition for reconsideration in November 2008, oil and gas construction activities discharging storm water contaminated only with sediment are no longer exempt from the NPDES program.

a CWA § 404 permit should contact the appropriate Regional Water Board to determine whether this permit applies to the site.

## C. Activities Not Covered Under the General Permit

24. Routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.

25. Disturbances to land surfaces solely related to agricultural operations such as disking, harrowing, terracing and leveling, and soil preparation.

26. Discharges of storm water from areas on tribal lands; construction on tribal lands is regulated by a federal permit.

27. Construction activity and land disturbance involving discharges of storm water within the Lake Tahoe Hydrologic Unit. The Lahontan Regional Water Board has adopted its own permit to regulate storm water discharges from construction activity in the Lake Tahoe Hydrologic Unit (Regional Water Board 6SLT). Owners of construction sites in this watershed must apply for the Lahontan Regional Water Board permit rather than the statewide Construction General Permit.

28. Construction activity that disturbs less than one acre of land surface, and that is not part of a larger common plan of development or the sale of one or more acres of disturbed land surface.

29. Construction activity covered by an individual NPDES Permit for storm water discharges.

30. Discharges from small (1 to 5 acre) construction activities with an approved Rainfall Erosivity Waiver authorized by U.S. EPA Phase II regulations certifying to the State Board that small construction activity will occur only when the Rainfall Erosivity Factor is less than 5 (“R” in the Revised Universal Soil Loss Equation).

31. Landfill construction activity that is subject to the Industrial General Permit.

32. Construction activity that discharges to Combined Sewer Systems.

33. Conveyances that discharge storm water runoff combined with municipal sewage.

34. Discharges of storm water identified in CWA § 402(*l*)(2), 33 U.S.C. § 1342(*l*)(2).

35. Discharges occurring in basins that are not tributary or hydrologically connected to waters of the United States (for more information contact your Regional Water Board).

## D. Obtaining and Modifying General Permit Coverage

36. This General Permit requires all dischargers to electronically file all Permit Registration Documents (PRDs), Notices of Termination (NOT), changes of information, annual reporting, and other compliance documents required by this General Permit through the State Water Board's Storm water Multi-Application and Report Tracking System (SMARTS) website.

37. Any information provided to the Regional Water Board shall comply with the Homeland Security Act and any other federal law that concerns security in the United States; any information that does not comply should not be submitted.

38. This General Permit grants an exception from the Risk Determination requirements for existing sites covered under Water Quality Orders No. 99-08-DWQ, and No. 2003-0007-DWQ. For certain sites, adding additional requirements may not be cost effective. Construction sites covered under Water Quality Order No. 99-08-DWQ shall obtain permit coverage at the Risk Level 1. LUPs covered under Water Quality Order No. 2003-0007-DWQ shall obtain permit coverage as a Type 1 LUP. The Regional Water Boards have the authority to require Risk Determination to be performed on sites currently covered under Water Quality Orders No. 99-08-DWQ and No. 2003-0007-DWQ where they deem it necessary. The State Water Board finds that there are two circumstances when it may be appropriate for the Regional Water Boards to require a discharger that had filed an NOI under State Water Board Order No. 99-08-DWQ to recalculate the site's risk level. These circumstances are: (1) when the discharger has a demonstrated history of noncompliance with State Water Board Order No. 99-08-DWQ or; (2) when the discharger's site poses a significant risk of causing or contributing to an exceedance of a water quality standard without the implementation of the additional Risk Level 2 or 3 requirements.

## E. Prohibitions

39. All discharges are prohibited except for the storm water and non-storm water discharges specifically authorized by this General Permit or another NPDES permit. Non-storm water discharges include a wide variety of sources, including improper dumping, spills, or leakage from storage tanks or transfer areas. Non-storm water discharges may

contribute significant pollutant loads to receiving waters. Measures to control spills, leakage, and dumping, and to prevent illicit connections during construction must be addressed through structural as well as non-structural Best Management Practices (BMPs)[3]. The State Water Board recognizes, however, that certain non-storm water discharges may be necessary for the completion of construction.

40. This General Permit prohibits all discharges which contain a hazardous substance in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

41. This General Permit incorporates discharge prohibitions contained in water quality control plans, as implemented by the State Water Board and the nine Regional Water Boards.

42. Pursuant to the Ocean Plan, discharges to Areas of Special Biological Significance (ASBS) are prohibited unless covered by an exception that the State Water Board has approved.

43. This General Permit prohibits the discharge of any debris[4] from construction sites. Plastic and other trash materials can cause negative impacts to receiving water beneficial uses. The State Water Board encourages the use of more environmentally safe, biodegradable materials on construction sites to minimize the potential risk to water quality.

## F. Training

44. In order to improve compliance with and to maintain consistent enforcement of this General Permit, all dischargers are required to appoint two positions - the Qualified SWPPP Developer (QSD) and the Qualified SWPPP Practitioner (QSP) - who must obtain appropriate training. Together with the key stakeholders, the State and Regional Water Boards are leading the development of this curriculum through a collaborative organization called The Construction General Permit (CGP) Training Team.

45. The Professional Engineers Act (Bus. & Prof. Code section 6700, et seq.) requires that all engineering work must be performed by a California licensed engineer.

[3] BMPs are scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practice to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

[4] Litter, rubble, discarded refuse, and remains of destroyed inorganic anthropogenic waste.

## G. Determining and Reducing Risk

46. The risk of accelerated erosion and sedimentation from wind and water depends on a number of factors, including proximity to receiving water bodies, climate, topography, and soil type.

47. This General Permit requires dischargers to assess the risk level of a site based on both sediment transport and receiving water risk. This General Permit contains requirements for Risk Levels 1, 2 and 3, and LUP Risk Type 1, 2, and 3 (Attachment A). Risk levels are established by determining two factors: first, calculating the site's sediment risk; and second, receiving water risk during periods of soil exposure (i.e. grading and site stabilization). Both factors are used to determine the site-specific Risk Level(s). LUPs can be determined to be Type 1 based on the flowchart in Attachment A.1.

48. Although this General Permit does not mandate specific setback distances, dischargers are encouraged to set back their construction activities from streams and wetlands whenever feasible to reduce the risk of impacting water quality (e.g., natural stream stability and habitat function). Because there is a reduced risk to receiving waters when setbacks are used, this General Permit gives credit to setbacks in the risk determination and post-construction storm water performance standards. The risk calculation and runoff reduction mechanisms in this General Permit are expected to facilitate compliance with any Regional Water Board and local agency setback requirements, and to encourage voluntary setbacks wherever practicable.

49. Rain events can occur at any time of the year in California. Therefore, a Rain Event Action Plan (REAP) is necessary for Risk Level 2 and 3 traditional construction projects (LUPs exempt) to ensure that active construction sites have adequate erosion and sediment controls implemented prior to the onset of a storm event, even if construction is planned only during the dry season.

50. Soil particles smaller than 0.02 millimeters (mm) (i.e., finer than medium silt) do not settle easily using conventional measures for sediment control (i.e., sediment basins). Given their long settling time, dislodging these soils results in a significant risk that fine particles will be released into surface waters and cause unacceptable downstream impacts. If operated correctly, an Active Treatment System (ATS[5]) can prevent or reduce the release of fine particles from construction sites.

[5] An ATS is a treatment system that employs chemical coagulation, chemical flocculation, or electro coagulation in order to reduce turbidity caused by fine suspended sediment.

Use of an ATS can effectively reduce a site's risk of impacting receiving waters.

51. Dischargers located in a watershed area where a Total Maximum Daily Load (TMDL) has been adopted or approved by the Regional Water Board or U.S. EPA may be required by a separate Regional Water Board action to implement additional BMPs, conduct additional monitoring activities, and/or comply with an applicable waste load allocation and implementation schedule. Such dischargers may also be required to obtain an individual Regional Water Board permit specific to the area.

## H. Effluent Standards

52. The State Water Board convened a blue ribbon panel of storm water experts that submitted a report entitled, "The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities," dated June 19, 2006. The panel concluded that numeric limits or action levels are technically feasible to control construction storm water discharges, provided that certain conditions are considered. The panel also concluded that numeric effluent limitations (NELs) are feasible for discharges from construction sites that utilize an ATS. The State Water Board has incorporated the expert panel's suggestions into this General Permit, which includes numeric action levels (NALs) for pH and turbidity, and special numeric limits for ATS discharges.

**Determining Compliance with Numeric Limitations**

53. This General Permit sets a pH NAL of 6.5 to 8.5, and a turbidity NAL of 250 NTU. The purpose of the NAL and its associated monitoring requirement is to provide operational information regarding the performance of the measures used at the site to minimize the discharge of pollutants and to protect beneficial uses and receiving waters from the adverse effects of construction-related storm water discharges. An exceedance of a NAL does not constitute a violation of this General Permit.

54. This General Permit requires dischargers with NAL exceedances to immediately implement additional BMPs and revise their Storm Water Pollution Prevention Plans (SWPPPs) accordingly to either prevent pollutants and authorized non-storm water discharges from contaminating storm water, or to substantially reduce the pollutants to levels consistently below the NALs. NAL exceedances are reported in the State Water Boards SMARTS system, and the discharger is

required to provide an NAL Exceedance Report when requested by a Regional Water Board.

## I. Receiving Water Limitations

55. This General Permit requires all enrolled dischargers to determine the receiving waters potentially affected by their discharges and to comply with all applicable water quality standards, including any more stringent standards applicable to a water body.

## J. Sampling, Monitoring, Reporting and Record Keeping

56. Visual monitoring of storm water and non-storm water discharges is required for all sites subject to this General Permit.

57. Records of all visual monitoring inspections are required to remain on-site during the construction period and for a minimum of three years.

58. For all Risk Level 3/LUP Type 3 and Risk Level 2/LUP Type 2 sites, this General Permit requires effluent monitoring for pH and turbidity. Sampling, analysis and monitoring requirements for effluent monitoring for pH and turbidity are contained in this General Permit.

59. Risk Level 3 and LUP Type 3 sites with effluent that exceeds the Receiving Water Monitoring Triggers contained in this General Permit and with direct discharges to receiving water are required to conduct receiving water monitoring. An exceedance of a Receiving Water Monitoring Trigger does not constitute a violation of this General Permit.

60. This General Permit establishes a 5 year, 24 hour (expressed in inches of rainfall) as an exemptions to the receiving water monitoring requirements for Risk Level 3 and LUP Type 3 dischargers.

61. If run-on is caused by a forest fire or any other natural disaster, then receiving water monitoring triggers do not apply.

62. For Risk Level 3 and LUP Type 3 sites larger than 30 acres and with direct discharges to receiving waters, this General Permit requires bioassessment sampling before and after site completion to determine if significant degradation to the receiving water's biota has occurred. Bioassessment sampling guidelines are contained in this General Permit.

63. A summary and evaluation of the sampling and analysis results will be submitted in the Annual Reports.

64. This General Permit contains sampling, analysis and monitoring requirements for non-visible pollutants at all sites subject to this General Permit.

65. Compliance with the General Permit relies upon dischargers to electronically self-report any discharge violations and to comply with any Regional Water Board enforcement actions.

66. This General Permit requires that all dischargers maintain a paper or electronic copy of all required records for three years from the date generated or date submitted, whichever is last. These records must be available at the construction site until construction is completed. For LUPs, these documents may be retained in a crew member's vehicle and made available upon request.

## K. Active Treatment System (ATS) Requirements

67. Active treatment systems add chemicals to facilitate flocculation, coagulation and filtration of suspended sediment particles. The uncontrolled release of these chemicals to the environment can negatively affect the beneficial uses of receiving waters and/or degrade water quality (e.g., acute and chronic toxicity). Additionally, the batch storage and treatment of storm water through an ATS' can potentially cause physical impacts on receiving waters if storage volume is inadequate or due to sudden releases of the ATS batches and improperly designed outfalls.

68. If designed, operated and maintained properly an ATS can achieve very high removal rates of suspended sediment (measured as turbidity), albeit at sometimes significantly higher costs than traditional erosion/sediment control practices. As a result, this General Permit establishes NELs consistent with the expected level of typical ATS performance.

69. This General Permit requires discharges of storm water associated with construction activity that undergo active treatment to comply with special operational and effluent limitations to ensure that these discharges do not adversely affect the beneficial uses of the receiving waters or cause degradation of their water quality.

70. For ATS discharges, this General Permit establishes technology-based NELs for turbidity.

71. This General Permit establishes a 10 year, 24 hour (expressed in inches of rainfall) Compliance Storm Event exemption from the technology-based numeric effluent limitations for ATS discharges. Exceedances of the ATS turbidity NEL constitutes a violation of this General Permit.

## L. Post-Construction Requirements

72. This General Permit includes performance standards for post-construction that are consistent with State Water Board Resolution No. 2005-0006, "Resolution Adopting the Concept of Sustainability as a Core Value for State Water Board Programs and Directing Its Incorporation," and 2008-0030, "Requiring Sustainable Water Resources Management." The requirement for all construction sites to match pre-project hydrology will help ensure that the physical and biological integrity of aquatic ecosystems are sustained. This "runoff reduction" approach is analogous in principle to Low Impact Development (LID) and will serve to protect related watersheds and waterbodies from both hydrologic-based and pollution impacts associated with the post-construction landscape.

73. LUP projects are not subject to post-construction requirements due to the nature of their construction to return project sites to pre-construction conditions.

## M. Storm Water Pollution Prevention Plan Requirements

74. This General Permit requires the development of a site-specific SWPPP. The SWPPP must include the information needed to demonstrate compliance with all requirements of this General Permit, and must be kept on the construction site and be available for review. The discharger shall ensure that a QSD develops the SWPPP.

75. To ensure proper site oversight, this General Permit requires a Qualified SWPPP Practitioner to oversee implementation of the BMPs required to comply with this General Permit.

## N. Regional Water Board Authorities

76. Regional Water Boards are responsible for implementation and enforcement of this General Permit. A general approach to permitting is not always suitable for every construction site and environmental circumstances. Therefore, this General Permit recognizes that Regional Water Boards must have some flexibility and authority to alter, approve, exempt, or rescind permit authority granted under this

General Permit in order to protect the beneficial uses of our receiving waters and prevent degradation of water quality.

**IT IS HEREBY ORDERED** that all dischargers subject to this General Permit shall comply with the following conditions and requirements (including all conditions and requirements as set forth in Attachments A, B, C, D, E and F)[6]:

# II. CONDITIONS FOR PERMIT COVERAGE

## A. Linear Underground/Overhead Projects (LUPs)

1. Linear Underground/Overhead Projects (LUPs) include, but are not limited to, any conveyance, pipe, or pipeline for the transportation of any gaseous, liquid (including water and wastewater for domestic municipal services), liquescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g. telephone, telegraph, radio or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to, (a) those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment, and associated ancillary facilities); and include, but are not limited to, (b) underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/ or pavement repair or replacement, and stockpile/borrow locations.

2. The Legally Responsible Person is responsible for obtaining coverage under the General Permit where the construction of pipelines, utility lines, fiber-optic cables, or other linear underground/overhead projects will occur across several properties unless the LUP construction activities are covered under another construction storm water permit.

3. Only LUPs shall comply with the conditions and requirements in Attachment A, A.1 & A.2 of this Order. The balance of this Order is not applicable to LUPs except as indicated in Attachment A.

[6] These attachments are part of the General Permit itself and are not separate documents that are capable of being updated independently by the State Water Board.

## B. Obtaining Permit Coverage Traditional Construction Sites

1. The Legally Responsible Person (LRP) (see Special Provisions, Electronic Signature and Certification Requirements, Section IV.I.1) must obtain coverage under this General Permit.

2. To obtain coverage, the LRP must electronically file Permit Registration Documents (PRDs) prior to the commencement of construction activity. Failure to obtain coverage under this General Permit for storm water discharges to waters of the United States is a violation of the CWA and the California Water Code.

3. PRDs shall consist of:

   a. Notice of Intent (NOI)
   b. Risk Assessment (Section VIII)
   c. Site Map
   d. Storm Water Pollution Prevention Plan (Section XIV)
   e. Annual Fee
   f. Signed Certification Statement

   Any information provided to the Regional Water Board shall comply with the Homeland Security Act and any other federal law that concerns security in the United States; any information that does not comply should not be submitted.

   Attachment B contains additional PRD information. Dischargers must electronically file the PRDs, and mail the appropriate annual fee to the State Water Board.

4. This permit is effective on July 1, 2010.

   a. **Dischargers Obtaining Coverage On or After July 1, 2010:** All dischargers requiring coverage on or after July 1, 2010, shall electronically file their PRDs prior to the commencement of construction activities, and mail the appropriate annual fee no later than seven days prior to the commencement of construction activities. Permit coverage shall not commence until the PRDs and the annual fee are received by the State Water Board, and a WDID number is assigned and sent by SMARTS.

   b. **Dischargers Covered Under 99-08-DWQ and 2003-0007-DWQ:** Existing dischargers subject to State Water Board Order No. 99-08-DWQ (existing dischargers) will continue coverage under 99-08-DWQ until July 1, 2010. After July 1, 2010, all NOIs subject to State Water Board Order No. 99-08-DWQ will be terminated.

Existing dischargers shall electronically file their PRDs no later than July 1, 2010. If an existing discharger's site acreage subject to the annual fee has changed, it shall mail a revised annual fee no less than seven days after receiving the revised annual fee notification, **or else lose permit coverage**. All existing dischargers shall be exempt from the risk determination requirements in Section VIII of this General Permit until two years after permit adoption. All existing dischargers are therefore subject to Risk Level 1 requirements regardless of their site's sediment and receiving water risks. However, a Regional Board retains the authority to require an existing discharger to comply with the Section VIII risk determination requirements.

5. The discharger is only considered covered by this General Permit upon receipt of a Waste Discharger Identification (WDID) number assigned and sent by the State Water Board Storm water Multi-Application and Report Tracking System (SMARTS). In order to demonstrate compliance with this General Permit, the discharger must obtain a WDID number and must present documentation of a valid WDID upon demand.

6. During the period this permit is subject to review by the U.S. EPA, the prior permit (State Water Board Order No. 99-08-DWQ) remains in effect. Existing dischargers under the prior permit will continue to have coverage under State Water Board Order No. 99-08-DWQ until this General Permit takes effect on July 1, 2010. Dischargers who complete their projects and electronically file an NOT prior to July 1, 2010, are not required to obtain coverage under this General Permit.

7. Small Construction Rainfall Erosivity Waiver

   EPA's Small Construction Erosivity Waiver applies to sites between one and five acres demonstrating that there are no adverse water quality impacts.

   Dischargers eligible for a Rainfall Erosivity Waiver based on low erosivity potential shall complete the electronic Notice of Intent (NOI) and Sediment Risk form through the State Water Board's SMARTS system, certifying that the construction activity will take place during a period when the value of the rainfall erosivity factor is less than five. Where the LRP changes or another LRP is added during construction, the new LRP must also submit a waiver certification through the SMARTS system.

   If a small construction site continues beyond the projected completion date given on the waiver certification, the LRP shall recalculate the

rainfall erosivity factor for the new project duration and submit this information through the SMARTS system. If the new R factor is below five (5), the discharger shall update through SMARTS all applicable information on the waiver certification and retain a copy of the revised waiver onsite. The LRP shall submit the new waiver certification 30 days prior to the projected completion date listed on the original waiver form to assure exemption from permitting requirements is uninterrupted. If the new R factor is five (5) or above, the LRP shall be required to apply for coverage under this Order.

8. In the case of a public emergency that requires immediate construction activities, a discharger shall submit a brief description of the emergency construction activity within five days of the onset of construction, and then shall submit all PRDs within thirty days.

**C. Revising Permit Coverage for Change of Acreage or New Ownership**

1. The discharger may reduce or increase the total acreage covered under this General Permit when a portion of the site is complete and/or conditions for termination of coverage have been met (See Section II.D Conditions for Termination of Coverage); when ownership of a portion of the site is sold to a different entity; or when new acreage, subject to this General Permit, is added to the site.

2. Within 30 days of a reduction or increase in total disturbed acreage, the discharger shall electronically file revisions to the PRDs that include:

   a. A revised NOI indicating the new project size;

   b. A revised site map showing the acreage of the site completed, acreage currently under construction, acreage sold/transferred or added, and acreage currently stabilized in accordance with the Conditions for Termination of Coverage in Section II.D below.

   c. SWPPP revisions, as appropriate; and

   d. Certification that any new landowners have been notified of applicable requirements to obtain General Permit coverage. The certification shall include the name, address, telephone number, and e-mail address of the new landowner.

   e. If the project acreage has increased, dischargers shall mail payment of revised annual fees within 14 days of receiving the revised annual fee notification.

3. The discharger shall continue coverage under the General Permit for any parcel that has not achieved "Final Stabilization" as defined in Section II.D.

4. When an LRP with active General Permit coverage transfers its LRP status to another person or entity that qualifies as an LRP, the existing LRP shall inform the new LRP of the General Permit's requirements. In order for the new LRP to continue the construction activity on its parcel of property, the new LRP, or the new LRP's approved signatory, must submit PRDs in accordance with this General Permit's requirements.

**D. Conditions for Termination of Coverage**

1. Within 90 days of when construction is complete or ownership has been transferred, the discharger shall electronically file a Notice of Termination (NOT), a final site map, and photos through the State Water Boards SMARTS system. Filing a NOT certifies that all General Permit requirements have been met. The Regional Water Board will consider a construction site complete only when all portions of the site have been transferred to a new owner, or all of the following conditions have been met:

   a. For purposes of "final stabilization," the site will not pose any additional sediment discharge risk than it did prior to the commencement of construction activity;

   b. There is no potential for construction-related storm water pollutants to be discharged into site runoff;

   c. Final stabilization has been reached;

   d. Construction materials and wastes have been disposed of properly;

   e. Compliance with the Post-Construction Standards in Section XIII of this General Permit has been demonstrated;

   f. Post-construction storm water management measures have been installed and a long-term maintenance plan[7] has been established; and

   g. All construction-related equipment, materials and any temporary BMPs no longer needed are removed from the site.

[7] For the purposes of this requirement a long-term maintenance plan will be designed for a minimum of five years, and will describe the procedures to ensure that the post-construction storm water management measures are adequately maintained.

2. The discharger shall certify that final stabilization conditions are satisfied in their NOT. Failure to certify shall result in continuation of permit coverage and annual billing.

3. The NOT must demonstrate through photos, RUSLE or RUSLE2, or results of testing and analysis that the site meets all of the conditions above (Section II.D.1) and the final stabilization condition (Section II.D.1.a) is attained by one of the following methods:

   a. "70% final cover method," no computational proof required

      **OR:**

   b. "RUSLE or RUSLE2 method," computational proof required

      **OR:**

   c. "Custom method", the discharger shall demonstrate in some other manner than a or b, above, that the site complies with the "final stabilization" requirement in Section II.D.1.a.

## III. DISCHARGE PROHIBITIONS

**A.** Dischargers shall not violate any discharge prohibitions contained in applicable Basin Plans or statewide water quality control plans. Waste discharges to Areas of Special Biological Significance (ASBS) are prohibited by the California Ocean Plan, unless granted an exception issued by the State Water Board.

**B.** All discharges are prohibited except for the storm water and non-storm water discharges specifically authorized by this General Permit or another NPDES permit.

**C.** Authorized non-storm water discharges may include those from de-chlorinated potable water sources such as: fire hydrant flushing, irrigation of vegetative erosion control measures, pipe flushing and testing, water to control dust, uncontaminated ground water from dewatering, and other discharges not subject to a separate general NPDES permit adopted by a Regional Water Board. The discharge of non-storm water is authorized under the following conditions:

1. The discharge does not cause or contribute to a violation of any water quality standard;

2. The discharge does not violate any other provision of this General Permit;

3. The discharge is not prohibited by the applicable Basin Plan;

4. The discharger has included and implemented specific BMPs required by this General Permit to prevent or reduce the contact of the non-storm water discharge with construction materials or equipment.

5. The discharge does not contain toxic constituents in toxic amounts or (other) significant quantities of pollutants;

6. The discharge is monitored and meets the applicable NALs; and

7. The discharger reports the sampling information in the Annual Report.

If any of the above conditions are not satisfied, the discharge is not authorized by this General Permit. The discharger shall notify the Regional Water Board of any anticipated non-storm water discharges not already authorized by this General Permit or another NPDES permit, to determine whether a separate NPDES permit is necessary.

**D.** Debris resulting from construction activities are prohibited from being discharged from construction sites.

**E.** When soil contamination is found or suspected and a responsible party is not identified, or the responsible party fails to promptly take the appropriate action, the discharger shall have those soils sampled and tested to ensure proper handling and public safety measures are implemented. The discharger shall notify the appropriate local, State, and federal agency(ies) when contaminated soil is found at a construction site, and will notify the appropriate Regional Water Board.

# IV. SPECIAL PROVISIONS

## A. Duty to Comply

1. The discharger shall comply with all of the conditions of this General Permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act and is grounds for enforcement action and/or removal from General Permit coverage.

2. The discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this General Permit has not yet been modified to incorporate the requirement.

## B. General Permit Actions

1. This General Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the discharger for a General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not annul any General Permit condition.

2. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the dischargers so notified.

## C. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this General Permit.

## D. Duty to Mitigate

The discharger shall take all responsible steps to minimize or prevent any discharge in violation of this General Permit, which has a reasonable likelihood of adversely affecting human health or the environment.

## E. Proper Operation and Maintenance

The discharger shall at all times properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with the conditions of this General Permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a discharger when necessary to achieve compliance with the conditions of this General Permit.

## F. Property Rights

This General Permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor does it authorize any infringement of Federal, State, or local laws or regulations.

## G. Duty to Maintain Records and Provide Information

1. The discharger shall maintain a paper or electronic copy of all required records, including a copy of this General Permit, for three years from the date generated or date submitted, whichever is last. These records shall be available at the construction site until construction is completed.

2. The discharger shall furnish the Regional Water Board, State Water Board, or U.S. EPA, within a reasonable time, any requested information to determine compliance with this General Permit. The discharger shall also furnish, upon request, copies of records that are required to be kept by this General Permit.

## H. Inspection and Entry

The discharger shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or, in the case of construction sites which discharge through a municipal separate storm sewer, an authorized representative of the municipal operator of the separate storm sewer system receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the discharger's premises at reasonable times where a regulated construction activity is being conducted or where records must be kept under the conditions of this General Permit;

2. Access and copy at reasonable times any records that must be kept under the conditions of this General Permit;

3. Inspect at reasonable times the complete construction site, including any off-site staging areas or material storage areas, and the erosion/sediment controls; and

4. Sample or monitor at reasonable times for the purpose of ensuring General Permit compliance.

## I. Electronic Signature and Certification Requirements

1. All Permit Registration Documents (PRDs) and Notices of Termination (NOTs) shall be electronically signed, certified, and submitted via SMARTS to the State Water Board. Either the Legally Responsible Person (LRP), as defined in Appendix 5 – Glossary, or a person legally authorized to sign and certify PRDs and NOTs on behalf of the LRP (the LRP's Approved Signatory, as defined in Appendix 5 - Glossary) must submit all information electronically via SMARTS.

2. Changes to Authorization. If an Approved Signatory's authorization is no longer accurate, a new authorization satisfying the requirements of paragraph (a) of this section must be submitted via SMARTS prior to or together with any reports, information or applications to be signed by an Approved Signatory.

3. All Annual Reports, or other information required by the General Permit (other than PRDs and NOTs) or requested by the Regional Water Board, State Water Board, U.S. EPA, or local storm water management agency shall be certified and submitted by the LRP or the LRP's Approved Signatory.

## J. Certification

Any person signing documents under Section IV.I above, shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

## K. Anticipated Noncompliance

The discharger shall give advance notice to the Regional Water Board and local storm water management agency of any planned changes in the construction activity, which may result in noncompliance with General Permit requirements.

## L. Bypass

Bypass[8] is prohibited. The Regional Water Board may take enforcement action against the discharger for bypass unless:

1. Bypass was unavoidable to prevent loss of life, personal injury or severe property damage;[9]

2. There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that could occur during normal periods of equipment downtime or preventative maintenance;

3. The discharger submitted a notice at least ten days in advance of the need for a bypass to the Regional Water Board; or

4. The discharger may allow a bypass to occur that does not cause effluent limitations to be exceeded, but only if it is for essential maintenance to assure efficient operation. In such a case, the above bypass conditions are not applicable. The discharger shall submit notice of an unanticipated bypass as required.

## M. Upset

1. A discharger that wishes to establish the affirmative defense of an upset[10] in an action brought for noncompliance shall demonstrate,

[8] The intentional diversion of waste streams from any portion of a treatment facility

[9] Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

[10] An exceptional incident in which there is unintentional and temporary noncompliance the technology based numeric effluent limitations because of factors beyond the reasonable control of the discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An upset occurred and that the discharger can identify the cause(s) of the upset

b. The treatment facility was being properly operated by the time of the upset

c. The discharger submitted notice of the upset as required; and

d. The discharger complied with any remedial measures required

2. No determination made before an action of noncompliance occurs, such as during administrative review of claims that noncompliance was caused by an upset, is final administrative action subject to judicial review.

3. In any enforcement proceeding, the discharger seeking to establish the occurrence of an upset has the burden of proof

**N. Penalties for Falsification of Reports**

Section 309(c)(4) of the CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years or by both.

**O. Oil and Hazardous Substance Liability**

Nothing in this General Permit shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties to which the discharger is or may be subject to under Section 311 of the CWA.

**P. Severability**

The provisions of this General Permit are severable; and, if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

**Q. Reopener Clause**

This General Permit may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations (CFR) 122.62, 122.63, 122.64, and 124.5.

## R. Penalties for Violations of Permit Conditions

1. Section 309 of the CWA provides significant penalties for any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any such section in a permit issued under Section 402. Any person who violates any permit condition of this General Permit is subject to a civil penalty not to exceed $37,500[11] per calendar day of such violation, as well as any other appropriate sanction provided by Section 309 of the CWA.

2. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties, which in some cases are greater than those under the CWA.

## S. Transfers

This General Permit is not transferable.

## T. Continuation of Expired Permit

This General Permit continues in force and effect until a new General Permit is issued or the SWRCB rescinds this General Permit. Only those dischargers authorized to discharge under the expiring General Permit are covered by the continued General Permit.

[11] May be further adjusted in accordance with the Federal Civil Penalties Inflation Adjustment Act.

# V. EFFLUENT STANDARDS & RECEIVING WATER MONITORING

## A. Narrative Effluent Limitations

1. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

2. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

**Table 1- Numeric Action Levels, Test Methods, Detection Limits, and Reporting Units**

| Parameter | Test Method | Discharge Type | Min. Detection Limit | Units | Numeric Action Level |
|---|---|---|---|---|---|
| pH | Field test with calibrated portable instrument | Risk Level 2 | 0.2 | pH units | lower NAL = 6.5<br>upper NAL = 8.5 |
| | | Risk Level 3 | | | lower NAL = 6.5<br>upper NAL = 8.5 |
| Turbidity | EPA 0180.1 and/or field test with calibrated portable instrument | Risk Level 2 | 1 | NTU | 250 NTU |
| | | Risk Level 3 | | | 250 NTU |

## B. Numeric Action Levels (NALs)

1. For Risk Level 2 and 3 dischargers, the lower storm event average NAL for pH is 6.5 pH units and the upper storm event average NAL for

pH is 8.5 pH units. The discharger shall take actions as described below if the discharge is outside of this range of pH values.

2. For Risk Level 2 and 3 dischargers, the NAL storm event daily average for turbidity is 250 NTU. The discharger shall take actions as described below if the discharge is outside of this range of turbidity values.

3. Whenever the results from a storm event daily average indicate that the discharge is below the lower NAL for pH, exceeds the upper NAL for pH, or exceeds the turbidity NAL (as listed in Table 1), the discharger shall conduct a construction site and run-on evaluation to determine whether pollutant source(s) associated with the site's construction activity may have caused or contributed to the NAL exceedance and shall immediately implement corrective actions if they are needed.

4. The site evaluation shall be documented in the SWPPP and specifically address whether the source(s) of the pollutants causing the exceedance of the NAL:

   a. Are related to the construction activities and whether additional BMPs are required to (1) meet BAT/BCT requirements; (2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) determine what corrective action(s) were taken or will be taken and with a description of the schedule for completion.

      **AND/OR**:

   b. Are related to the run-on associated with the construction site location and whether additional BMPs measures are required to (1) meet BAT/BCT requirements; (2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) what corrective action(s) were taken or will be taken with a description of the schedule for completion.

## C. Receiving Water Monitoring Triggers

1. The receiving water monitoring triggers for Risk Level 3 dischargers with direct discharges to surface waters are triggered when the daily average effluent pH values during any site phase when there is a high risk of pH discharge[12] fall outside of the range of 6.0 and 9.0 pH units, or when the daily average effluent turbidity exceeds 500 NTU.

2. Risk Level 3 dischargers with with direct discharges to surface waters shall conduct receiving water monitoring whenever their effluent monitoring results exceed the receiving water monitoring triggers. If the pH trigger is exceeded, the receiving water shall be monitored for pH for the duration of coverage under this General Permit. If the turbidity trigger is exceeded, the receiving water shall be monitored for turbidity and SSC for the duration of coverage under this general permit.

3. Risk Level 3 dischargers with direct discharges to surfaces waters shall initiate receiving water monitoring when the triggers are exceeded unless the storm event causing the exceedance is determined after the fact to equal to or greater than the 5-year 24-hour storm (expressed in inches of rainfall) as determined by using these maps:

   http://www.wrcc.dri.edu/pcpnfreq/nca5y24.gif
   http://www.wrcc.dri.edu/pcpnfreq/sca5y24.gif

   Verification of the 5-year 24-hour storm event shall be done by reporting on-site rain gauge readings as well as nearby governmental rain gauge readings.

4. If run-on is caused by a forest fire or any other natural disaster, then receiving water monitoring triggers do not apply.

[12] A period of high risk of pH discharge is defined as a project's complete utilities phase, complete vertical build phase, and any portion of any phase where significant amounts of materials are placed directly on the land at the site in a manner that could result in significant alterations of the background pH of the discharges.

## VI. RECEIVING WATER LIMITATIONS

**A.** The discharger shall ensure that storm water discharges and authorized non-storm water discharges to any surface or ground water will not adversely affect human health or the environment.

**B.** The discharger shall ensure that storm water discharges and authorized non-storm water discharges will not contain pollutants in quantities that threaten to cause pollution or a public nuisance.

**C.** The discharger shall ensure that storm water discharges and authorized non-storm water discharges will not contain pollutants that cause or contribute to an exceedance of any applicable water quality objectives or water quality standards (collectively, WQS) contained in a Statewide Water Quality Control Plan, the California Toxics Rule, the National Toxics Rule, or the applicable Regional Water Board's Water Quality Control Plan (Basin Plan).

**D.** Dischargers located within the watershed of a CWA § 303(d) impaired water body, for which a TMDL has been approved by the U.S. EPA, shall comply with the approved TMDL if it identifies "construction activity" or land disturbance as a source of the pollution.

# VII. TRAINING QUALIFICATIONS AND CERTIFICATION REQUIREMENTS

## A. General

The discharger shall ensure that all persons responsible for implementing requirements of this General Permit shall be appropriately trained in accordance with this Section. Training should be both formal and informal, occur on an ongoing basis, and should include training offered by recognized governmental agencies or professional organizations. Those responsible for preparing and amending SWPPPs shall comply with the requirements in this Section VII.

The discharger shall provide documentation of all training for persons responsible for implementing the requirements of this General Permit in the Annual Reports.

## B. SWPPP Certification Requirements

1. **Qualified SWPPP Developer:** The discharger shall ensure that SWPPPs are written, amended and certified by a Qualified SWPPP Developer (QSD). A QSD shall have one of the following registrations or certifications, and appropriate experience, as required for:

   a. A California registered professional civil engineer;

   b. A California registered professional geologist or engineering geologist;

   c. A California registered landscape architect;

   d. A professional hydrologist registered through the American Institute of Hydrology;

   e. A Certified Professional in Erosion and Sediment Control (CPESC) ™ registered through Enviro Cert International, Inc.;

   f. A Certified Professional in Storm Water Quality (CPSWQ) ™ registered through Enviro Cert International, Inc.; or

   g. A professional in erosion and sediment control registered through the National Institute for Certification in Engineering Technologies (NICET).

Effective two years after the adoption date of this General Permit, a QSD shall have attended a State Water Board-sponsored or approved QSD training course.

2. The discharger shall list the name and telephone number of the currently designated Qualified SWPPP Developer(s) in the SWPPP.

3. **Qualified SWPPP Practitioner:** The discharger shall ensure that all BMPs required by this General Permit are implemented by a Qualified SWPPP Practitioner (QSP). A QSP is a person responsible for non-storm water and storm water visual observations, sampling and analysis. Effective two years from the date of adoption of this General Permit, a QSP shall be either a QSD or have one of the following certifications:

   a. A certified erosion, sediment and storm water inspector registered through Enviro Cert International, Inc.; or

   b. A certified inspector of sediment and erosion control registered through Certified Inspector of Sediment and Erosion Control, Inc.

   Effective two years after the adoption date of this General Permit, a QSP shall have attended a State Water Board-sponsored or approved QSP training course.

4. The LRP shall list in the SWPPP, the name of any Approved Signatory, and provide a copy of the written agreement or other mechanism that provides this authority from the LRP in the SWPPP.

5. The discharger shall include, in the SWPPP, a list of names of all contractors, subcontractors, and individuals who will be directed by the Qualified SWPPP Practitioner. This list shall include telephone numbers and work addresses. Specific areas of responsibility of each subcontractor and emergency contact numbers shall also be included.

6. The discharger shall ensure that the SWPPP and each amendment will be signed by the Qualified SWPPP Developer. The discharger shall include a listing of the date of initial preparation and the date of each amendment in the SWPPP.

## VIII. RISK DETERMINATION

The discharger shall calculate the site's sediment risk and receiving water risk during periods of soil exposure (i.e. grading and site stabilization) and use the calculated risks to determine a Risk Level(s) using the methodology in

Appendix 1. For any site that spans two or more planning watersheds,[13] the discharger shall calculate a separate Risk Level for each planning watershed. The discharger shall notify the State Water Board of the site's Risk Level determination(s) and shall include this determination as a part of submitting the PRDs. If a discharger ends up with more than one Risk Level determination, the Regional Water Board may choose to break the project into separate levels of implementation.

## IX. RISK LEVEL 1 REQUIREMENTS

Risk Level 1 Dischargers shall comply with the requirements included in Attachment C of this General Permit.

## X. RISK LEVEL 2 REQUIREMENTS

Risk Level 2 Dischargers shall comply with the requirements included in Attachment D of this General Permit.

## XI. RISK LEVEL 3 REQUIREMENTS

Risk Level 3 Dischargers shall comply with the requirements included in Attachment E of this General Permit.

## XII. ACTIVE TREATMENT SYSTEMS (ATS)

Dischargers choosing to implement an ATS on their site shall comply with all of the requirements in Attachment F of this General Permit.

[13] Planning watershed: defined by the Calwater Watershed documents as a watershed that ranges in size from approximately 3,000 to 10,000 acres http://cain.ice.ucdavis.edu/calwater/calwfaq.html, http://gis.ca.gov/catalog/BrowseRecord.epl?id=22175 .

# XIII. POST-CONSTRUCTION STANDARDS

**A.** All dischargers shall comply with the following runoff reduction requirements unless they are located within an area subject to post-construction standards of an active Phase I or II municipal separate storm sewer system (MS4) permit that has an approved Storm Water Management Plan.

1. This provision shall take effect three years from the adoption date of this permit, or later at the discretion of the Executive Officer of the Regional Board.

2. The discharger shall demonstrate compliance with the requirements of this section by submitting with their NOI a map and worksheets in accordance with the instructions in Appendix 2. The discharger shall use non-structural controls unless the discharger demonstrates that non-structural controls are infeasible or that structural controls will produce greater reduction in water quality impacts.

3. The discharger shall, through the use of non-structural and structural measures as described in Appendix 2, replicate the pre-project water balance (for this permit, defined as the volume of rainfall that ends up as runoff) for the smallest storms up to the 85$^{th}$ percentile storm event (or the smallest storm event that generates runoff, whichever is larger). Dischargers shall inform Regional Water Board staff at least 30 days prior to the use of any structural control measure used to comply with this requirement. Volume that cannot be addressed using non-structural practices shall be captured in structural practices and approved by the Regional Water Board. When seeking Regional Board approval for the use of structural practices, dischargers shall document the infeasibility of using non-structural practices on the project site, or document that there will be fewer water quality impacts through the use of structural practices.

4. For sites whose disturbed area exceeds two acres, the discharger shall preserve the pre-construction drainage density (miles of stream length per square mile of drainage area) for all drainage areas within the area serving a first order stream[14] or larger stream and ensure that post-project time of runoff concentration is equal or greater than pre-project time of concentration.

[14] A first order stream is defined as a stream with no tributaries.

**B.** All dischargers shall implement BMPs to reduce pollutants in storm water discharges that are reasonably foreseeable after all construction phases have been completed at the site (Post-construction BMPs).

## XIV. SWPPP REQUIREMENTS

**A.** The discharger shall ensure that the Storm Water Pollution Prevention Plans (SWPPPs) for all traditional project sites are developed and amended or revised by a QSD. The SWPPP shall be designed to address the following objectives:

1. All pollutants and their sources, including sources of sediment associated with construction, construction site erosion and all other activities associated with construction activity are controlled;

2. Where not otherwise required to be under a Regional Water Board permit, all non-storm water discharges are identified and either eliminated, controlled, or treated;

3. Site BMPs are effective and result in the reduction or elimination of pollutants in storm water discharges and authorized non-storm water discharges from construction activity to the BAT/BCT standard;

4. Calculations and design details as well as BMP controls for site run-on are complete and correct, and

5. Stabilization BMPs installed to reduce or eliminate pollutants after construction are completed.

**B.** To demonstrate compliance with requirements of this General Permit, the QSD shall include information in the SWPPP that supports the conclusions, selections, use, and maintenance of BMPs.

**C.** The discharger shall make the SWPPP available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone.

## XV. REGIONAL WATER BOARD AUTHORITIES

**A.** In the case where the Regional Water Board does not agree with the discharger's self-reported risk level (e.g., they determine themselves to be a Level 1 Risk when they are actually a Level 2 Risk site), Regional Water Boards may either direct the discharger to reevaluate the Risk Level(s) for their site or terminate coverage under this General Permit.

**B.** Regional Water Boards may terminate coverage under this General Permit for dischargers who fail to comply with its requirements or where they determine that an individual NPDES permit is appropriate.

**C.** Regional Water Boards may require dischargers to submit a Report of Waste Discharge / NPDES permit application for Regional Water Board consideration of individual requirements.

**D.** Regional Water Boards may require additional Monitoring and Reporting Program Requirements, including sampling and analysis of discharges to sediment-impaired water bodies.

**E.** Regional Water Boards may require dischargers to retain records for more than the three years required by this General Permit.

## XVI. ANNUAL REPORTING REQUIREMENTS

**A.** All dischargers shall prepare and electronically submit an Annual Report no later than September 1 of each year.

**B.** The discharger shall certify each Annual Report in accordance with the Special Provisions.

**C.** The discharger shall retain an electronic or paper copy of each Annual Report for a minimum of three years after the date the annual report is filed.

**D.** The discharger shall include storm water monitoring information in the Annual Report consisting of:

1. a summary and evaluation of all sampling and analysis results, including copies of laboratory reports;

2. the analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit");

3. a summary of all corrective actions taken during the compliance year;

4. identification of any compliance activities or corrective actions that were not implemented;

5. a summary of all violations of the General Permit;

6. the names of individual(s) who performed the facility inspections, sampling, visual observation (inspections), and/or measurements;

7. the date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation (rain gauge); and

8. the visual observation and sample collection exception records and reports specified in Attachments C, D, and E.

**E.** The discharger shall provide training information in the Annual Report consisting of:

1. documentation of all training for individuals responsible for all activities associated with compliance with this General Permit;

2. documentation of all training for individuals responsible for BMP installation, inspection, maintenance, and repair; and

3. documentation of all training for individuals responsible for overseeing, revising, and amending the SWPPP.

# ATTACHMENT A
## Linear Underground/ Overhead Requirements



All Linear Underground/Overhead project dischargers who submit permit registration documents (PRDs) indicating their intention to be regulated under the provisions of this General Permit shall comply with the following:

## A. DEFINITION OF LINEAR UNDERGROUND/OVERHEAD PROJECTS

**1.** Linear Underground/Overhead Projects (LUPs) include, but are not limited to, any conveyance, pipe, or pipeline for the transportation of any gaseous, liquid (including water and wastewater for domestic municipal services), liquiescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g., telephone, telegraph, radio, or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to, (a) those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment, and associated ancillary facilities); and include, but are not limited to, (b) underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/ or pavement repair or replacement, and stockpile/borrow locations.

**2.** LUP evaluation shall consist of two tasks:

a. Confirm that the project or project section(s) qualifies as an LUP. The State Water Board website contains a project determination guidance flowchart. http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

b. Identify which Type(s) (1, 2 or 3 described in Section I below) are applicable to the project or project sections based on project sediment and receiving water risk. (See Attachment A.1)

**3.** A Legally Responsible Person (LRP) for a Linear Underground/Overhead project is required to obtain CGP coverage under one or more permit registration document (PRD) electronic submittals to the State Water Board's Storm Water Multi-Application and Report Tracking (SMARTs) system. Attachment A.1 contains a flow chart to be used when determining if a linear project qualifies for coverage and to determine LUP Types. Since a LUP may be constructed within both developed and undeveloped locations and portions of LUPs may be constructed by different contractors, LUPs may be broken into logical permit sections. Sections may be determined based on portions of a project conducted by one contractor. Other situations may also occur, such as the time period in which the sections of a project will be constructed (e.g. project phases), for which separate permit coverage is possible. For projects that are broken into separate sections, a description of how each section relates to the overall project and the definition of the boundaries between sections shall be clearly stated.

**4.** Where construction activities transverse or enter into different Regional Water Board jurisdictions, LRPs shall obtain permit coverage for each Regional Water Board area involved prior to the commencement of construction activities.

**5.** Small Construction Rainfall Erosivity Waiver

EPA's Small Construction Erosivity Waiver applies to sites between one and five acres demonstrating that there are no adverse water quality impacts.

Dischargers eligible for a Rainfall Erosivity Waiver based on low erosivity potential shall complete the electronic Notice of Intent (NOI) and Sediment Risk form through the State Water Board's SMARTS system, certifying that the construction activity will take place during a period when the value of the rainfall erosivity factor is less than five. Where the LRP changes or another LRP is added during construction, the new LRP must also submit a waiver certification through the SMARTS system.

If a small linear construction site continues beyond the projected completion date given on the waiver certification, the LRP shall recalculate the rainfall erosivity factor for the new project duration and submit this information through the SMARTS system. If the new R factor is below five (5), the discharger shall update through SMARTS all applicable information on the waiver certification and retain a copy of the revised waiver onsite. The LRP shall submit the new waiver certification 30 days prior to the projected completion date listed on the original waiver form to assure exemption from permitting requirements is uninterrupted. If the new R factor is five (5) or above, the LRP shall be required to apply for coverage under this Order.

## B. LINEAR PROJECT PERMIT REGISTRATION DOCUMENTS (PRDs)

Any information provided to the Regional Water Board shall comply with the Homeland Security Act and any other federal law that concerns security in the United States; any information that does not comply should not be submitted. PRDs shall consist of the following:

### 1. Notice of Intent (NOI)

Prior to construction activities, the LRP of a proposed linear underground/overhead project shall utilize the processes and methods provided in Attachment A.2, Permit Registration Documents (PRDs) – General Instructions for Linear Underground/Overhead Projects to comply with the Construction General Permit.

### 2. Site Maps

LRPs submitting PRDs shall include at least 3 maps. The first map will be a zoomed[1] 1000-1500 ft vicinity map that shows the starting point of the project. The second will be a zoomed map of 1000-1500 ft showing the ending location of the project. The third will be a larger view vicinity map, 1000 ft to 2000 ft, displaying the entire project location depending on the project size, and indicating the LUP type (1, 2 or 3) areas within the total project footprint.

### 3. Drawings

LRPs submitting PRDs shall include a construction drawing(s) or other appropriate drawing(s) or map(s) that shows the locations of storm drain

[1] An image with a close-up/enhanced detailed view of site features that show minute details such as streets and neighboring structures.
Or: An image with a close-up/enhanced detailed view of the site's surrounding infrastructure.
Or: An image with a close up detailed view of the project and its surroundings.

inlets and waterbodies[2] that may receive discharges from the construction activities and that shows the locations of BMPs to be installed for all those BMPs that can be illustrated on the revisable drawing(s) or map(s). If storm drain inlets, waterbodies, and/or BMPs cannot be adequately shown on the drawing(s) or map(s) they should be described in detail within the SWPPP.

**4. Storm Water Pollution Prevention Plan (SWPPP)**

LUP dischargers shall comply with the SWPPP Preparation, Implementation, and Oversight requirements in Section K of this Attachment.

**5. Contact information**

LUP dischargers shall include contact information for all contractors (or subcontractors) responsible for each area of an LUP project. This should include the names, telephone numbers, and addresses of contact personnel. Specific areas of responsibility of each contact, and emergency contact numbers should also be included.

**6.** In the case of a public emergency that requires immediate construction activities, a discharger shall submit a brief description of the emergency construction activity within five days of the onset of construction, and then shall submit all PRDs within thirty days.

## C. LINEAR PROJECT TERMINATION OF COVERAGE REQUIREMENTS

The LRP may terminate coverage of an LUP when construction activities are completed by submitting an electronic notice of termination (NOT) through the State Water Board's SMARTS system. Termination requirements are different depending on the complexity of the LUP. An LUP is considered complete when: (a) there is no potential for construction-related storm water pollution; (b) all elements of the SWPPP have been completed; (c) construction materials and waste have been disposed of properly; (d) the site is in compliance with all local storm water management requirements; and (e) the LRP submits a notice of termination (NOT) and has received approval for termination from the appropriate Regional Water Board office.

**1. LUP Stabilization Requirements**

The LUP discharger shall ensure that all disturbed areas of the construction site are stabilized prior to termination of coverage under this General Permit. Final stabilization for the purposes of submitting an NOT

[2] Includes basin(s) that the MS4 storm sewer systems may drain to for Hydromodification or Hydrological Conditional of Concerns under the MS4 permits.

is satisfied when all soil disturbing activities are completed and one of the following criteria is met:

a. In disturbed areas that were vegetated prior to construction activities of the LUP, the area disturbed must be re-established to a uniform vegetative cover equivalent to 70 percent coverage of the preconstruction vegetative conditions. Where preconstruction vegetation covers less than 100 percent of the surface, such as in arid areas, the 70 percent coverage criteria is adjusted as follows: if the preconstruction vegetation covers 50 percent of the ground surface, 70 percent of 50 percent (.70 X .50=.35) would require 35 percent total uniform surface coverage; or

b. Where no vegetation is present prior to construction, the site is returned to its original line and grade and/or compacted to achieve stabilization; or

c. Equivalent stabilization measures have been employed. These measures include, but are not limited to, the use of such BMPs as blankets, reinforced channel liners, soil cement, fiber matrices, geotextiles, or other erosion resistant soil coverings or treatments.

**2. LUP Termination of Coverage Requirements**

The LRP shall file an NOT through the State Water Board's SMARTS system. By submitting an NOT, the LRP is certifying that construction activities for an LUP are complete and that the project is in full compliance with requirements of this General Permit and that it is now compliant with soil stabilization requirements where appropriate. Upon approval by the appropriate Regional Water Board office, permit coverage will be terminated.

**3. Revising Coverage for Change of Acreage**

When the LRP of a portion of an LUP construction project changes, or when a phase within a multi-phase project is completed, the LRP may reduce the total acreage covered by this General Permit. In reducing the acreage covered by this General Permit, the LRP shall electronically file revisions to the PRDs that include:

a. a revised NOI indicating the new project size;

b. a revised site map showing the acreage of the project completed, acreage currently under construction, acreage sold, transferred or added, and acreage currently stabilized.

c. SWPPP revisions, as appropriate; and

d. certification that any new LRPs have been notified of applicable requirements to obtain General Permit coverage. The certification shall include the name, address, telephone number, and e-mail address (if known) of the new LRP.

If the project acreage has increased, dischargers shall mail payment of revised annual fees within 14 days of receiving the revised annual fee notification.

## D. DISCHARGE PROHIBITIONS

**1.** LUP dischargers shall not violate any discharge prohibitions contained in applicable Basin Plans or statewide water quality control plans. Waste discharges to Areas of Special Biological Significance (ASBS) are prohibited by the California Ocean Plan, unless granted an exception issued by the State Water Board.

**2.** LUP dischargers are prohibited from discharging non-storm water that is not otherwise authorized by this General Permit. Non-storm water discharges authorized by this General Permit[3] may include, fire hydrant flushing, irrigation of vegetative erosion control measures, pipe flushing and testing, water to control dust, street cleaning, dewatering,[4] uncontaminated groundwater from dewatering, and other discharges not subject to a separate general NPDES permit adopted by a Regional Water Board. Such discharges are allowed by this General Permit provided they are not relied upon to clean up failed or inadequate construction or post-construction BMPs designed to keep materials on site. These authorized non-storm water discharges:

[3] Dischargers must identify all authorized non-storm water discharges in the LUP's SWPPP and identify BMPs that will be implemented to either eliminate or reduce pollutants in non-storm water discharges. Regional Water Boards may direct the discharger to discontinue discharging such non-storm water discharges if determined that such discharges discharge significant pollutants or threaten water quality.
[4] Dewatering activities may be prohibited or need coverage under a separate permit issued by the Regional Water Boards. Dischargers shall check with the appropriate Regional Water Boards for any required permit or basin plan conditions prior to initial dewatering activities to land, storm drains, or waterbodies.

a. Shall not cause or contribute to a violation of any water quality standard;

b. Shall not violate any other provision of this General Permit;

c. Shall not violate any applicable Basin Plan;

d. Shall comply with BMPs as described in the SWPPP;

e. Shall not contain toxic constituents in toxic amounts or (other) significant quantities of pollutants;

f. Shall be monitored and meets the applicable NALs; and

g. Shall be reported by the discharger in the Annual Report.

If any of the above conditions are not satisfied, the discharge is not authorized by this General Permit. The discharger shall notify the Regional Water Board of any anticipated non-storm water discharges not authorized by this General Permit to determine the need for a separate NPDES permit.

Additionally, some LUP dischargers may be required to obtain a separate permit if the applicable Regional Water Board has adopted a General Permit for dewatering discharges. Wherever feasible, alternatives, that do not result in the discharge of non-storm water, shall be implemented in accordance with this Attachment's Section K.2 - SWPPP Implementation Schedule.

**3.** LUP dischargers shall ensure that trench spoils or any other soils disturbed during construction activities that are contaminated[5] are not discharged with storm water or non-storm water discharges into any storm drain or water body except pursuant to an NPDES permit.

When soil contamination is found or suspected and a responsible party is not identified, or the responsible party fails to promptly take the appropriate action, the LUP discharger shall have those soils sampled and tested to ensure that proper handling and public safety measures are

[5] Contaminated soil contains pollutants in concentrations that exceed the appropriate thresholds that various regulatory agencies set for those substances. Preliminary testing of potentially contaminated soils will be based on odor, soil discoloration, or prior history of the site's chemical use and storage and other similar factors. When soil contamination is found or suspected and a responsible party is not identified, or the responsible party fails to promptly take the appropriate action, the discharger shall have those soils sampled and tested to ensure proper handling and public safety measures are implemented. The legally responsible person will notify the appropriate local, State, or federal agency(ies) when contaminated soil is found at a construction site, and will notify the Regional Water Board by submitting an NOT at the completion of the project.

implemented. The LUP discharger shall notify the appropriate local, State, and federal agency(ies) when contaminated soil is found at a construction site, and will notify the appropriate Regional Water Board.

**4.** Discharging any pollutant-laden water that will cause or contribute to an exceedance of the applicable Regional Water Board's Basin Plan from a dewatering site or sediment basin into any receiving water or storm drain is prohibited.

**5.** Debris[6] resulting from construction activities are prohibited from being discharged from construction project sites.

## E. SPECIAL PROVISIONS

### 1. Duty to Comply

a. The LUP discharger must comply with all of the conditions of this General Permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act and is grounds for enforcement action and/or removal from General Permit coverage.

b. The LUP discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this General Permit has not yet been modified to incorporate the requirement.

### 2. General Permit Actions

a. This General Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the discharger for a General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not annul any General Permit condition.

[6] Litter, rubble, discarded refuse, and remains of something destroyed.

b. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the dischargers so notified.

**3. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for an LUP discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this General Permit.

**4. Duty to Mitigate**

The LUP discharger shall take all responsible steps to minimize or prevent any discharge in violation of this General Permit, which has a reasonable likelihood of adversely affecting human health or the environment.

**5. Proper Operation and Maintenance**

The LUP discharger shall at all times properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with the conditions of this General Permit and with the requirements of the Storm Water Pollution Prevention Plan (SWPPP). Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a discharger when necessary to achieve compliance with the conditions of this General Permit.

**6. Property Rights**

This General Permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor does it authorize any infringement of Federal, State, or local laws or regulations.

**7. Duty to Maintain Records and Provide Information**

a. The LUP discharger shall maintain a paper or electronic copy of all required records, including a copy of this General Permit, for three years from the date generated or date submitted, whichever is last. These records shall be kept at the construction site or in a crew

member's vehicle until construction is completed, and shall be made available upon request.

b. The LUP discharger shall furnish the Regional Water Board, State Water Board, or USEPA, within a reasonable time, any requested information to determine compliance with this General Permit. The LUP discharger shall also furnish, upon request, copies of records that are required to be kept by this General Permit.

**8. Inspection and Entry**

The LUP discharger shall allow the Regional Water Board, State Water Board, USEPA, and/or, in the case of construction sites which discharge through a municipal separate storm sewer, an authorized representative of the municipal operator of the separate storm sewer system receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

a. Enter upon the discharger's premises at reasonable times where a regulated construction activity is being conducted or where records must be kept under the conditions of this General Permit;

b. Access and copy at reasonable times any records that must be kept under the conditions of this General Permit;

c. Inspect at reasonable times the complete construction site, including any off-site staging areas or material storage areas, and the erosion/sediment controls; and

d. Sample or monitor at reasonable times for the purpose of ensuring General Permit compliance.

**9. Electronic Signature and Certification Requirements**

a. All Permit Registration Documents (PRDs) and Notices of Termination (NOTs) shall be electronically signed, certified, and submitted via SMARTS to the State Water Board. Either the Legally Responsible Person (LRP), as defined in Appendix 5 – Glossary, or a person legally authorized to sign and certify PRDs and NOTs on behalf of the LRP (the LRP's Approved Signatory, as defined in Appendix 5 - Glossary) must submit all information electronically via SMARTS.

b. Changes to Authorization. If an Approved Signatory's authorization is no longer accurate, a new authorization satisfying the requirements of paragraph (a) of this section must be submitted via SMARTS prior to or

together with any reports, information or applications to be signed by an Approved Signatory.

c. All SWPPP revisions, annual reports, or other information required by the General Permit (other than PRDs and NOTs) or requested by the Regional Water Board, State Water Board, USEPA, or local storm water management agency shall be certified and submitted by the LRP or the LRP's Approved Signatory.

**10. Certification**

Any person signing documents under Section E.9 above, shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

**11. Anticipated Noncompliance**

The LUP discharger shall give advance notice to the Regional Water Board and local storm water management agency of any planned changes in the construction activity, which may result in noncompliance with General Permit requirements.

**12. Penalties for Falsification of Reports**

Section 309(c)(4) of the CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years or by both.

**13. Oil and Hazardous Substance Liability**

Nothing in this General Permit shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties to which the LUP discharger is or may be subject to under Section 311 of the CWA.

**14. Severability**

The provisions of this General Permit are severable; and, if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

**15. Reopener Clause**

This General Permit may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, receipt of USEPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations (CFR) 122.62, 122.63, 122.64, and 124.5.

**16. Penalties for Violations of Permit Conditions**

a. Section 309 of the CWA provides significant penalties for any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any such section in a permit issued under Section 402. Any person who violates any permit condition of this General Permit is subject to a civil penalty not to exceed $37,500[7] per calendar day of such violation, as well as any other appropriate sanction provided by Section 309 of the CWA.

b. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties, which in some cases are greater than those under the CWA.

**17. Transfers**

This General Permit is not transferable. A new LRP of an ongoing construction activity must submit PRDs in accordance with the requirements of this General Permit to be authorized to discharge under this General Permit. An LRP who is a property owner with active General Permit coverage who sells a fraction or all the land shall inform the new property owner(s) of the requirements of this General Permit.

**18. Continuation of Expired Permit**

This General Permit continues in force and effect until a new General Permit is issued or the SWRCB rescinds this General Permit. Only those

[7] May be further adjusted in accordance with the Federal Civil Penalties Inflation Adjustment Act

dischargers authorized to discharge under the expiring General Permit are covered by the continued General Permit.

## F. EFFLUENT STANDARDS & RECEIVING WATER MONITORING

### 1. Narrative Effluent Limitations

a. LUP dischargers shall ensure that storm water discharges and authorized non-storm water discharges regulated by this General Permit do not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

b. LUP dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of structural or non-structural controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

**Table 1. Numeric Action Levels, Test Methods, Detection Limits, and Reporting Units**

| Parameter | Test Method | Discharge Type | Min. Detection Limit | Units | Numeric Action Level |
|---|---|---|---|---|---|
| pH | Field test with calibrated portable instrument | LUP Type 2 | 0.2 | pH units | lower NAL = 6.5<br>upper NAL = 8.5 |
| | | LUP Type 3 | | | lower NAL = 6.5<br>upper NAL = 8.5 |
| Turbidity | EPA 0180.1 and/or field test with calibrated portable instrument | LUP Type 2 | 1 | NTU | 250 NTU |
| | | LUP Type 3 | | | 250 NTU |

**2. Numeric Action Levels (NALs)**

a. For LUP Type 2 and 3 dischargers, the lower storm event daily average NAL for pH is 6.5 pH units and the upper storm event daily average NAL for pH is 8.5 pH units. The LUP discharger shall take actions as described below if the storm event daily average discharge is outside of this range of pH values.

b. For LUP Type 2 and 3 dischargers, the storm event daily average NAL for turbidity is 250 NTU. The discharger shall take actions as described below if the storm event daily average discharge is outside of this range of turbidity values.

c. Whenever daily average analytical effluent monitoring results indicate that the discharge is below the lower NAL for pH, exceeds the upper NAL for pH, or exceeds the turbidity NAL (as listed in Table 1), the LUP discharger shall conduct a construction site and run-on evaluation to determine whether pollutant source(s) associated with the site's construction activity may have caused or contributed to the NAL exceedance and shall immediately implement corrective actions if they are needed.

d. The site evaluation will be documented in the SWPPP and specifically address whether the source(s) of the pollutants causing the exceedance of the NAL:

i Are related to the construction activities and whether additional BMPs or SWPPP implementation measures are required to (1) meet BAT/BCT requirements; (2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) determine what corrective action(s) were taken or will be taken and with a description of the schedule for completion.

**AND/OR**:

ii Are related to the run-on associated with the construction site location and whether additional BMPs or SWPPP implementation measures are required to (1) meet BAT/BCT requirements; (2) reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) decide what corrective action(s) were taken or will be taken, including a description of the schedule for completion.

**3. Receiving Water Monitoring Triggers**

a. The receiving water monitoring triggers for LUP Type 3 dischargers with direct discharges to surface waters are triggered when the daily average effluent pH values during any site phase when there is a high risk of pH discharge[8] fall outside of the range of 6.0 and 9.0 pH units, or when the daily average effluent turbidity exceeds 500 NTU.

b. LUP Type 3 dischargers with direct discharges to surface waters shall conduct receiving water monitoring whenever their effluent monitoring results exceed the receiving water monitoring triggers. If the pH trigger is exceeded, the receiving water shall be monitored for pH for the duration of coverage under this General Permit. If the turbidity trigger is exceeded, the receiving water shall be monitored for turbidity and SSC for the duration of coverage under this General Permit.

c. LUP Type 3 dischargers with direct discharges to surfaces waters shall initiate receiving water monitoring when the triggers are exceeded unless the storm event causing the exceedance is determined after the fact to equal to or greater than the 5-year 24-hour storm (expressed in inches of rainfall) as determined by using these maps:

   http://www.wrcc.dri.edu/pcpnfreq/nca5y24.gif
   http://www.wrcc.dri.edu/pcpnfreq/sca5y24.gif

   Verification of the 5-year 24-hour storm event shall be done by reporting on-site rain gauge readings as well as nearby governmental rain gauge readings.

d. If run-on is caused by a forest fire or any other natural disaster, then receiving water monitoring triggers do not apply.

## G. RECEIVING WATER LIMITATIONS

**1.** LUP dischargers shall ensure that storm water discharges and authorized non-storm water discharges to any surface or ground water will not adversely affect human health or the environment.

**2.** LUP dischargers shall ensure that storm water discharges and authorized non-storm water discharges will not contain pollutants in quantities that threaten to cause pollution or a public nuisance.

**3.** LUP dischargers shall ensure that storm water discharges and authorized non-storm water discharges will not contain pollutants that cause or

[8] A period of high risk of pH discharge is defined as a project's complete utilities phase, complete vertical build phase, and any portion of any phase where significant amounts of materials are placed directly on the land at the site in a manner that could result in significant alterations of the background pH of the discharges.

contribute to an exceedance of any applicable water quality objectives or water quality standards (collectively, WQS) contained in a Statewide Water Quality Control Plan, the California Toxics Rule, the National Toxics Rule, or the applicable Regional Water Board's Water Quality Control Plan (Basin Plan).

## H. TRAINING QUALIFICATIONS

### 1. General

All persons responsible for implementing requirements of this General Permit shall be appropriately trained. Training should be both formal and informal, occur on an ongoing basis, and should include training offered by recognized governmental agencies or professional organizations. Persons responsible for preparing, amending and certifying SWPPPs shall comply with the requirements in this Section H.

### 2. SWPPP Certification Requirements

a. **Qualified SWPPP Developer:** The LUP discharger shall ensure that all SWPPPs be written, amended and certified by a Qualified SWPPP Developer (QSD). A QSD shall have one of the following registrations or certifications, and appropriate experience, as required for:

i A California registered professional civil engineer;

ii A California registered professional geologist or engineering geologist;

iii A California registered landscape architect;

iv A professional hydrologist registered through the American Institute of Hydrology;

v A certified professional in erosion and sediment control (CPESC) ™ registered through Enviro Cert International, Inc;

vi A certified professional in storm water quality (CPSWQ)™ registered through Enviro Cert International, Inc.; or

vii A certified professional in erosion and sediment control registered through the National Institute for Certification in Engineering Technologies (NICET).

Effective two years after the adoption date of this General Permit, a QSD shall have attended a State Water Board-sponsored or approved QSD training course.

b. The LUP discharger shall ensure that the SWPPP is written and amended, as needed, to address the specific circumstances for each construction site covered by this General Permit prior to commencement of construction activity for any stage.

c. The LUP discharger shall list the name and telephone number of the currently designated Qualified SWPPP Developer(s) in the SWPPP.

d. **Qualified SWPPP Practitioner:** The LUP discharger shall ensure that all elements of any SWPPP for each project will be implemented by a Qualified SWPPP Practitioner (QSP). A QSP is a person responsible for non-storm water and storm water visual observations, sampling and analysis, and for ensuring full compliance with the permit and implementation of all elements of the SWPPP. Effective two years from the date of adoption of this General Permit, a QSP shall be either a QSD or have one of the following certifications:

   i A certified erosion, sediment and storm water inspector registered through Certified Professional in Erosion and Sediment Control, Inc.; or

   ii A certified inspector of sediment and erosion control registered through Certified Inspector of Sediment and Erosion Control, Inc.

   Effective two years after the adoption date of this General Permit, a QSP shall have attended a State Water Board-sponsored or approved QSP training course.

e. The LUP discharger shall ensure that the SWPPP include a list of names of all contractors, subcontractors, and individuals who will be directed by the Qualified SWPPP Practitioner, and who is ultimately responsible for implementation of the SWPPP. This list shall include telephone numbers and work addresses. Specific areas of responsibility of each subcontractor and emergency contact numbers shall also be included.

f. The LUP discharger shall ensure that the SWPPP and each amendment be signed by the Qualified SWPPP Developer. The LUP discharger shall include a listing of the date of initial preparation and the dates of each amendment in the SWPPP.

## I. TYPES OF LINEAR PROJECTS

This attachment establishes three types (Type 1, 2 & 3) of complexity for areas within an LUP or project section based on threat to water quality. Project area Types are determined through Attachment A.1.

The Type 1 requirements below establish the baseline requirements for all LUPs subject to this General Permit. Additional requirements for Type 2 and Type 3 LUPs are labeled.

### 1. Type 1 LUPs*:*

LUP dischargers with areas of a LUP designated as Type 1 shall comply with the requirements in this Attachment. Type 1 LUPs are:

a. Those construction areas where 70 percent or more of the construction activity occurs on a paved surface and where areas disturbed during construction will be returned to preconstruction conditions or equivalent protection established at the end of the construction activities for the day; or

b. Where greater than 30 percent of construction activities occur within the non-paved shoulders or land immediately adjacent to paved surfaces, or where construction occurs on unpaved improved roads, including their shoulders or land immediately adjacent to them where:

   i Areas disturbed during construction will be returned to preconstruction conditions or equivalent protection is established at the end of the construction activities for the day to minimize the potential for erosion and sediment deposition, and

   ii Areas where established vegetation was disturbed during construction will be stabilized and re-vegetated by the end of project. When required, adequate temporary stabilization BMPs will be installed and maintained until vegetation is established to meet minimum cover requirements established in this General Permit for final stabilization.

c. Where the risk determination is as follows:

   i Low sediment risk, low receiving water risk, or

   ii Low sediment risk, medium receiving water risk, or

   iii Medium sediment risk, low receiving water risk

**2. Type 2 LUPs**:

Type 2 LUPs are determined by the Combined Risk Matrix in Attachment A.1. Type 2 LUPs have the specified combination of risk:

d. High sediment risk, low receiving water risk, or

e. Medium sediment risk, medium receiving water risk, or

f. Low sediment risk, high receiving water risk

Receiving water risk is either considered "Low" for those areas of the project that are not in close proximity to a sensitive receiving watershed, "Medium" for those areas of the project within a sensitive receiving watershed yet outside of the flood plain of a sensitive receiving water body, and "High" where the soil disturbance is within close proximity to a sensitive receiving water body. Project sediment risk is calculated based on the Risk Factor Worksheet in Attachment C of this General Permit.

**3. Type 3 LUPs:**

Type 3 LUPs are determined by the Combined Risk Matrix in Attachment A.1. Type 3 LUPs have the specified combination of risk:

a. High sediment risk, high receiving water risk, or

b. High sediment risk, medium receiving water risk, or

c. Medium sediment risk, high receiving water risk

Receiving water risk is either considered "Medium" for those areas of the project within a sensitive receiving watershed yet outside of the flood plain of a sensitive receiving water body, or "High" where the soil disturbance is within close proximity to a sensitive receiving water body. Project sediment risk is calculated based on the Risk Factor Worksheet in Attachment C.

## J. LUP TYPE-SPECIFIC REQUIREMENTS

### 1. Effluent Standards

a. Narrative – LUP dischargers shall comply with the narrative effluent standards below.

i Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

ii LUP dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

b. Numeric – LUP Type 1 dischargers are not subject to a numeric effluent standard

c. Numeric –LUP Type 2 dischargers are subject to a pH NAL of 6.5-8.5, and a turbidity NAL of 250 NTU.

d. Numeric – LUP Type 3 dischargers are subject to a pH NAL of 6.5-8.5, and a turbidity NAL of 250 NTU.

**2. Good Site Management "Housekeeping"**

a. LUP dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, the good housekeeping measures shall consist of the following:

i Identify the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

ii Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).

iii Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).

iv Minimize exposure of construction materials to precipitation (not applicable to materials designed to be outdoors and exposed to the environment).

v Implement BMPs to control the off-site tracking of loose construction and landscape materials.

b. LUP dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:

i Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.

ii Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.

iii Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.

iv Cover waste disposal containers at the end of every business day and during a rain event.

v Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.

vi Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.

vii Implement procedures that effectively address hazardous and non-hazardous spills.

viii Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require that:

(1) Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly; and

(2) Appropriate spill response personnel are assigned and trained.

ix Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

c. LUP dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:

   i Prevent oil, grease, or fuel from leaking into the ground, storm drains or surface waters.

   ii Implement appropriate BMPs whenever equipment or vehicles are fueled, maintained or stored.

   iii Clean leaks immediately and disposing of leaked materials properly.

d. LUP dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:

   i Contain stockpiled materials such as mulches and topsoil when they are not actively being used.

   ii Contain fertilizers and other landscape materials when they are not actively being used.

   iii Discontinue the application of any erodible landscape material at least 2 days before a forecasted rain event[9] or during periods of precipitation.

   iv Applying erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.

   v Stacking erodible landscape material on pallets and covering or storing such materials when not being used or applied.

e. LUP dischargers shall conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, LUP dischargers shall do the following:

[9] 50% or greater chance of producing precipitation.

i Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.

ii Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.

iii Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.

iv Ensure retention of sampling, visual observation, and inspection records.

v Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

f. LUP dischargers shall implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations.

**3. Non-Storm Water Management**

a. LUP dischargers shall implement measures to control all non-storm water discharges during construction.

b. LUP dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.

c. LUP dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

**4. Erosion Control**

a. LUP dischargers shall implement effective wind erosion control.

b. LUP dischargers shall provide effective soil cover for inactive[10] areas and all finished slopes, and utility backfill.

[10] Areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days

c. LUP dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

**5. Sediment Controls**

a. LUP dischargers shall establish and maintain effective perimeter controls as needed, and implement effective BMPs for all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.

b. On sites where sediment basins are to be used, LUP dischargers shall, at minimum, design sediment basins according to the guidance provided in CASQA's Construction BMP Handbook.

c. **Additional LUP Type 2 & 3 Requirement:** LUP Type 2 & 3 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow lengths[11] in accordance with Table 2 below.

**Table 2 – Critical Slope/Sheet Flow Length Combinations**

| Slope Percentage | Sheet flow length not to exceed |
|---|---|
| 0-25% | 20 feet |
| 25-50% | 15 feet |
| Over 50% | 10 feet |

d. **Additional LUP Type 2 & 3 Requirement:** LUP Type 2 & 3 dischargers shall ensure that construction activity traffic to and from the project is limited to entrances and exits that employ effective controls to prevent off-site tracking of sediment.

e. **Additional LUP Type 2 & 3 Requirement:** LUP Type 2 & 3 dischargers shall ensure that all storm drain inlets and perimeter controls, runoff control BMPs, and pollutant controls at entrances and exits (e.g. tire washoff locations) are maintained and protected from activities that reduce their effectiveness.

f. **Additional LUP Type 2 & 3 Requirement:** LUP Type 2 & 3 dischargers shall inspect all immediate access roads. At a minimum daily and prior to any rain event, the discharger shall remove any

[11] Sheet flow length is the length that shallow, low velocity flow travels across a site.

sediment or other construction activity-related materials that are deposited on the roads (by vacuuming or sweeping).

g. **Additional LUP Type 3 Requirement:** The Regional Water Board may require LUP Type 3 dischargers to implement additional site-specific sediment control requirements if the implementation of the other requirements in this section are not adequately protecting the receiving waters.

**6. Run-on and Run-off Controls**

a. LUP dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site-shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this Attachment.

b. Run-on and runoff controls are not required for Type 1 LUPs unless the evaluation of quantity and quality of run-on and runoff deems them necessary or visual inspections show that the site requires such controls.

**7. Inspection, Maintenance and Repair**

a. All inspection, maintenance repair and sampling activities at the discharger's LUP location shall be performed or supervised by a QSP representing the discharger. The QSP may delegate any or all of these activities to an employee trained to do the task(s) appropriately, but shall ensure adequate deployment.

b. LUP dischargers shall conduct visual inspections and observations daily during working hours (not recorded). At least once each 24-hour period during extended storm events, **LUP Type 2 & 3 dischargers** shall conduct visual inspections to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.

c. Upon identifying failures or other shortcomings, as directed by the QSP, LUP dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.

d. For each pre- and post-rain event inspection required, LUP dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format that includes the information described below.

e. The LUP discharger shall ensure that the checklist remains on-site or with the SWPPP. At a minimum, an inspection checklist should include:

i Inspection date and date the inspection report was written.

ii Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.

iii Site information, including stage of construction, activities completed, and approximate area of the site exposed.

iv A description of any BMPs evaluated and any deficiencies noted.

v If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.

vi Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.

vii Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.

viii Photographs taken during the inspection, if any.

ix Inspector's name, title, and signature.

## K. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS

### 1. Objectives

SWPPPs for all LUPs shall be developed and amended or revised by a QSD. The SWPPP shall be designed to address the following objectives:

a. All pollutants and their sources, including sources of sediment, associated with construction activities associated with LUP activity are controlled;

b. All non-storm water discharges are identified and either eliminated, controlled, or treated;

c. BMPs are effective and result in the reduction or elimination of pollutants in storm water discharges and authorized non-storm water discharges from LUPs during construction; and

d. Stabilization BMPs installed to reduce or eliminate pollutants after construction is completed are effective and maintained.

### 2. SWPPP Implementation Schedule

a. LUPs for which PRDs have been submitted to the State Water Board shall develop a site/project location SWPPP prior to the start of land-disturbing activity in accordance with this Section and shall implement the SWPPP concurrently with commencement of soil-disturbing activities.

b. For an ongoing LUP involving a change in the LRP, the new LRP shall review the existing SWPPP and amend it, if necessary, or develop a new SWPPP within 15 calendar days to conform to the requirements set forth in this General Permit.

### 3. Availability

The SWPPP shall be available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone.

## L. REGIONAL WATER BOARD AUTHORITIES

**1.** Regional Water Boards shall administer the provisions of this General Permit. Administration of this General Permit may include, but is not limited to, requesting the submittal of SWPPPs, reviewing SWPPPs, reviewing monitoring and sampling and analysis reports, conducting compliance inspections, gathering site information by any medium including sampling, photo and video documentation, and taking enforcement actions.

**2.** Regional Water Boards may terminate coverage under this General Permit for dischargers who fail to comply with its requirements or where they determine that an individual NPDES permit is appropriate.

**3.** Regional Water Boards may issue separate permits for discharges of storm water associated with construction activity to individual dischargers, categories of dischargers, or dischargers in a geographic area. Upon issuance of such permits by a Regional Water Board, dischargers subject to those permits shall no longer be regulated by this General Permit.

**4.** Regional Water Boards may direct the discharger to reevaluate the LUP Type(s) for the project (or elements/areas of the project) and impose the appropriate level of requirements.

**5.** Regional Water Boards may terminate coverage under this General Permit for dischargers who negligently or with willful intent incorrectly determine or report their LUP Type (e.g., they determine themselves to be a LUP Type 1 when they are actually a Type 2).

**6.** Regional Water Boards may review PRDs and reject or accept applications for permit coverage or may require dischargers to submit a Report of Waste Discharge / NPDES permit application for Regional Water Board consideration of individual requirements.

**7.** Regional Water Boards may impose additional requirements on dischargers to satisfy TMDL implementation requirements or to satisfy provisions in their Basin Plans.

**8.** Regional Water Boards may require additional Monitoring and Reporting Program Requirements, including sampling and analysis of discharges to sediment-impaired water bodies.

**9.** Regional Water Boards may require dischargers to retain records for more than the three years required by this General Permit.

**10.** Based on an LUP's threat to water quality and complexity, the Regional Water Board may determine on a case-by-case basis that an LUP, or a portion of an LUP, is not eligible for the linear project requirements contained in this Attachment, and require that the discharger comply with all standard requirements in this General Permit.

**11.** The Regional Water Board may require additional monitoring and reporting program requirements including sampling and analysis of discharges to CWA § 303(d)-listed water bodies. Additional requirements imposed by the Regional Water Board shall be consistent with the overall monitoring effort in the receiving waters.

## M. MONITORING AND REPORTING REQUIREMENTS

**Table 3. LUP Summary of Monitoring Requirements**

| LUP Type | Visual Inspections | | | | Sample Collection | | |
|---|---|---|---|---|---|---|---|
| | Daily Site BMP | Pre-storm Event / Baseline | Daily Storm BMP | Post Storm | Storm Water Discharge | Receiving Water | Non-Visible (when applicable) |
| 1 | X | | | | | | X |
| 2 | X | X | X | X | X | | X |
| 3 | X | X | X | X | X | X | X |

### 1. Objectives

LUP dischargers shall prepare a monitoring and reporting program (M&RP) prior to the start of construction and immediately implement the program at the start of construction for LUPs. The monitoring program must be implemented at the appropriate level to protect water quality at all times throughout the life of the project. The M&RP must be a part of the SWPPP, included as an appendix or separate SWPPP chapter.

### 2. M&RP Implementation Schedule

a. LUP dischargers shall implement the requirements of this Section at the time of commencement of construction activity. LUP dischargers are responsible for implementing these requirements until construction activity is complete and the site is stabilized.

b. LUP dischargers shall revise the M&RP when:

i Site conditions or construction activities change such that a change in monitoring is required to comply with the requirements and intent of this General Permit.

ii The Regional Water Board requires the discharger to revise its M&RP based on its review of the document. Revisions may include, but not be limited to, conducting additional site inspections, submitting reports, and certifications. Revisions shall be submitted via postal mail or electronic e-mail.

iii The Regional Water Board may require additional monitoring and reporting program requirements including sampling and analysis of discharges to CWA § 303(d)-listed water bodies. Additional requirements imposed by the Regional Water Board shall be consistent with the overall monitoring effort in the receiving waters.

**3. LUP Type 1 Monitoring and Reporting Requirements**

a. LUP Type 1 Inspection Requirements

i LUP Type 1 dischargers shall ensure that all inspections are conducted by trained personnel. The name(s) and contact number(s) of the assigned inspection personnel should be listed in the SWPPP.

ii LUP Type 1 dischargers shall ensure that all visual inspections are conducted daily during working hours and in conjunction with other daily activities in areas where active construction is occurring.

iii LUP Type 1 dischargers shall ensure that photographs of the site taken before, during, and after storm events are taken during inspections, and submitted through the State Water Board's SMARTS website once every three rain events.

iv LUP Type 1 dischargers shall conduct daily visual inspections to verify that:

(1) Appropriate BMPs for storm water and non-storm water are being implemented in areas where active construction is occurring (including staging areas);

(2) Project excavations are closed, with properly protected spoils, and that road surfaces are cleaned of excavated material and construction materials such as chemicals by either removing or storing the material in protective storage containers at the end of every construction day;

(3) Land areas disturbed during construction are returned to pre-construction conditions or an equivalent protection is used at the end of each workday to eliminate or minimize erosion and the possible discharge of sediment or other pollutants during a rain event.

v Inspections may be discontinued in non-active construction areas where soil-disturbing activities are completed and final soil stabilization is achieved (e.g., paving is completed, substructures

are installed, vegetation meets minimum cover requirements for final stabilization, or other stabilization requirements are met).

vi Inspection programs are required for LUP Type 1 projects where temporary and permanent stabilization BMPs are installed and are to be monitored after active construction is completed. Inspection activities shall continue until adequate permanent stabilization is established and, in areas where re-vegetation is chosen, until minimum vegetative coverage is established in accordance with Section C.1 of this Attachment.

b. LUP Type 1 Monitoring Requirements for Non-Visible Pollutants

LUP Type 1 dischargers shall implement sampling and analysis requirements to monitor non-visible pollutants associated with (1) construction sites; (2) activities producing pollutants that are not visually detectable in storm water discharges; and (3) activities which could cause or contribute to an exceedance of water quality objectives in the receiving waters.

i Sampling and analysis for non-visible pollutants is only required where the LUP Type 1 discharger believes pollutants associated with construction activities have the potential to be discharged with storm water runoff due to a spill or in the event there was a breach, malfunction, failure and/or leak of any BMP. Also, failure to implement BMPs may require sample collection.

(1) Visual observations made during the monitoring program described above will help the LUP Type 1 discharger determine when to collect samples.

(2) The LUP Type 1 discharger is not required to sample if one of the conditions described above (e.g., breach or spill) occurs and the site is cleaned of material and pollutants and/or BMPs are implemented prior to the next storm event.

ii LUP Type 1 dischargers shall collect samples down-gradient from all discharge locations where the visual observations were made triggering the monitoring, and which can be safely accessed. For sites where sampling and analysis is required, personnel trained in water quality sampling procedures shall collect storm water samples.

iii If sampling for non-visible pollutant parameters is required, LUP Type 1 dischargers shall ensure that samples be analyzed for parameters indicating the presence of pollutants identified in the pollutant source assessment required in Section J.2.a.i.

iv LUP Type 1 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

v LUP Type 1 dischargers shall ensure that a sufficiently large sample of storm water that has not come into contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample[12]) will be collected for comparison with the discharge sample. Samples shall be collected during the first two hours of discharge from rain events that occur during daylight hours and which generate runoff.

vi LUP Type 1 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis. Analyses may include, but are not limited to, indicator parameters such as: pH, specific conductance, dissolved oxygen, conductivity, salinity, and Total Dissolved Solids (TDS).

vii For laboratory analyses, all sampling, sample preservation, and other analyses must be conducted according to test procedures pursuant to 40 C.F.R. Part 136. LUP Type 1 dischargers shall ensure that field samples are collected and analyzed according to manufacturer specifications of the sampling devices employed. Portable meters shall be calibrated according to manufacturer's specification.

viii LUP Type 1 dischargers shall ensure that all field and/or analytical data are kept in the SWPPP document.

c. <u>LUP Type 1 Visual Observation Exceptions</u>

i LUP Type 1 dischargers shall be prepared to collect samples and conduct visual observation (inspections) to meet the minimum visual observation requirements of this Attachment. The Type 1 LUP discharger is not required to physically collect samples or conduct visual observation (inspections) under the following conditions:

(1) During dangerous weather conditions such as flooding and electrical storms;

(2) Outside of scheduled site business hours.

(3) When access to the site is unsafe due to storm events.

[12] Sample collected at a location unaffected by contruction activities.

ii If the LUP Type 1 discharger does not collect the required samples or visual observation (inspections) due to these exceptions, an explanation why the sampling or visual observation (inspections) were not conducted shall be included in both the SWPPP and the Annual Report.

d. Particle Size Analysis for Risk Justification

LUP Type 1 dischargers utilizing justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

## 4. LUP Type 2 & 3 Monitoring and Reporting Requirements

a. LUP Type 2 & 3 Inspection Requirements

i LUP Type 2 & 3 dischargers shall ensure that all inspections are conducted by trained personnel. The name(s) and contact number(s) of the assigned inspection personnel should be listed in the SWPPP.

ii LUP Type 2 & 3 dischargers shall ensure that all visual inspections are conducted daily during working hours and in conjunction with other daily activities in areas where active construction is occurring.

iii LUP Type 2 & 3 dischargers shall ensure that photographs of the site taken before, during, and after storm events are taken during inspections, and submitted through the State Water Board's SMARTS website once every three rain events.

iv LUP Type 2 & 3 dischargers shall conduct daily visual inspections to verify that appropriate BMPs for storm water and non-storm water are being implemented and in place in areas where active construction is occurring (including staging areas).

v LUP Type 2 & 3 dischargers shall conduct inspections of the construction site prior to anticipated storm events, during extended storm events, and after actual storm events to identify areas contributing to a discharge of storm water associated with construction activity. Pre-storm inspections are to ensure that BMPs are properly installed and maintained; post-storm inspections are to assure that BMPs have functioned adequately. During

extended storm events, inspections shall be required during normal working hours for each 24-hour period.

vi Inspections may be discontinued in non-active construction areas where soil-disturbing activities are completed and final soil stabilization is achieved (e.g., paving is completed, substructures are installed, vegetation meets minimum cover requirements for final stabilization, or other stabilization requirements are met).

vii LUP Type 2 & 3 dischargers shall implement a monitoring program for inspecting projects that require temporary and permanent stabilization BMPs after active construction is complete. Inspections shall ensure that the BMPs are adequate and maintained. Inspection activities shall continue until adequate permanent stabilization is established and, in vegetated areas, until minimum vegetative coverage is established in accordance with Section C.1 of this Attachment.

viii If possible, LUP Type 2 & 3 dischargers shall install a rain gauge on-site at an accessible and secure location with readings made during all storm event inspections. When readings are unavailable, data from the closest rain gauge with publically available data may be used.

ix LUP Type 2 & 3 dischargers shall Include and maintain a log of the inspections conducted in the SWPPP. The log will provide the date and time of the inspection and who conducted the inspection.

b. LUP Type 2 & 3 Storm Water Effluent Monitoring Requirements

**Table 4. LUP Type 2 & 3 Effluent Monitoring Requirements**

| LUP Type | Frequency | Effluent Monitoring |
|---|---|---|
| **2** | Minimum of 3 samples per day characterizing discharges associated with construction activity from the project active areas of construction. | Turbidity, pH, and non-visible pollutant parameters (if applicable) |
| **3** | Minimum of 3 samples per day characterizing discharges associated with construction activity from the project active areas of construction. | turbidity, pH, and non-visible pollutant parameters (if applicable) |

i LUP Type 2 & 3 dischargers shall collect storm water grab samples from sampling locations characterizing discharges associated with activity from the LUP active areas of construction. At a minimum, 3 samples shall be collected per day of discharge.

ii LUP Type 2 & 3 dischargers shall collect samples of stored or contained storm water that is discharged subsequent to a storm event producing precipitation of ½ inch or more at the time of discharge.

iii LUP Type 2 & 3 dischargers shall ensure that storm water grab sample(s) obtained be representative of the flow and characteristics of the discharge.

iv LUP Type 2 & 3 dischargers shall analyze their effluent samples for:

(1) pH and turbidity
(2) Any additional parameter for which monitoring is required by the Regional Water Board.

c. LUP Type 2 & 3 Storm Water Effluent Sampling Locations

i LUP Type 2 & 3 dischargers shall perform sampling and analysis of storm water discharges to characterize discharges associated with construction activity from the entire disturbed project or area.

ii LUP Type 2 & 3 dischargers may monitor and report run-on from surrounding areas if there is reason to believe run-on may contribute to exceedance of NALs.

iii LUP Type 2 & 3 dischargers shall select analytical test methods from the list provided in Table 5 below.

iv LUP Type 2 & 3 dischargers shall ensure that all storm water sample collection preservation and handling shall be conducted in accordance with the “Storm Water Sample Collection and Handling Instructions” below.

d. LUP Type 3 Receiving Water Monitoring Requirements

i In the event that an LUP Type 3 discharger’s effluent exceeds the receiving water monitoring triggers of 500 NTU turbidity or pH range of 6.0-9.0, contained in this General Permit and has a direct discharge to receiving waters, the LUP discharger shall subsequently sample Receiving Waters (RWs) for turbidity, pH (if applicable) and SSC for the duration of coverage under this General Permit. In the event that an LUP Tupe 3 discharger utilizing ATS with direct discharges into receiving waters discharges effluent that exceeds the NELs in this permit, the discharger shall

subsequently sample RWs for turbidity, pH (if applicable), and SSC for the duration of coverage under this General Permit.

ii LUP Type 3 dischargers that meet the project criteria in Appendix 3 of this General Permit and have more than 30 acres of soil disturbance in the project area or project section area designated as Type 3, shall comply with the Bioassessment requirements prior to commencement of construction activity.

iii LUP Type 3 dischargers shall obtain RW samples in accordance with the requirements of the Receiving Water Sampling Locations section (Section M.4.c. of this Attachment).

e. LUP Type 3 Receiving Water Sampling Locations

i **Upstream/up-gradient RW samples**: LUP Type 3 dischargers shall obtain any required upstream/up-gradient receiving water samples from a representative and accessible location as close as possible to and upstream from the effluent discharge point.

ii **Downstream/down-gradient RW samples**: LUP Type 3 dischargers shall obtain any required downstream/down-gradient receiving water samples from a representative and accessible location as close as possible to and downstream from the effluent discharge point.

iii If two or more discharge locations discharge to the same receiving water, LUP Type 3 dischargers may sample the receiving water at a single upstream and downstream location.

f. LUP Type 2 & 3 Monitoring Requirements for Non-Visible Pollutants

LUP Type 2 & 3 dischargers shall implement sampling and analysis requirements to monitor non-visible pollutants associated with (1) construction sites; (2) activities producing pollutants that are not visually detectable in storm water discharges; and (3) activities which could cause or contribute to an exceedance of water quality objectives in the receiving waters.

i Sampling and analysis for non-visible pollutants is only required where LUP Type 2 & 3 dischargers believe pollutants associated with construction activities have the potential to be discharged with storm water runoff due to a spill or in the event there was a breach, malfunction, failure and/or leak of any BMP. Also, failure to implement BMPs may require sample collection.

(1) Visual observations made during the monitoring program described above will help LUP Type 2 & 3 dischargers determine when to collect samples.

(2) LUP Type 2 & 3 dischargers are not required to sample if one of the conditions described above (e.g., breach or spill) occurs and the site is cleaned of material and pollutants and/or BMPs are implemented prior to the next storm event.

ii LUP Type 2 & 3 dischargers shall collect samples down-gradient from the discharge locations where the visual observations were made triggering the monitoring and which can be safely accessed. For sites where sampling and analysis is required, personnel trained in water quality sampling procedures shall collect storm water samples.

iii If sampling for non-visible pollutant parameters is required, LUP Type 2 & 3 dischargers shall ensure that samples be analyzed for parameters indicating the presence of pollutants identified in the pollutant source assessment required in Section J.2.a.i.

iv LUP Type 2 & 3 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

v LUP Type 2 & 3 dischargers shall ensure that a sufficiently large sample of storm water that has not come into contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample[13]) will be collected for comparison with the discharge sample. Samples shall be collected during the first two hours of discharge from rain events that occur during daylight hours and which generate runoff.

vi LUP Type 2 & 3 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis. Analyses may include, but are not limited to, indicator parameters such as: pH, specific conductance, dissolved oxygen, conductivity, salinity, and Total Dissolved Solids (TDS).

vii For laboratory analyses, all sampling, sample preservation, and other analyses must be conducted according to test procedures pursuant to 40 C.F.R. Part 136. LUP Type 2 & 3 dischargers shall ensure that field samples are collected and analyzed according to manufacturer specifications of the sampling devices employed.

[13] Sample collected at a location unaffected by construction activities

Portable meters shall be calibrated according to manufacturer's specification.

viii LUP Type 2 & 3 dischargers shall ensure that all field and/or analytical data are kept in the SWPPP document.

g. LUP Type 2 & 3 Visual Observation and Sample Collection Exceptions

i LUP Type 2 & 3 dischargers shall be prepared to collect samples and conduct visual observation (inspections) to meet the minimum visual observation requirements of this Attachment. Type 2 & 3 LUP dischargers are not required to physically collect samples or conduct visual observation (inspections) under the following conditions:

(1) During dangerous weather conditions such as flooding and electrical storms;

(2) Outside of scheduled site business hours.

(3) When access to the site is unsafe due to storm events.

ii If the LUP Type 2 or 3 discharger does not collect the required samples or visual observation (inspections) due to these exceptions, an explanation why the sampling or visual observation (inspections) were not conducted shall be included in both the SWPPP and the Annual Report.

h. LUP Type 2 & 3 Storm Water Sample Collection and Handling Instructions

LUP Type 2 & 3 dischargers shall refer to Table 5 below for test Methods, detection Limits, and reporting Units. During storm water sample collection and handling, the LUP Type 2 & 3 discharger shall:

i Identify the parameters required for testing and the number of storm water discharge points that will be sampled. Request the laboratory to provide the appropriate number of sample containers, types of containers, sample container labels, blank chain of custody forms, and sample preservation instructions.

ii Determine how to ship the samples to the laboratory. The testing laboratory should receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory). The options are to either deliver the samples to the laboratory, arrange to have the laboratory pick them up, or ship them overnight to the laboratory.

iii Use only the sample containers provided by the laboratory to collect and store samples. Use of any other type of containers could contaminate your samples.

iv Prevent sample contamination, by not touching, or putting anything into the sample containers before collecting storm water samples.

v Not overfilling sample containers. Overfilling can change the analytical results.

vi Tightly screw the cap of each sample container without stripping the threads of the cap.

vii Complete and attach a label to each sample container. The label shall identify the date and time of sample collection, the person taking the sample, and the sample collection location or discharge point. The label should also identify any sample containers that have been preserved.

viii Carefully pack sample containers into an ice chest or refrigerator to prevent breakage and maintain temperature during shipment. Remember to place frozen ice packs into the shipping container. Samples should be kept as close to 4° C (39° F) as possible until arriving at the laboratory. Do not freeze samples.

ix Complete a Chain of Custody form for each set of samples. The Chain of Custody form shall include the discharger's name, address, and phone number, identification of each sample container and sample collection point, person collecting the samples, the date and time each sample container was filled, and the analysis that is required for each sample container.

x Upon shipping/delivering the sample containers, obtain both the signatures of the persons relinquishing and receiving the sample containers.

xi Designate and train personnel to collect, maintain, and ship samples in accordance with the above sample protocols and good laboratory practices.

xii Refer to the Surface Water Ambient Monitoring Program's (SWAMP) 2008 Quality Assurance Program Plan (QAPrP) for more

information on sampling collection and analysis. See http://www.waterboards.ca.gov/water_issues/programs/swamp/[14]

**Table 5. Test Methods, Detection Limits, Reporting Units and Applicable NALs**

| Parameter | Test Method | Discharge Type | Min. Detection Limit | Reporting Units | Numeric Action Levels | (LUP Type 3) Receiving Water Monitoring Trigger |
|---|---|---|---|---|---|---|
| **pH** | Field test with calibrated portable instrument | Type 2 & 3 | 0.2 | pH units | Lower = 6.5 upper = 8.5 | Lower = 6.0 upper = 9.0 |
| **Turbidity** | EPA 0180.1 and/or field test with calibrated portable instrument | Type 2 & 3 | 1 | NTU | 250 NTU | 500 NTU |
| **SSC** | ASTM Method D 3977-97[15] | Type 3 if Receiving Water Monitoring Trigger is exceeded | 5 | Mg/L | N/A | N/A |
| **Bioassessment** | (STE) Level I of (SAFIT),[16] fixed-count of 600 org/sample | Type 3 LUPs > 30 acres | N/A | N/A | N/A | N/A |

i. LUP Type 2 & 3 Monitoring Methods

i The LUP Type 2 or 3 discharger's project M&RP shall include a description of the following items:

(1) Visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures.

[14] Additional information regarding SWAMP's QAPrP can be found at: http://www.waterboards.ca.gov/water_issues/programs/swamp/.

[15] ASTM, 1999, Standard Test Method for Determining Sediment Concentration in Water Samples: American Society of Testing and Materials, D 3977-97, Vol. 11.02, pp. 389-394

[16] The current SAFIT STEs (28 November 2006) list requirements for both the Level I and Level II taxonomic effort, and are located at: http://www.swrcb.ca.gov/swamp/docs/safit/ste_list.pdf. When new editions are published by SAFIT, they will supersede all previous editions. All editions will be posted at the State Water Board's SWAMP website.

(2) Sampling locations, and sample collection and handling procedures. This shall include detailed procedures for sample collection, storage, preservation, and shipping to the testing lab to assure that consistent quality control and quality assurance is maintained. Dischargers shall attach to the monitoring program a copy of the Chain of Custody form used when handling and shipping samples.

(3) Identification of the analytical methods and related method detection limits (if applicable) for each parameter required in Section M.4.f above.

ii LUP Type 2 & 3 dischargers shall ensure that all sampling and sample preservation be in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a discharger's own field instruments for measuring pH and turbidity) shall be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. All laboratory analyses shall be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. With the exception of field analysis conducted by the discharger for turbidity and pH, all analyses shall be sent to and conducted at a laboratory certified for such analyses by the State Department of Health Services (SSC exception). The LUP discharger shall conduct its own field analysis of pH and may conduct its own field analysis of turbidity if the discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis.

j. LUP Type 2 & 3 Analytical Methods

LUP Type 2 & 3 dischargers shall refer to Table 5 above for test Methods, detection Limits, and reporting Units.

i **pH**: LUP Type 2 & 3 dischargers shall perform pH analysis on-site with a calibrated pH meter or pH test kit. The LUP discharger shall record pH monitoring results on paper and retain these records in accordance with Section M.4.o, below.

ii **Turbidity**: LUP Type 2 & 3 dischargers shall perform turbidity analysis using a calibrated turbidity meter (turbidimeter), either on-site or at an accredited lab. Acceptable test methods include Standard Method 2130 or USEPA Method 180.1. The results shall

be recorded in the site log book in Nephelometric Turbidity Units (NTU).

iii **Suspended sediment concentration (SSC)**: LUP Type 3 dischargers exceeding the turbidity Receiving Water Monitoring Trigger, shall perform SSC analysis using ASTM Method D3977-97.

iv **Bioassessment**: LUP Type 3 dischargers shall perform bioassessment sampling and analysis according to Appendix 3 of this General Permit.

k. Watershed Monitoring Option

If an LUP Type 2 or 3 discharger is part of a qualified regional watershed-based monitoring program the LUP Type 2 or 3 discharger may be eligible for relief from the monitoring requirements in this Attachment. The Regional Water Board may approve proposals to substitute an acceptable watershed-based monitoring program if it determines that the watershed-based monitoring program will provide information to determine each discharger's compliance with the requirements of this General Permit.

l. Particle Size Analysis for Risk Justification

LUP Type 2 & 3 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

m. NAL Exceedance Report

i In the event that any effluent sample exceeds an applicable NAL, the Regional Water Boards may require LUP Type 2 & 3 dischargers to submit NAL Exceedance Reports.

ii LUP Type 2 & 3 dischargers shall certify each NAL Exceedance Report in accordance with the Special Provisions for Construction Activity.

iii LUP Type 2 & 3 dischargers shall retain an electronic or paper copy of each NAL Exceedance Report for a minimum of three years after the date the exceedance report is filed.

iv LUP Type 2 & 3 dischargers shall include in the NAL Exceedance Report:

(1) the analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit"); and
(2) the date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation.
(3) Description of the current BMPs associated with the effluent sample that exceeded the NAL and the proposed corrective actions taken.

n. Monitoring Records

LUP Type 2 & 3 dischargers shall ensure that records of all storm water monitoring information and copies of all reports (including Annual Reports) required by this General Permit be retained for a period of at least three years. LUP Type 2 & 3 dischargers may retain records off-site and make them available upon request. These records shall include:

i The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation (rain gauge);

ii The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements;

iii The date and approximate time of analyses;

iv The individual(s) who performed the analyses;

v A summary of all analytical results from the last three years, the method detection limits and reporting units, the analytical techniques or methods used, and all chain of custody forms;

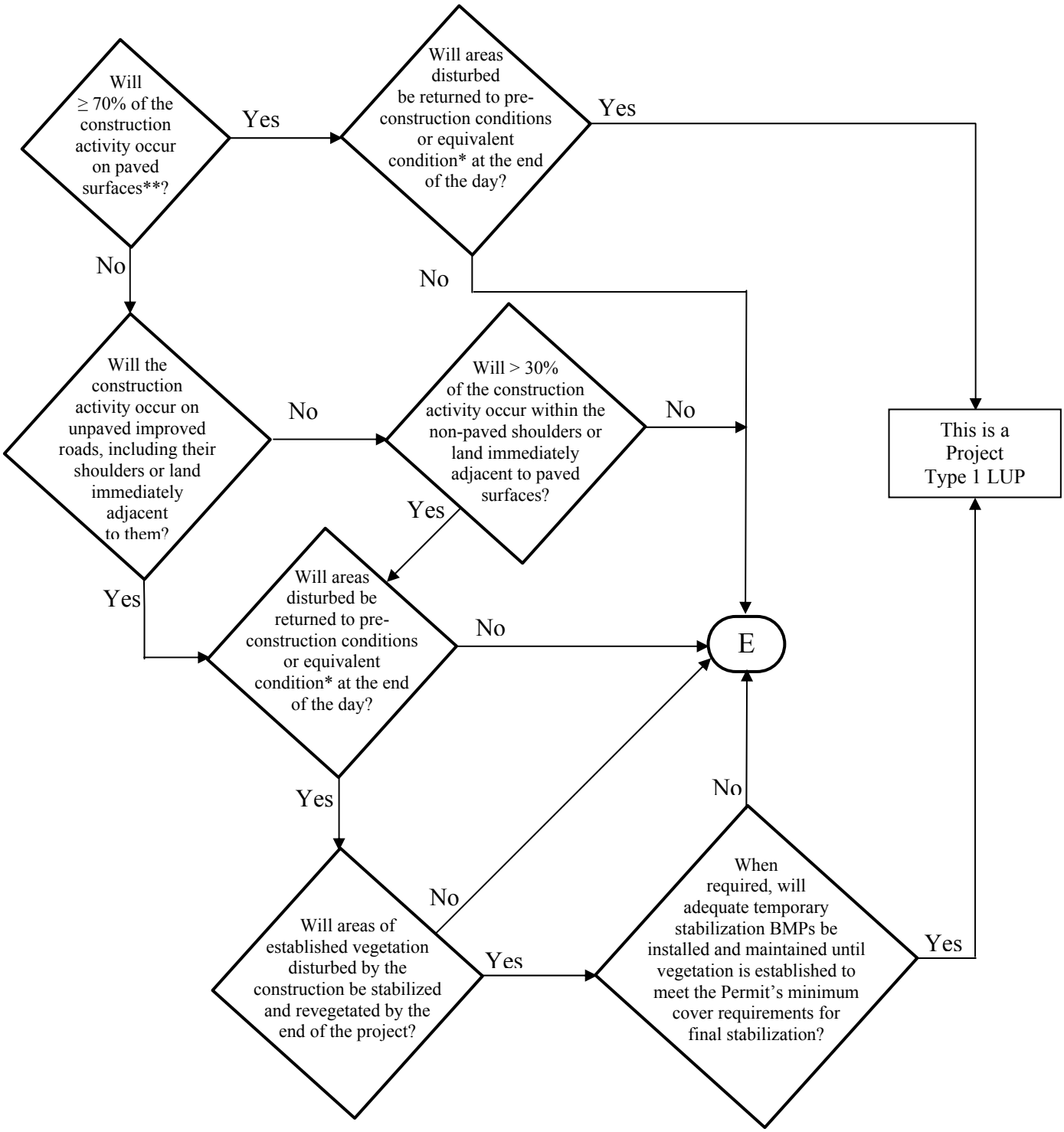
vi Quality assurance/quality control records and results;

vii Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Section M.4.a above);

viii Visual observation and sample collection exception records (see Section M.4.g above); and

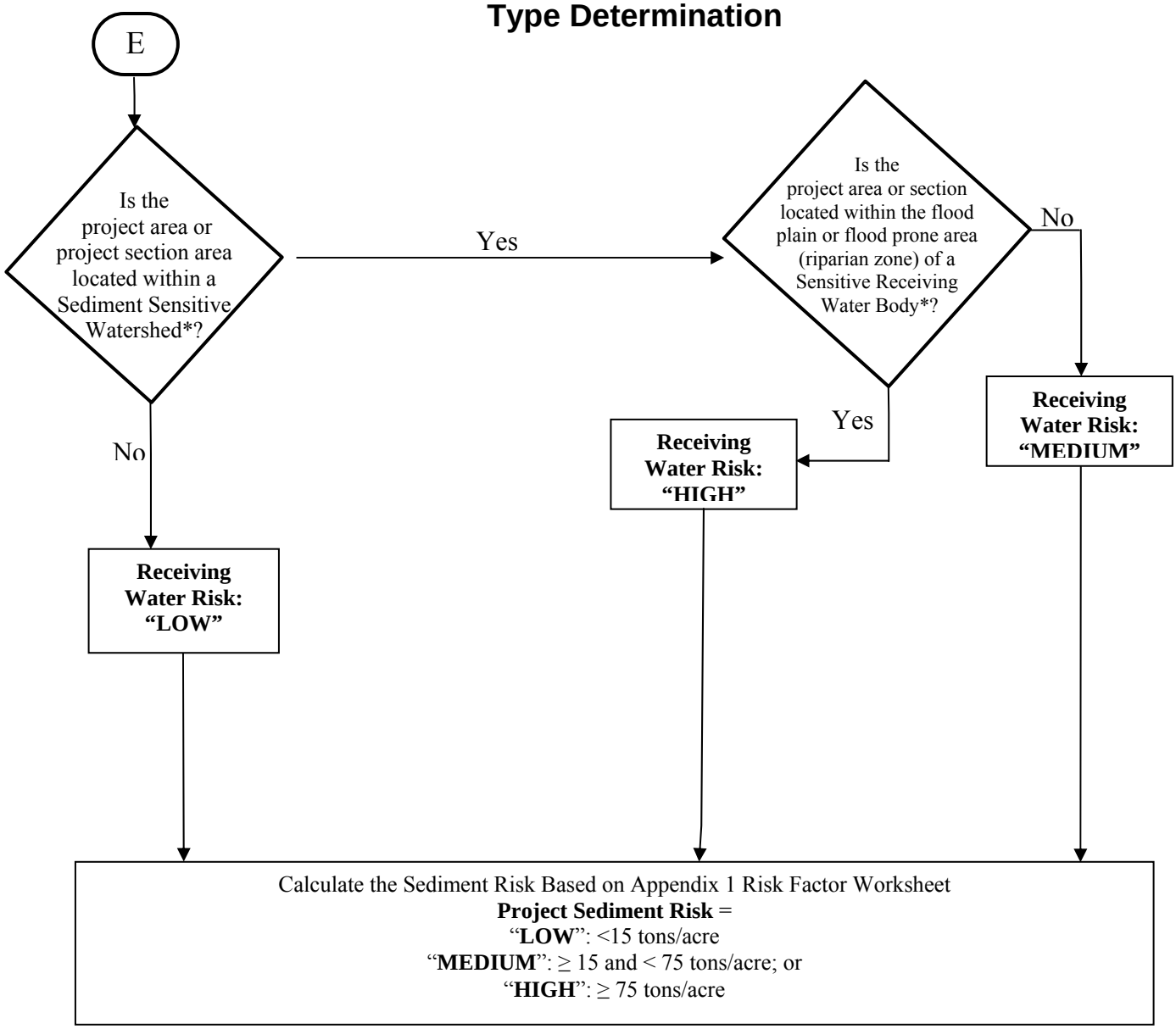
ix The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.

# ATTACHMENT A.1
## LUP Project Area or Project Section Area Type Determination




*See Definition of Terms
** Or: "Will < 30% of the soil disturbance occur on unpaved surfaces?

# ATTACHMENT A.1
# LUP Project Area or Project Section Area Type Determination




* See Definition of Terms

**PROJECT SEDIMENT RISK**

| RECEIVING WATER RISK | LOW | MEDIUM | HIGH |
|---|---|---|---|
| **LOW** | Type 1 | Type 1 | Type 2 |
| **MEDIUM** | Type 1 | Type 2 | Type 3 |
| **HIGH** | Type 2 | Type 3 | Type 3 |

# ATTACHMENT A.1
# Definition of Terms

1. **Equivalent Condition** – Means disturbed soils such as those from trench excavation are required to be hauled away, backfilled into the trench, and/or covered (e.g., metal plates, pavement, plastic covers over spoil piles) at the end of the construction day.
2. **Linear Construction Activity** – Linear construction activity consists of underground/ overhead facilities that typically include, but are not limited to, any conveyance, pipe or pipeline for the transportation of any gaseous, liquid (including water, wastewater for domestic municipal services), liquescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g., telephone, telegraph, radio or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/ tower pad and cable/ wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/ borrow locations.
3. **Sediment Sensitive Receiving Water Body –** Defined as a water body segment that is listed on EPA's approved CWA 303(d) list for sedimentation/siltation, turbidity, or is designated with beneficial uses of SPAWN, MIGRATORY, and COLD.
4. **Sediment Sensitive Watershed –** Defined as a watershed draining into a receiving water body listed on EPA's approved CWA 303(d) list for sedimentation/siltation, turbidity, or a water body designated with beneficial uses of SPAWN, MIGRATORY, and COLD.

# ATTACHMENT A.2
# PERMIT REGISTRATION DOCUMENTS (PRDs)
# GENERAL INSTRUCTIONS FOR LINEAR UNDERGROUND/OVERHEAD PROJECTS TO COMPLY WITH THE CONSTRUCTION GENERAL PERMIT

## GENERAL INSTRUCTIONS

### Who Must Submit

This permit is effective on July 1, 2010.

The Legally Responsible Person (LRP) for construction activities associated with linear underground/overhead project (LUP) must electronically apply for coverage under this General Permit on or after July 1, 2010. If it is determined that the LUP construction activities require an NPDES permit, the Legally Responsible Person[1] (LRP) shall submit PRDs for this General Permit in accordance with the following:

*LUPs associated with Private or Municipal Development Projects*

1. For LUPs associated with pre-development and pre-redevelopment construction activities:

   The LRP must obtain coverage[2] under this General Permit for its pre-development and pre-redevelopment construction activities where the total disturbed land area of these construction activities is greater than 1 acre.

2. For LUPs associated with new development and redevelopment construction projects:

   The LRP must obtain coverage under this General Permit for LUP construction activities associated with new development and redevelopment projects where the total disturbed land area of the LUP is greater than 1 acre. Coverage under this permit is not required where the same LUP construction activities are covered by another NPDES permit.

*LUPs not associated with private or municipal new development or redevelopment projects*:

The LRP must obtain coverage under this General Permit on or after July 1, 2010 for its LUP construction activities where the total disturbed land area is greater than 1 acre.

### PRD Submittal Requirements

Prior to the start of construction activities a LRP must submit PRDs and fees to the State Water Board for each LUP.

*New and Ongoing LUPs*

Dischargers of new LUPs that commence construction activities after the adoption date of this General Permit shall file PRDs prior to the commencement of construction and implement the SWPPP upon the start of construction.

[1] person possessing the title of the land on which the construction activities will occur for the regulated site
[2] obtain coverage means filing PRDs for the project.

**PERMIT REGISTRATION DOCUMENTS (PRDs)**
**GENERAL INSTRUCTIONS (CONTINUED)**

Dischargers of ongoing LUPs that are currently covered under State Water Board Order No. 2003-0007 (Small LUP General Permit) shall electronically file Permit Registration Documents no later than July 1, 2010. After July 1, 2010, all NOIs subject to State Water Board Order No. 2003-0007-DWQ will be terminated. All existing dischargers shall be exempt from the risk determination requirements in Attachment A. All existing dischargers are therefore subject to LUP Type 1 requirements regardless of their project's sediment and receiving water risks. However, a Regional Board retains the authority to require an existing discharger to comply with the risk determination requirements in Attachment A.

Where to Apply

The Permit Registration Documents (PRDs) can be found at www.waterboards.ca.gov/water_issues/programs/stormwater/

Fees

The annual fee for storm water permits are established through the State of California Code of Regulations.

When Permit Coverage Commences

To obtain coverage under the General Permit, the LRP must include the complete PRDs and the annual fee. All PRDs deemed incomplete will be rejected with an explanation as to what is required to complete submittal. Upon receipt of complete PRDs and associated fee, each discharger will be sent a waste discharger's identification (WDID) number.

## Projects and Activities Not Defined As Construction Activity

1. LUP construction activity does not include routine maintenance projects to maintain original line and grade, hydraulic capacity, or original purpose of the facility. Routine maintenance projects are projects associated with operations and maintenance activities that are conducted on existing lines and facilities and within existing right-of-way, easements, franchise agreements or other legally binding agreements of the discharger. Routine maintenance projects include, but are not limited to projects that are conducted to:

    - Maintain the original purpose of the facility, or hydraulic capacity.
    - Update existing lines[3] and facilities to comply with applicable codes, standards and regulations regardless if such projects result in increased capacity.
    - Repairing leaks.

    Routine maintenance does not include construction of new[4] lines or facilities resulting from compliance with applicable codes, standards and regulations.

[3] Update existing lines includes replacing existing lines with new materials or pipes.
[4] New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines.

**PERMIT REGISTRATION DOCUMENTS (PRDs)**
**GENERAL INSTRUCTIONS (CONTINUED)**

Routine maintenance projects do not include those areas of maintenance projects that are outside of an existing right-of-way, franchise, easements, or agreements. When a project must acquire new areas, those areas may be subject to this General Permit based on the area of disturbed land outside the original right-of-way, easement, or agreement.

2. LUP construction activity does not include field activities associated with the planning and design of a project (e.g., activities associated with route selection).

3. Tie-ins conducted immediately adjacent to "energized" or "pressurized" facilities by the discharger are not considered small construction activities where all other LUP construction activities associated with the tie-in are covered by a NOI and SWPPP of a third party or municipal agency.

## Calculating Land Disturbance Areas of LUPs

The total land area disturbed for LUPs is the sum of the:

- Surface areas of trenches, laterals and ancillary facilities, plus
- Area of the base of stockpiles on unpaved surfaces, plus
- Surface area of the borrow area, plus
- Areas of paved surfaces constructed for the project, plus
- Areas of new roads constructed or areas of major reconstruction to existing roads (e.g. improvements to two-track surfaces or road widening) for the sole purpose of accessing construction activities or as part of the final project, plus
- Equipment and material storage, staging, and preparation areas (laydown areas) not on paved surfaces, plus
- Soil areas outside the surface area of trenches, laterals and ancillary facilities that will be graded, and/or disturbed by the use of construction equipment, vehicles and machinery during construction activities.

*Stockpiling Areas*

Stockpiling areas, borrow areas and the removal of soils from a construction site may or may not be included when calculating the area of disturbed soil for a site depending on the following conditions:

- For stockpiling of soils onsite or immediately adjacent to a LUP site and the stockpile is not on a paved surface, the area of the base of the stockpile is to be included in the disturbed area calculation.

- The surface area of borrow areas that are onsite or immediately adjacent to a project site are to be included in the disturbed area calculation.

- For soil that is hauled offsite to a location owned or operated by the discharger that is not a paved surface, the area of the base of the stockpile is to be included in the disturbed area calculation except when the offsite location is already subject to a separate storm water permit.

**PERMIT REGISTRATION DOCUMENTS (PRDs)**
**GENERAL INSTRUCTIONS (CONTINUED)**

- For soil that is brought to the project from an off-site location owned or operated by the discharger the surface area of the borrow pit is to be included in the disturbed area calculation except when the offsite location is already subject to a separate storm water permit.

- Trench spoils on a paved surface that are either returned to the trench or excavation or hauled away from the project daily for disposal or reuse will not be included in the disturbed area calculation.

If you have any questions concerning submittal of PRDs, please call the State Water Board at (866) 563-3107.

# ATTACHMENT B
# PERMIT REGISTRATION DOCUMENTS (PRDs) TO COMPLY WITH THE TERMS OF THE GENERAL PERMIT TO DISCHARGE STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY

## GENERAL INSTRUCTIONS

**A.** All Linear Construction Projects shall comply with the PRD requirements in Attachment A.2 of this Order.

**B. Who Must Submit**

Discharges of storm water associated with construction that results in the disturbance of one acre or more of land must apply for coverage under the General Construction Storm Water Permit (General Permit). Any construction activity that is a part of a larger common plan of development or sale must also be permitted, regardless of size. (For example, if 0.5 acre of a 20-acre subdivision is disturbed by the construction activities of discharger A and the remaining 19.5 acres is to be developed by discharger B, discharger A must obtain a General Storm Water Permit for the 0.5 acre project).

Other discharges from construction activities that are covered under this General Permit can be found in the General Permit Section II.B.

It is the LRP's responsibility to obtain coverage under this General Permit by electronically submitting complete PRDs (Permit Registration Documents).

In all cases, the proper procedures for submitting the PRDs must be completed before construction can commence.

**C. Construction Activity Not Covered By This General Permit**

Discharges from construction that are not covered under this General Permit can be found in the General Permit Sections II.A &B..

**D. Annual Fees and Fee Calculation**

Annual fees are calculated based upon the total area of land to be disturbed not the total size of the acreage owned. However, the calculation includes all acres to be disturbed during the duration of the project. For example, if 10 acres are scheduled to be disturbed the first year and 10 in each subsequent year for 5 years, the annual fees would be based upon 50 acres of disturbance. The State Water Board will evaluate adding acreage to an existing Permit Waste Discharge Identification (WDID) number on a case-by-case basis. In general, any acreage to be considered must be contiguous to the permitted land area and the existing

SWPPP must be appropriate for the construction activity and topography of the acreage under consideration. As acreage is built out and stabilized or sold, the Change of Information (COI) form enables the applicant to remove those acres from inclusion in the annual fee calculation. Checks should be made payable to: State Water Board.

The Annual fees are established through regulations adopted by the State Water Board. The total annual fee is the current base fee plus applicable surcharges for all construction sites submitting an NOI, based on the total acreage to be disturbed during the life of the project. Annual fees are subject to change by regulation.

Dischargers that apply for and satisfy the Small Construction Erosivity Wavier requirements shall pay a fee of $200.00 plus an applicable surcharge, see the General Permit Section II.B.7.

## E. When to Apply

LRP's proposing to conduct construction activities subject to this General Permit must submit their PRDs prior to the commencement of construction activity.

## F. Requirements for Completing Permit Registration Documents (PRDs)

All dischargers required to comply with this General Permit shall electronically submit the required PRDs for their type of construction as defined below.

## G. Standard PRD Requirements (All Dischargers)

1. Notice of Intent
2. Risk Assessment (Standard or Site-Specific)
3. Site Map
4. SWPPP
5. Annual Fee
6. Certification

## H. Additional PRD Requirements Related to Construction Type

1. Discharger in unincorporated areas of the State (not covered under an adopted Phase I or II SUSMP requirements) and that are not a linear project shall also submit a completed:
   a. Post-Construction Water Balance Calculator (Appendix 2).

2. Dischargers who are proposing to implement ATS shall submit:
   a. Complete ATS Plan in accordance with Attachment F at least 14 days prior to the planned operation of the ATS and a paper copy shall be available onsite during ATS operation.

b. Certification proof that design done by a professional in accordance with Attachment F.

3. Dischargers who are proposing an alternate Risk Justification:
   a. Particle Size Analysis.

## I. Exceptions to Standard PRD Requirements

Construction sites with an R value less than 5 as determined in the Risk Assessment are not required to submit a SWPPP.

## J. Description of PRDs

1. Notice of Intent (NOI)

2. Site Map(s) Includes:
   a. The project's surrounding area (vicinity)
   b. Site layout
   c. Construction site boundaries
   d. Drainage areas
   e. Discharge locations
   f. Sampling locations
   g. Areas of soil disturbance (temporary or permanent)
   h. Active areas of soil disturbance (cut or fill)
   i. Locations of all runoff BMPs
   j. Locations of all erosion control BMPs
   k. Locations of all sediment control BMPs
   l. ATS location (if applicable)
   m. Locations of sensitive habitats, watercourses, or other features which are not to be disturbed
   n. Locations of all post-construction BMPs
   o. Locations of storage areas for waste, vehicles, service, loading/unloading of materials, access (entrance/exits) points to construction site, fueling, and water storage, water transfer for dust control and compaction practices

3. **SWPPPs**
   A site-specific SWPPP shall be developed by each discharger and shall be submitted with the PRDs.

4. **Risk Assessment**
   All dischargers shall use the Risk Assessment procedure as describe in the General Permit Appendix 1.

   a. The Standard Risk Assessment includes utilization of the following:
      i. Receiving water Risk Assessment interactive map

ii. EPA Rainfall Erosivity Factor Calculator Website
iii. Sediment Risk interactive map
iv. Sediment sensitive water bodies list

b. The Site-Specific Risk Assessment includes the completion of the hand calculated R value Risk Calculator

5. **Post-Construction Water Balance Calculator**
All dischargers subject to this requirement shall complete the Water Balance Calculator (in Appendix 2) in accordance with the instructions.

6. **ATS Design Document and Certification**
All dischargers using ATS must submit electronically their system design (as well as any supporting documentation) and proof that the system was designed by a qualified ATS design professional (See Attachment F).

To obtain coverage under the General Permit PRDs must be included and completed. If any of the required items are missing, the PRD submittal is considered incomplete and will be rejected. Upon receipt of a complete PRD submittal, the State Water Board will process the application package in the order received and assign a (WDID) number.

Questions?

If you have any questions on completing the PRDs please email stormwater@waterboards.ca.gov or call (866) 563-3107.

# ATTACHMENT C
# RISK LEVEL 1 REQUIREMENTS

## A. Effluent Standards

***[These requirements are the same as those in the General Permit order.]***

1. Narrative – Risk Level 1 dischargers shall comply with the narrative effluent standards listed below:

   a. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

   b. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

2. Numeric – Risk Level 1 dischargers are not subject to a numeric effluent standard.

## B. Good Site Management "Housekeeping"

1. Risk Level 1 dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, Risk Level 1 dischargers shall implement the following good housekeeping measures:

   a. Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

   b. Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).

c. Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).

d. Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

e. Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.

2. Risk Level 1 dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:

a. Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.

b. Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.

c. Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.

d. Cover waste disposal containers at the end of every business day and during a rain event.

e. Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.

f. Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.

g. Implement procedures that effectively address hazardous and non-hazardous spills.

h. Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require that:

i. Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly; and

ii. Appropriate spill response personnel are assigned and trained.

i. Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

3. Risk Level 1 dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:

   a. Prevent oil, grease, or fuel to leak in to the ground, storm drains or surface waters.

   b. Place all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.

   c. Clean leaks immediately and disposing of leaked materials properly.

4. Risk Level 1 dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:

   a. Contain stockpiled materials such as mulches and topsoil when they are not actively being used.

   b. Contain fertilizers and other landscape materials when they are not actively being used.

   c. Discontinue the application of any erodible landscape material within 2 days before a forecasted rain event or during periods of precipitation.

   d. Apply erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.

   e. Stack erodible landscape material on pallets and covering or storing such materials when not being used or applied.

5. Risk Level 1 dischargers shall conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify

all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, Risk Level 1 dischargers shall do the following:

a. Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.

b. Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.

c. Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.

d. Ensure retention of sampling, visual observation, and inspection records.

e. Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

6. Risk Level 1 dischargers shall implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients, trash, metals, bacteria, oil and grease and organics.

**C. Non-Storm Water Management**

1. Risk Level 1 dischargers shall implement measures to control all non-storm water discharges during construction.

2. Risk Level 1 dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.

3. Risk Level 1 dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

## D. Erosion Control

1. Risk Level 1 dischargers shall implement effective wind erosion control.

2. Risk Level 1 dischargers shall provide effective soil cover for inactive[1] areas and all finished slopes, open space, utility backfill, and completed lots.

3. Risk Level 1 dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

## E. Sediment Controls

1. Risk Level 1 dischargers shall establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.

2. On sites where sediment basins are to be used, Risk Level 1 dischargers shall, at minimum, design sediment basins according to the method provided in CASQA's Construction BMP Guidance Handbook.

## F. Run-on and Runoff Controls

Risk Level 1 dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this General Permit.

## G. Inspection, Maintenance and Repair

1. Risk Level 1 dischargers shall ensure that all inspection, maintenance repair and sampling activities at the project location shall be performed or supervised by a Qualified SWPPP Practitioner (QSP) representing the discharger. The QSP may delegate any or all of these activities to an employee trained to do the task(s) appropriately, but shall ensure adequate deployment.

2. Risk Level 1 dischargers shall perform weekly inspections and observations, and at least once each 24-hour period during extended

[1] Inactive areas of construction are areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days.

storm events, to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.

3. Upon identifying failures or other shortcomings, as directed by the QSP, Risk Level 1 dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.

4. For each inspection required, Risk Level 1 dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format.

5. Risk Level 1 dischargers shall ensure that checklists shall remain onsite with the SWPPP and at a minimum, shall include:

   a. Inspection date and date the inspection report was written.

   b. Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.

   c. Site information, including stage of construction, activities completed, and approximate area of the site exposed.

   d. A description of any BMPs evaluated and any deficiencies noted.

   e. If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.

   f. Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.

   g. Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.

   h. Photographs taken during the inspection, if any.

   i. Inspector's name, title, and signature.

**H. Rain Event Action Plan**

Not required for Risk Level 1 dischargers.

## I. Risk Level 1 Monitoring and Reporting Requirements

**Table 1- Summary of Monitoring Requirements**

| Risk Level | Visual Inspections | | | | | Sample Collection | |
|---|---|---|---|---|---|---|---|
| | Quarterly Non-storm Water Discharge | Pre-storm Event | | Daily Storm BMP | Post Storm | Storm Water Discharge | Receiving Water |
| | | Baseline | REAP | | | | |
| 1 | X | X | | X | X | | |

1. **Construction Site Monitoring Program Requirements**

   a. Pursuant to Water Code Sections 13383 and 13267, all dischargers subject to this General Permit shall develop and implement a written site-specific Construction Site Monitoring Program (CSMP) in accordance with the requirements of this Section. The CSMP shall include all monitoring procedures and instructions, location maps, forms, and checklists as required in this section. The CSMP shall be developed prior to the commencement of construction activities, and revised as necessary to reflect project revisions. The CSMP shall be a part of the Storm Water Pollution Prevention Plan (SWPPP), included as an appendix or separate SWPPP chapter.

   b. Existing dischargers registered under the State Water Board Order No. 99-08-DWQ shall make and implement necessary revisions to their Monitoring Programs to reflect the changes in this General Permit in a timely manner, but no later than July 1, 2010. Existing dischargers shall continue to implement their existing Monitoring Programs in compliance with State Water Board Order No. 99-08-DWQ until the necessary revisions are completed according to the schedule above.

   c. When a change of ownership occurs for all or any portion of the construction site prior to completion or final stabilization, the new discharger shall comply with these requirements as of the date the ownership change occurs.

2. **Objectives**

   The CSMP shall be developed and implemented to address the following objectives:

   a. To demonstrate that the site is in compliance with the Discharge Prohibitions;

b. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives;

c. To determine whether immediate corrective actions, additional Best Management Practice (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges; and

d. To determine whether BMPs included in the SWPPP are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges.

3. **Risk Level 1 - Visual Monitoring (Inspection) Requirements for Qualifying Rain Events**

a. Risk Level 1 dischargers shall visually observe (inspect) storm water discharges at all discharge locations within two business days (48 hours) after each qualifying rain event.

b. Risk Level 1 dischargers shall visually observe (inspect) the discharge of stored or contained storm water that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Stored or contained storm water that will likely discharge after operating hours due to anticipated precipitation shall be observed prior to the discharge during operating hours.

c. Risk Level 1 dischargers shall conduct visual observations (inspections) during business hours only.

d. Risk Level 1 dischargers shall record the time, date and rain gauge reading of all qualifying rain events.

e. Within 2 business days (48 hours) prior to each qualifying rain event, Risk Level 1 dischargers shall visually observe (inspect):

i. All storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources. If needed, the discharger shall implement appropriate corrective actions.

ii. All BMPs to identify whether they have been properly implemented in accordance with the SWPPP. If needed, the discharger shall implement appropriate corrective actions.

iii. Any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

f. For the visual observations (inspections) described in e.i and e.iii above, Risk Level 1 dischargers shall observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

g. Within two business days (48 hours) after each qualifying rain event, Risk Level 1 dischargers shall conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the SWPPP accordingly.

h. Risk Level 1 dischargers shall maintain on-site records of all visual observations (inspections), personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

4. **Risk Level 1 – Visual Observation Exemptions**

a. Risk Level 1 dischargers shall be prepared to conduct visual observation (inspections) until the minimum requirements of Section I.3 above are completed. Risk Level 1 dischargers are not required to conduct visual observation (inspections) under the following conditions:

i. During dangerous weather conditions such as flooding and electrical storms.

ii. Outside of scheduled site business hours.

b. If no required visual observations (inspections) are collected due to these exceptions, Risk Level 1 dischargers shall include an explanation in their SWPPP and in the Annual Report documenting why the visual observations (inspections) were not conducted.

5. **Risk Level 1 – Monitoring Methods**

Risk Level 1 dischargers shall include a description of the visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures in the CSMP.

6. **Risk Level 1 – Non-Storm Water Discharge Monitoring Requirements**

a. Visual Monitoring Requirements:

i. Risk Level 1 dischargers shall visually observe (inspect) each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources.

ii. Risk Level 1 dischargers shall conduct one visual observation (inspection) quarterly in each of the following periods: January-March, April-June, July-September, and October-December. Visual observation (inspections) are only required during daylight hours (sunrise to sunset).

iii. Risk Level 1 dischargers shall ensure that visual observations (inspections) document the presence or evidence of any non-storm water discharge (authorized or unauthorized), pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.), and source. Risk Level 1 dischargers shall maintain on-site records indicating the personnel performing the visual observation (inspections), the dates and approximate time each drainage area and non-storm water discharge was observed, and the response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges.

7. **Risk Level 1 – Non-Visible Pollutant Monitoring Requirements**

a. Risk Level 1 dischargers shall collect one or more samples during any breach, malfunction, leakage, or spill observed during a visual inspection which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water.

b. Risk Level 1 dischargers shall ensure that water samples are large enough to characterize the site conditions.

c. Risk Level 1 dischargers shall collect samples at all discharge locations that can be safely accessed.

d. Risk Level 1 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

e. Risk Level 1 dischargers shall analyze samples for all non-visible pollutant parameters (if applicable) - parameters indicating the

presence of pollutants identified in the pollutant source assessment required (Risk Level 1 dischargers shall modify their CSMPs to address these additional parameters in accordance with any updated SWPPP pollutant source assessment).

f. Risk Level 1 dischargers shall collect a sample of storm water that has not come in contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample) for comparison with the discharge sample.

g. Risk Level 1 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis.[2]

h. Risk Level 1 dischargers shall keep all field /or analytical data in the SWPPP document.

8. **Risk Level 1 – Particle Size Analysis for Project Risk Justification**

Risk Level 1 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

9. **Risk Level 1 – Records**

Risk Level 1 dischargers shall retain records of all storm water monitoring information and copies of all reports (including Annual Reports) for a period of at least three years. Risk Level 1 dischargers shall retain all records on-site while construction is ongoing. These records include:

a. The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation.

b. The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements.

c. The date and approximate time of analyses.

d. The individual(s) who performed the analyses.

[2] For laboratory analysis, all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136. Field discharge samples shall be collected and analyzed according to the specifications of the manufacturer of the sampling devices employed.

e. A summary of all analytical results from the last three years, the method detection limits and reporting units, and the analytical techniques or methods used.

f. Rain gauge readings from site inspections.

g. Quality assurance/quality control records and results.

h. Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Sections I.3 and I.6 above).

i. Visual observation and sample collection exception records (see Section I.4 above).

j. The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.

# ATTACHMENT D
# RISK LEVEL 2 REQUIREMENTS

## A. Effluent Standards

***[These requirements are the same as those in the General Permit order.]***

1. Narrative – Risk Level 2 dischargers shall comply with the narrative effluent standards listed below:

   a. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

   b. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

2. Numeric – Risk level 2 dischargers are subject to a pH NAL of 6.5-8.5, and a turbidity NAL of 250 NTU.

## B. Good Site Management "Housekeeping"

1. Risk Level 2 dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, Risk Level 2 dischargers shall implement the following good housekeeping measures:

   a. Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

   b. Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).

c. Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).

d. Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

e. Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.

2. Risk Level 2 dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:

a. Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.

b. Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.

c. Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.

d. Cover waste disposal containers at the end of every business day and during a rain event.

e. Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.

f. Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.

g. Implement procedures that effectively address hazardous and non-hazardous spills.

h. Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require:

i. Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly.

ii. Appropriate spill response personnel are assigned and trained.

i. Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

3. Risk Level 2 dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:

   a. Prevent oil, grease, or fuel to leak in to the ground, storm drains or surface waters.

   b. Place all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.

   c. Clean leaks immediately and disposing of leaked materials properly.

4. Risk Level 2 dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:

   a. Contain stockpiled materials such as mulches and topsoil when they are not actively being used.

   b. Contain all fertilizers and other landscape materials when they are not actively being used.

   c. Discontinue the application of any erodible landscape material within 2 days before a forecasted rain event or during periods of precipitation.

   d. Apply erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.

   e. Stack erodible landscape material on pallets and covering or storing such materials when not being used or applied.

5. Risk Level 2 dischargers shall conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify

all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, Risk Level 2 dischargers shall do the following:

a. Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.

b. Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.

c. Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.

d. Ensure retention of sampling, visual observation, and inspection records.

e. Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

6. Risk Level 2 dischargers shall implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients, trash, metals, bacteria, oil and grease and organics.

7. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall document all housekeeping BMPs in the SWPPP and REAP(s) in accordance with the nature and phase of the construction project. Construction phases at traditional land development projects include Grading and Land Development Phase, Streets and Utilities, or Vertical Construction for traditional land development projects.

**C. Non-Storm Water Management**

1. Risk Level 2 dischargers shall implement measures to control all non-storm water discharges during construction.

2. Risk Level 2 dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.

3. Risk Level 2 dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

## D. Erosion Control

1. Risk Level 2 dischargers shall implement effective wind erosion control.

2. Risk Level 2 dischargers shall provide effective soil cover for inactive[1] areas and all finished slopes, open space, utility backfill, and completed lots.

3. Risk Level 2 dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

## E. Sediment Controls

1. Risk Level 2 dischargers shall establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.

2. On sites where sediment basins are to be used, Risk Level 2 dischargers shall, at minimum, design sediment basins according to the method provided in CASQA's Construction BMP Guidance Handbook.

3. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall implement appropriate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs for areas under active[2] construction.

4. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow lengths[3] in accordance with Table 1.

[1] Inactive areas of construction are areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days.
[2] Active areas of construction are areas undergoing land surface disturbance. This includes construction activity during the preliminary stage, mass grading stage, streets and utilities stage and the vertical construction stage.
[3] Sheet flow length is the length that shallow, low velocity flow travels across a site.

**Table 1 - Critical Slope/Sheet Flow Length Combinations**

| Slope Percentage | Sheet flow length not to exceed |
|---|---|
| 0-25% | 20 feet |
| 25-50% | 15 feet |
| Over 50% | 10 feet |

5. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall ensure that construction activity traffic to and from the project is limited to entrances and exits that employ effective controls to prevent offsite tracking of sediment.

6. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall ensure that all storm drain inlets and perimeter controls, runoff control BMPs, and pollutant controls at entrances and exits (e.g. tire washoff locations) are maintained and protected from activities that reduce their effectiveness.

7. **Additional Risk Level 2 Requirement:** Risk Level 2 dischargers shall inspect on a daily basis all immediate access roads daily. At a minimum daily (when necessary) and prior to any rain event, the discharger shall remove any sediment or other construction activity-related materials that are deposited on the roads (by vacuuming or sweeping).

## F. Run-on and Run-off Controls

Risk Level 2 dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this General Permit.

## G. Inspection, Maintenance and Repair

1. Risk Level 2 dischargers shall ensure that all inspection, maintenance repair and sampling activities at the project location shall be performed or supervised by a Qualified SWPPP Practitioner (QSP) representing the discharger. The QSP may delegate any or all of these activities to an employee appropriately trained to do the task(s).

2. Risk Level 2 dischargers shall perform weekly inspections and observations, and at least once each 24-hour period during extended storm events, to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.

3. Upon identifying failures or other shortcomings, as directed by the QSP, Risk Level 2 dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.

4. For each inspection required, Risk Level 2 dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format.

5. Risk Level 2 dischargers shall ensure that checklists shall remain onsite with the SWPPP and at a minimum, shall include:

   a. Inspection date and date the inspection report was written.

   b. Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.

   c. Site information, including stage of construction, activities completed, and approximate area of the site exposed.

   d. A description of any BMPs evaluated and any deficiencies noted.

   e. If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.

   f. Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.

   g. Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.

   h. Photographs taken during the inspection, if any.

   i. Inspector's name, title, and signature.

## H. Rain Event Action Plan

1. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP develop a Rain Event Action Plan (REAP) 48 hours prior to any

likely precipitation event. A likely precipitation event is any weather pattern that is forecast to have a 50% or greater probability of producing precipitation in the project area. The discharger shall ensure a QSP obtain a printed copy of precipitation forecast information from the National Weather Service Forecast Office (e.g., by entering the zip code of the project's location at http://www.srh.noaa.gov/forecast).

2. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP develop the REAPs for all phases of construction (i.e., Grading and Land Development, Streets and Utilities, Vertical Construction, Final Landscaping and Site Stabilization).

3. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP ensure that the REAP include, at a minimum, the following site information:

   a. Site Address
   b. Calculated Risk Level (2 or 3)
   c. Site Storm Water Manager Information including the name, company, and 24-hour emergency telephone number
   d. Erosion and Sediment Control Provider information including the name, company, and 24-hour emergency telephone number
   e. Storm Water Sampling Agent information including the name, company, and 24-hour emergency telephone number

4. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP include in the REAP, at a minimum, the following project phase information:

   a. Activities associated with each construction phase
   b. Trades active on the construction site during each construction phase
   c. Trade contractor information
   d. Suggested actions for each project phase

5. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP develop additional REAPs for project sites where construction activities are indefinitely halted or postponed (Inactive Construction). At a minimum, Inactive Construction REAPs must include:

   a. Site Address
   b. Calculated Risk Level (2 or 3)
   c. Site Storm Water Manager Information including the name, company, and 24-hour emergency telephone number

d. Erosion and Sediment Control Provider information including the name, company, and 24-hour emergency telephone number
e. Storm Water Sampling Agent information including the name, company, and 24-hour emergency telephone number
f. Trades active on site during Inactive Construction
g. Trade contractor information
h. Suggested actions for inactive construction sites

6. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP begin implementation and make the REAP available onsite no later than 24 hours prior to the likely precipitation event.

7. **Additional Risk Level 2 Requirement:** The discharger shall ensure a QSP maintain onsite a paper copy of each REAP onsite in compliance with the record retention requirements of the Special Provisions in this General Permit.

## I. Risk Level 2 Monitoring and Reporting Requirements

**Table 2- Summary of Monitoring Requirements**

| Risk Level | Visual Inspections | | | | | Sample Collection | |
|---|---|---|---|---|---|---|---|
| | Quarterly Non-storm Water Discharge | Pre-storm Event | | Daily Storm BMP | Post Storm | Storm Water Discharge | Receiving Water |
| | | Baseline | REAP | | | | |
| 2 | X | X | X | X | X | X | |

1. Construction Site Monitoring Program Requirements

   a. Pursuant to Water Code Sections 13383 and 13267, all dischargers subject to this General Permit shall develop and implement a written site-specific Construction Site Monitoring Program (CSMP) in accordance with the requirements of this Section. The CSMP shall include all monitoring procedures and instructions, location maps, forms, and checklists as required in this section. The CSMP shall be developed prior to the commencement of construction activities, and revised as necessary to reflect project revisions. The CSMP shall be a part of the Storm Water Pollution Prevention Plan (SWPPP), included as an appendix or separate SWPPP chapter.

   b. Existing dischargers registered under the State Water Board Order No. 99-08-DWQ shall make and implement necessary revisions to their Monitoring Program to reflect the changes in this General Permit in a timely manner, but no later than July 1, 2010. Existing dischargers shall continue to implement their existing Monitoring Programs in compliance with State Water Board Order No. 99-08-DWQ until the necessary revisions are completed according to the schedule above.

   c. When a change of ownership occurs for all or any portion of the construction site prior to completion or final stabilization, the new discharger shall comply with these requirements as of the date the ownership change occurs.

2. **Objectives**

   The CSMP shall be developed and implemented to address the following objectives:

   a. To demonstrate that the site is in compliance with the Discharge Prohibitions and applicable Numeric Action Levels (NALs).

b. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives.

c. To determine whether immediate corrective actions, additional Best Management Practice (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges.

d. To determine whether BMPs included in the SWPPP/Rain Event Action Plan (REAP) are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges.

3. **Risk Level 2 – Visual Monitoring (Inspection) Requirements for Qualifying Rain Events**

a. Risk Level 2 dischargers shall visually observe (inspect) storm water discharges at all discharge locations within two business days (48 hours) after each qualifying rain event.

b. Risk Level 2 dischargers shall visually observe (inspect) the discharge of stored or contained storm water that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Stored or contained storm water that will likely discharge after operating hours due to anticipated precipitation shall be observed prior to the discharge during operating hours.

c. Risk Level 2 dischargers shall conduct visual observations (inspections) during business hours only.

d. Risk Level 2 dischargers shall record the time, date and rain gauge reading of all qualifying rain events.

e. Within 2 business days (48 hours) prior to each qualifying rain event, Risk Level 2 dischargers shall visually observe (inspect):

i. all storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources. If needed, the discharger shall implement appropriate corrective actions.

ii. all BMPs to identify whether they have been properly implemented in accordance with the SWPPP/REAP. If needed, the discharger shall implement appropriate corrective actions.

iii. any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

f. For the visual observations (inspections) described in c.i and c.iii above, Risk Level 2 dischargers shall observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

g. Within two business days (48 hours) after each qualifying rain event, Risk Level 2 dischargers shall conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the SWPPP accordingly.

h. Risk Level 2 dischargers shall maintain on-site records of all visual observations (inspections), personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

4. **Risk Level 2 – Water Quality Sampling and Analysis**

a. Risk Level 2 dischargers shall collect storm water grab samples from sampling locations, as defined in Section I.5. The storm water grab sample(s) obtained shall be representative of the flow and characteristics of the discharge.

b. At minimum, Risk Level 2 dischargers shall collect 3 samples per day of the qualifying event.

c. Risk Level 2 dischargers shall ensure that the grab samples collected of stored or contained storm water are from discharges subsequent to a qualifying rain event (producing precipitation of ½ inch or more at the time of discharge).

<u>Storm Water Effluent Monitoring Requirements</u>

d. Risk Level 2 dischargers shall analyze their effluent samples for:

i. pH and turbidity.

ii. Any additional parameters for which monitoring is required by the Regional Water Board.

5. **Risk Level 2 – Storm Water Discharge Water Quality Sampling Locations**

Effluent Sampling Locations

a. Risk Level 2 dischargers shall perform sampling and analysis of storm water discharges to characterize discharges associated with construction activity from the entire project disturbed area.

b. Risk Level 2 dischargers shall collect effluent samples at all discharge points where storm water is discharged off-site.

c. Risk Level 2 dischargers shall ensure that storm water discharge collected and observed represent[4] the effluent in each drainage area based on visual observation of the water and upstream conditions.

d. Risk Level 2 dischargers shall monitor and report site run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance of NALs.

e. Risk Level 2 dischargers who deploy an ATS on their site, or a portion on their site, shall collect ATS effluent samples and measurements from the discharge pipe or another location representative of the nature of the discharge.

f. Risk Level 2 dischargers shall select analytical test methods from the list provided in Table 3 below.

g. All storm water sample collection preservation and handling shall be conducted in accordance with Section I.7 “Storm Water Sample Collection and Handling Instructions” below.

6. **Risk Level 2 – Visual Observation and Sample Collection Exemptions**

a. Risk Level 2 dischargers shall be prepared to collect samples and conduct visual observation (inspections) until the minimum requirements of Sections I.3 and I.4 above are completed. Risk Level 2 dischargers are not required to physically collect samples or conduct visual observation (inspections) under the following conditions:

[4] For example, if there has been concrete work recently in an area, or drywall scrap is exposed to the rain, a pH sample shall be taken of drainage from the relevant work area. Similarly, if sediment laden water is flowing through some parts of a silt fence, samples shall be taken of the sediment-laden water even if most water flowing through the fence is clear.

i. During dangerous weather conditions such as flooding and electrical storms.

ii. Outside of scheduled site business hours.

b. If no required samples or visual observation (inspections) are collected due to these exceptions, Risk Level 2 dischargers shall include an explanation in their SWPPP and in the Annual Report documenting why the sampling or visual observation (inspections) were not conducted.

7. **Risk Level 2 – Storm Water Sample Collection and Handling Instructions**

a. Risk Level 2 dischargers shall refer to Table 3 below for test methods, detection limits, and reporting units.

b. Risk Level 2 dischargers shall ensure that testing laboratories will receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory), and shall use only the sample containers provided by the laboratory to collect and store samples.

c. Risk Level 2 dischargers shall designate and train personnel to collect, maintain, and ship samples in accordance with the Surface Water Ambient Monitoring Program's (SWAMP) 2008 Quality Assurance Program Plan (QAPrP).[5]

8. **Risk Level 2 – Monitoring Methods**

a. Risk Level 2 dischargers shall include a description of the following items in the CSMP:

i. Visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures.

ii. Sampling locations, and sample collection and handling procedures. This shall include detailed procedures for sample collection, storage, preservation, and shipping to the testing lab to assure that consistent quality control and quality assurance is maintained. Dischargers shall attach to the monitoring program

[5] Additional information regarding SWAMP's QAPrP can be found at http://www.waterboards.ca.gov/water_issues/programs/swamp/. QAPrP:http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/swamp_qapp_master090108a.pdf.

an example Chain of Custody form used when handling and shipping samples.

iii. Identification of the analytical methods and related method detection limits (if applicable) for each parameter required in Section I.4 above.

b. Risk Level 2 dischargers shall ensure that all sampling and sample preservation are in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a discharger's own field instruments for measuring pH and turbidity) should be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. Risk Level 2 dischargers shall ensure that all laboratory analyses are conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. With the exception of field analysis conducted by the discharger for turbidity and pH, all analyses should be sent to and conducted at a laboratory certified for such analyses by the State Department of Health Services. Risk Level 2 dischargers shall conduct their own field analysis of pH and may conduct their own field analysis of turbidity if the discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis.

9. **Risk Level 2 – Analytical Methods**

a. Risk Level 2 dischargers shall refer to Table 3 below for test methods, detection limits, and reporting units.

b. **pH**: Risk Level 2 dischargers shall perform pH analysis on-site with a calibrated pH meter or a pH test kit. Risk Level 2 dischargers shall record pH monitoring results on paper and retain these records in accordance with Section I.14, below.

c. **Turbidity**: Risk Level 2 dischargers shall perform turbidity analysis using a calibrated turbidity meter (turbidimeter), either on-site or at an accredited lab. Acceptable test methods include Standard Method 2130 or USEPA Method 180.1. The results will be recorded in the site log book in Nephelometric Turbidity Units (NTU).

10. **Risk Level 2 - Non-Storm Water Discharge Monitoring Requirements**

a. Visual Monitoring Requirements:

i. Risk Level 2 dischargers shall visually observe (inspect) each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources.

ii. Risk Level 2 dischargers shall conduct one visual observation (inspection) quarterly in each of the following periods: January-March, April-June, July-September, and October-December. Visual observation (inspections) are only required during daylight hours (sunrise to sunset).

iii. Risk Level 2 dischargers shall ensure that visual observations (inspections) document the presence or evidence of any non-storm water discharge (authorized or unauthorized), pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.), and source. Risk Level 2 dischargers shall maintain on-site records indicating the personnel performing the visual observation (inspections), the dates and approximate time each drainage area and non-storm water discharge was observed, and the response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges.

b. Effluent Sampling Locations:

i. Risk Level 2 dischargers shall sample effluent at all discharge points where non-storm water and/or authorized non-storm water is discharged off-site.

ii. Risk Level 2 dischargers shall send all non-storm water sample analyses to a laboratory certified for such analyses by the State Department of Health Services.

iii. Risk Level 2 dischargers shall monitor and report run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance of NALs.

11. **Risk Level 2 – Non-Visible Pollutant Monitoring Requirements**

a. Risk Level 2 dischargers shall collect one or more samples during any breach, malfunction, leakage, or spill observed during a visual

inspection which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water.

b. Risk Level 2 dischargers shall ensure that water samples are large enough to characterize the site conditions.

c. Risk Level 2 dischargers shall collect samples at all discharge locations that can be safely accessed.

d. Risk Level 2 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

e. Risk Level 2 dischargers shall analyze samples for all non-visible pollutant parameters (if applicable) - parameters indicating the presence of pollutants identified in the pollutant source assessment required (Risk Level 2 dischargers shall modify their CSMPs to address these additional parameters in accordance with any updated SWPPP pollutant source assessment).

f. Risk Level 2 dischargers shall collect a sample of storm water that has not come in contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample) for comparison with the discharge sample.

g. Risk Level 2 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis.[6]

h. Risk Level 2 dischargers shall keep all field /or analytical data in the SWPPP document.

12. **Risk Level 2 – Watershed Monitoring Option**

Risk Level 2 dischargers who are part of a qualified regional watershed-based monitoring program may be eligible for relief from the requirements in Sections I.5. The Regional Water Board may approve proposals to substitute an acceptable watershed-based monitoring program by determining if the watershed-based monitoring program will provide substantially similar monitoring information in evaluating discharger compliance with the requirements of this General Permit.

[6] For laboratory analysis, all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136. Field discharge samples shall be collected and analyzed according to the specifications of the manufacturer of the sampling devices employed.

13. **Risk Level 2 – Particle Size Analysis for Project Risk Justification**

Risk Level 2 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

14. **Risk Level 2 – Records**

Risk Level 2 dischargers shall retain records of all storm water monitoring information and copies of all reports (including Annual Reports) for a period of at least three years. Risk Level 2 dischargers shall retain all records on-site while construction is ongoing. These records include:

a. The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation.

b. The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements.

c. The date and approximate time of analyses.

d. The individual(s) who performed the analyses.

e. A summary of all analytical results from the last three years, the method detection limits and reporting units, the analytical techniques or methods used, and the chain of custody forms.

f. Rain gauge readings from site inspections;

g. Quality assurance/quality control records and results.

h. Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Sections I.3 and I.10 above).

i. Visual observation and sample collection exception records (see Section I.6 above).

j. The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.

15. **Risk Level 2 – NAL Exceedance Report**

a. In the event that any effluent sample exceeds an applicable NAL, Risk Level 2 dischargers shall electronically submit all storm event sampling results to the State Water Board no later than 10 days after the conclusion of the storm event. The Regional Boards have the authority to require the submittal of an NAL Exceedance Report.

b. Risk Level 2 dischargers shall certify each NAL Exceedance Report in accordance with the Special Provisions for Construction Activity.

c. Risk Level 2 dischargers shall retain an electronic or paper copy of each NAL Exceedance Report for a minimum of three years after the date the annual report is filed.

d. Risk Level 2 dischargers shall include in the NAL Exceedance Report:

   i. The analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as “less than the method detection limit”).

   ii. The date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation.

   iii. A description of the current BMPs associated with the effluent sample that exceeded the NAL and the proposed corrective actions taken.

**Table 3 – Risk Level 2 Test Methods, Detection Limits, Reporting Units and Applicable NALs/NELs**

| Parameter | Test Method / Protocol | Discharge Type | Min. Detection Limit | Reporting Units | Numeric Action Level |
|---|---|---|---|---|---|
| pH | Field test with calibrated portable instrument | Risk Level 2 Discharges | 0.2 | pH units | lower NAL = 6.5<br>upper NAL = 8.5 |
| Turbidity | EPA 0180.1 and/or field test with calibrated portable instrument | Risk Level 2 Discharges other than ATS | 1 | NTU | 250 NTU |
| | | For ATS discharges | 1 | NTU | N/A |

# ATTACHMENT E
# RISK LEVEL 3 REQUIREMENTS

## A. Effluent Standards

***[These requirements are the same as those in the General Permit order.]***

1. Narrative – Risk Level 3 dischargers shall comply with the narrative effluent standards listed below:

   a. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

   b. Dischargers shall minimize or prevent pollutants in storm water discharges and authorized non-storm water discharges through the use of controls, structures, and management practices that achieve BAT for toxic and non-conventional pollutants and BCT for conventional pollutants.

2. Numeric –Risk Level 3 dischargers are subject to a pH NAL of 6.5-8.5, and a turbidity NAL of 250 NTU.

## B. Good Site Management "Housekeeping"

1. Risk Level 3 dischargers shall implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, Risk Level 3 dischargers shall implement the following good housekeeping measures:

   a. Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

   b. Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).

c. Store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).

d. Minimize exposure of construction materials to precipitation. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

e. Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.

2. Risk Level 3 dischargers shall implement good housekeeping measures for waste management, which, at a minimum, shall consist of the following:

a. Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.

b. Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.

c. Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.

d. Cover waste disposal containers at the end of every business day and during a rain event.

e. Prevent discharges from waste disposal containers to the storm water drainage system or receiving water.

f. Contain and securely protecting stockpiled waste material from wind and rain at all times unless actively being used.

g. Implement procedures that effectively address hazardous and non-hazardous spills.

h. Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require that:

i. Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly; and

ii. Appropriate spill response personnel are assigned and trained.

i. Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.

3. Risk Level 3 dischargers shall implement good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:

   a. Prevent oil, grease, or fuel to leak in to the ground, storm drains or surface waters.

   b. Place all equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.

   c. Clean leaks immediately and disposing of leaked materials properly.

4. Risk Level 3 dischargers shall implement good housekeeping for landscape materials, which, at a minimum, shall consist of the following:

   a. Contain stockpiled materials such as mulches and topsoil when they are not actively being used.

   b. Contain fertilizers and other landscape materials when they are not actively being used.

   c. Discontinuing the application of any erodible landscape material within 2 days before a forecasted rain event or during periods of precipitation.

   d. Applying erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.

   e. Stacking erodible landscape material on pallets and covering or storing such materials when not being used or applied.

5. Risk Level 3 dischargers shall conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify

all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, Risk Level 3 dischargers shall do the following:

a. Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.

b. Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.

c. Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges. This shall include an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.

d. Ensure retention of sampling, visual observation, and inspection records.

e. Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

6. Risk Level 3 dischargers shall implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients, trash, metals, bacteria, oil and grease and organics.

7. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall document all housekeeping BMPs in the SWPPP and REAP(s) in accordance with the nature and phase of the construction project. Construction phases at traditional land development projects include Grading and Land Development Phase, Streets and Utilities, or Vertical Construction for traditional land development projects.

**C. Non-Storm Water Management**

1. Risk Level 3 dischargers shall implement measures to control all non-storm water discharges during construction.

2. Risk Level 3 dischargers shall wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or MS4 drainage systems.

3. Risk Level 3 dischargers shall clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

## D. Erosion Control

1. Risk Level 3 dischargers shall implement effective wind erosion control.

2. Risk Level 3 dischargers shall provide effective soil cover for inactive[1] areas and all finished slopes, open space, utility backfill, and completed lots.

3. Dischargers shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

## E. Sediment Controls

1. Risk Level 3 dischargers shall establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.

2. On sites where sediment basins are to be used, Risk Level 3 dischargers shall, at minimum, design sediment basins according to the method provided in CASQA's Construction BMP Guidance Handbook.

3. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall implement appropriate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs for areas under active[2] construction.

4. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow lengths[3] in accordance with Table 1.

[1] Inactive areas of construction are areas of construction activity that have been disturbed and are not scheduled to be re-disturbed for at least 14 days.
[2] Active areas of construction are areas undergoing land surface disturbance. This includes construction activity during the preliminary stage, mass grading stage, streets and utilities stage and the vertical construction stage
[3] Sheet flow length is the length that shallow, low velocity flow travels across a site.

**Table 1 - Critical Slope/Sheet Flow Length Combinations**

| Slope Percentage | Sheet flow length not to exceed |
|---|---|
| 0-25% | 20 feet |
| 25-50% | 15 feet |
| Over 50% | 10 feet |

5. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall ensure that construction activity traffic to and from the project is limited to entrances and exits that employ effective controls to prevent offsite tracking of sediment.

6. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall ensure that all storm drain inlets and perimeter controls, runoff control BMPs, and pollutant controls at entrances and exits (e.g. tire washoff locations) are maintained and protected from activities that reduce their effectiveness.

7. **Additional Risk Level 3 Requirement:** Risk Level 3 dischargers shall inspect on a daily basis all immediate access roads daily. At a minimum daily (when necessary) and prior to any rain event, the discharger shall remove any sediment or other construction activity-related materials that are deposited on the roads (by vacuuming or sweeping).

8. **Additional Risk Level 3 Requirement:** The Regional Water Board may require Risk Level 3 dischargers to implement additional site-specific sediment control requirements if the implementation of the other requirements in this section are not adequately protecting the receiving waters.

## F. Run-on and Run-off Controls

Risk Level 3 dischargers shall effectively manage all run-on, all runoff within the site and all runoff that discharges off the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance with the effluent limitations in this General Permit.

## G. Inspection, Maintenance and Repair

1. Risk Level 3 dischargers shall ensure that all inspection, maintenance repair and sampling activities at the project location shall be performed or supervised by a Qualified SWPPP Practitioner (QSP) representing the discharger. The QSP may delegate any or all of these activities to an employee appropriately trained to do the task(s).

2. Risk Level 3 dischargers shall perform weekly inspections and observations, and at least once each 24-hour period during extended storm events, to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Inspectors shall be the QSP or be trained by the QSP.

3. Upon identifying failures or other shortcomings, as directed by the QSP, Risk Level 3 dischargers shall begin implementing repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.

4. For each inspection required, Risk Level 3 dischargers shall complete an inspection checklist, using a form provided by the State Water Board or Regional Water Board or in an alternative format.

5. Risk Level 3 dischargers shall ensure that checklists shall remain onsite with the SWPPP and at a minimum, shall include:

    a. Inspection date and date the inspection report was written.

    b. Weather information, including presence or absence of precipitation, estimate of beginning of qualifying storm event, duration of event, time elapsed since last storm, and approximate amount of rainfall in inches.

    c. Site information, including stage of construction, activities completed, and approximate area of the site exposed.

    d. A description of any BMPs evaluated and any deficiencies noted.

    e. If the construction site is safely accessible during inclement weather, list the observations of all BMPs: erosion controls, sediment controls, chemical and waste controls, and non-storm water controls. Otherwise, list the results of visual inspections at all relevant outfalls, discharge points, downstream locations and any projected maintenance activities.

    f. Report the presence of noticeable odors or of any visible sheen on the surface of any discharges.

    g. Any corrective actions required, including any necessary changes to the SWPPP and the associated implementation dates.

    h. Photographs taken during the inspection, if any.

i. Inspector's name, title, and signature.

## H. Rain Event Action Plan

1. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP develop a Rain Event Action Plan (REAP) 48 hours prior to any likely precipitation event. A likely precipitation event is any weather pattern that is forecast to have a 50% or greater probability of producing precipitation in the project area. The QSP shall obtain a printed copy of precipitation forecast information from the National Weather Service Forecast Office (e.g., by entering the zip code of the project's location at http://www.srh.noaa.gov/forecast).

2. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP develop the REAPs for all phases of construction (i.e., Grading and Land Development, Streets and Utilities, Vertical Construction, Final Landscaping and Site Stabilization).

3. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP ensure that the REAP include, at a minimum, the following site information:

   a. Site Address.
   b. Calculated Risk Level (2 or 3).
   c. Site Storm Water Manager Information including the name, company, and 24-hour emergency telephone number.
   d. Erosion and Sediment Control Provider information including the name, company, and 24-hour emergency telephone number.
   e. Storm Water Sampling Agent information including the name, company, and 24-hour emergency telephone number.

4. **Additional Risk Level 3 Requirement:** The QSP shall include in the REAP, at a minimum, the following project phase information:

   a. Activities associated with each construction phase.
   b. Trades active on the construction site during each construction phase.
   c. Trade contractor information.
   d. Suggested actions for each project phase.

5. **Additional Risk Level 3 Requirement:** The QSP shall develop additional REAPs for project sites where construction activities are indefinitely halted or postponed (Inactive Construction). At a minimum, Inactive Construction REAPs must include:

a. Site Address.
b. Calculated Risk Level (2 or 3).
c. Site Storm Water Manager Information including the name, company, and 24-hour emergency telephone number.
d. Erosion and Sediment Control Provider information including the name, company, and 24-hour emergency telephone number.
e. Storm Water Sampling Agent information including the name, company, and 24-hour emergency telephone number.
f. Trades active on site during Inactive Construction.
g. Trade contractor information.
h. Suggested actions for inactive construction sites.

6. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP begin implementation and make the REAP available onsite no later than 24 hours prior to the likely precipitation event.

7. **Additional Risk Level 3 Requirement:** The discharger shall ensure a QSP maintain onsite a paper copy of each REAP onsite in compliance with the record retention requirements of the Special Provisions in this General Permit.

## I. Risk Level 3 Monitoring and Reporting Requirements

**Table 2- Summary of Monitoring Requirements**

| Risk Level | Visual Inspections | | | | | Sample Collection | |
|---|---|---|---|---|---|---|---|
| | Quarterly Non-storm Water Discharge | Pre-storm Event | | Daily Storm BMP | Post Storm | Storm Water Discharge | Receiving Water |
| | | Baseline | REAP | | | | |
| 3 | X | X | X | X | X | X | X[4] |

1. Construction Site Monitoring Program Requirements

   a. Pursuant to Water Code Sections 13383 and 13267, all dischargers subject to this General Permit shall develop and implement a written site-specific Construction Site Monitoring Program (CSMP) in accordance with the requirements of this Section. The CSMP shall include all monitoring procedures and instructions, location maps, forms, and checklists as required in this section. The CSMP shall be developed prior to the commencement of construction activities, and revised as necessary to reflect project revisions. The CSMP shall be a part of the Storm Water Pollution Prevention Plan (SWPPP), included as an appendix or separate SWPPP chapter.

   b. Existing dischargers registered under the State Water Board Order No. 99-08-DWQ shall make and implement necessary revisions to their Monitoring Program to reflect the changes in this General Permit in a timely manner, but no later than July 1, 2010. Existing dischargers shall continue to implement their existing Monitoring Program in compliance with State Water Board Order No. 99-08-DWQ until the necessary revisions are completed according to the schedule above.

   c. When a change of ownership occurs for all or any portion of the construction site prior to completion or final stabilization, the new discharger shall comply with these requirements as of the date the ownership change occurs.

2. **Objectives**

   The CSMP shall be developed and implemented to address the following objectives:

[4] When receiving water monitoring trigger is exceeded

a. To demonstrate that the site is in compliance with the Discharge Prohibitions and applicable Numeric Action Levels (NALs) of this General Permit.

b. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives.

c. To determine whether immediate corrective actions, additional Best Management Practice (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in storm water discharges and authorized non-storm water discharges.

d. To determine whether BMPs included in the SWPPP/Rain Event Action Plan (REAP) are effective in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges.

3. **Risk Level 3 – Visual Monitoring (Inspection) Requirements for Qualifying Rain Events**

a. Risk Level 3 dischargers shall visually observe (inspect) storm water discharges at all discharge locations within two business days (48 hours) after each qualifying rain event.

b. Risk Level 3 dischargers shall visually observe (inspect) the discharge of stored or contained storm water that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Stored or contained storm water that will likely discharge after operating hours due to anticipated precipitation shall be observed prior to the discharge during operating hours.

c. Risk Level 3 dischargers shall conduct visual observations (inspections) during business hours only.

d. Risk Level 3 dischargers shall record the time, date and rain gauge reading of all qualifying rain events.

e. Within 2 business days (48 hours) prior to each qualifying rain event, Risk Level 3 dischargers shall visually observe (inspect):

i. all storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources. If needed, the discharger shall implement appropriate corrective actions.

ii. all BMPs to identify whether they have been properly implemented in accordance with the SWPPP/REAP. If needed, the discharger shall implement appropriate corrective actions.

iii. any storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

f. For the visual observations (inspections) described in c.i. and c.iii above, Risk Level 3 dischargers shall observe the presence or absence of floating and suspended materials, a sheen on the surface, discolorations, turbidity, odors, and source(s) of any observed pollutants.

g. Within two business days (48 hours) after each qualifying rain event, Risk Level 3 dischargers shall conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the SWPPP accordingly.

h. Risk Level 3 dischargers shall maintain on-site records of all visual observations (inspections), personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

4. **Risk Level 3 – Water Quality Sampling and Analysis**

a. Risk Level 3 dischargers shall collect storm water grab samples from sampling locations, as defined in Section I.5. The storm water grab sample(s) obtained shall be representative of the flow and characteristics of the discharge.

b. At minimum, Risk Level 3 dischargers shall collect 3 samples per day of the qualifying event.

c. Risk Level 3 dischargers shall ensure that the grab samples collected of stored or contained storm water are from discharges subsequent to a qualifying rain event (producing precipitation of ½ inch or more at the time of discharge).

<u>Storm Water Effluent Monitoring Requirements</u>

d. Risk Level 3 dischargers shall analyze their effluent samples for:

i. pH and turbidity.

ii. Any additional parameters for which monitoring is required by the Regional Water Board.

e. Risk 3 dischargers shall electronically submit all storm event sampling results to the State Water Board no later than 10 days after the conclusion of the storm event.

Receiving Water Monitoring Requirements

f. In the event that a Risk Level 3 discharger's effluent exceeds the daily average receiving water monitoring trigger of 500 NTU turbidity or the daily average pH range 6.0-9.0 contained in this General Permit and has a direct discharge into receiving waters, the Risk Level 3 discharger shall subsequently sample receiving waters (RWs) for turbidity, pH (if applicable), and SSC for the duration of coverage under this General Permit. If a Risk Level 3 discharger utilizing ATS with direct discharges into receiving waters discharges effluent that exceeds the NELs in this permit, the discharger shall subsequently sample RWs for turbidity, pH (if applicable), and SSC for the duration of coverage under this General Permit.

g. Risk Level 3 dischargers disturbing 30 acres or more of the landscape and with direct discharges into receiving waters shall conduct or participate in benthic macroinvertebrate bioassessment of RWs prior to commencement of construction activity (See Appendix 3).

h. Risk Level 3 dischargers shall obtain RW samples in accordance with the Receiving Water sampling location section (Section I.5), below.

5. **Risk Level 3 – Storm Water Discharge Water Quality Sampling Locations**

Effluent Sampling Locations

a. Risk Level 3 dischargers shall perform sampling and analysis of storm water discharges to characterize discharges associated with construction activity from the entire project disturbed area.

b. Risk Level 3 dischargers shall collect effluent samples at all discharge points where storm water is discharged off-site.

c. Risk Level 3 dischargers shall ensure that storm water discharge collected and observed represent[5] the effluent in each drainage area based on visual observation of the water and upstream conditions.

d. Risk Level 3 dischargers shall monitor and report site run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance of NALs.

e. Risk Level 3 dischargers who deploy an ATS on their site, or a portion on their site, shall collect ATS effluent samples and measurements from the discharge pipe or another location representative of the nature of the discharge.

f. Risk Level 3 dischargers shall select analytical test methods from the list provided in Table 3 below.

g. All storm water sample collection preservation and handling shall be conducted in accordance with Section I.7 "Storm Water Sample Collection and Handling Instructions" below.

Receiving Water Sampling Locations

h. **Upstream/up-gradient RW samples**: Risk Level 3 dischargers shall obtain any required upstream/up-gradient receiving water samples from a representative and accessible location as close as possible and upstream from the effluent discharge point.

i. **Downstream/down-gradient RW samples**: Risk Level 3 dischargers shall obtain any required downstream/down-gradient receiving water samples from a representative and accessible location as close as possible and downstream from the effluent discharge point.

j. If two or more discharge locations discharge to the same receiving water, Risk Level 3 dischargers may sample the receiving water at a single upstream and downstream location.

[5] For example, if there has been concrete work recently in an area, or drywall scrap is exposed to the rain, a pH sample shall be taken of drainage from the relevant work area. Similarly, if sediment-laden water is flowing through some parts of a silt fence, samples shall be taken of the sediment laden water even if most water flowing through the fence is clear.

6. **Risk Level 3 – Visual Observation and Sample Collection Exemptions**

   a. Risk Level 3 dischargers shall be prepared to collect samples and conduct visual observation (inspections) until the minimum requirements of Sections I.3 and I.4 above are completed. Risk Level 3 dischargers are not required to physically collect samples or conduct visual observation (inspections) under the following conditions:

      i. During dangerous weather conditions such as flooding and electrical storms.

      ii. Outside of scheduled site business hours.

   b. If no required samples or visual observation (inspections) are collected due to these exceptions, Risk Level 3 dischargers shall include an explanation in their SWPPP and in the Annual Report documenting why the sampling or visual observation (inspections) were not conducted.

7. **Risk Level 3 – Storm Water Sample Collection and Handling Instructions**

   a. Risk Level 3 dischargers shall refer to Table 3 below for test methods, detection limits, and reporting units.

   b. Risk Level 3 dischargers shall ensure that testing laboratories will receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory), and shall use only the sample containers provided by the laboratory to collect and store samples.

   c. Risk Level 3 dischargers shall designate and train personnel to collect, maintain, and ship samples in accordance with the Surface Water Ambient Monitoring Program's (SWAMP) 2008 Quality Assurance Program Plan (QAPrP).[6]

[6] Additional information regarding SWAMP's QAPrP can be found at http://www.waterboards.ca.gov/water_issues/programs/swamp/.
QAPrP:http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/swamp_qapp_master090108a.pdf

8. **Risk Level 3 – Monitoring Methods**

   a. Risk Level 3 dischargers shall include a description of the following items in the CSMP:

      i. Visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures.

      ii. Sampling locations, and sample collection and handling procedures. This shall include detailed procedures for sample collection, storage, preservation, and shipping to the testing lab to assure that consistent quality control and quality assurance is maintained. Dischargers shall attach to the monitoring program an example Chain of Custody form used when handling and shipping samples.

      iii. Identification of the analytical methods and related method detection limits (if applicable) for each parameter required in Section I.4 above.

   b. Risk Level 3 dischargers shall ensure that all sampling and sample preservation are in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a discharger's own field instruments for measuring pH and turbidity) should be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. Risk Level 3 dischargers shall ensure that all laboratory analyses are conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. With the exception of field analysis conducted by the discharger for turbidity and pH, all analyses should be sent to and conducted at a laboratory certified for such analyses by the State Department of Health Services (SSC exception). Risk Level 3 dischargers shall conduct their own field analysis of pH and may conduct their own field analysis of turbidity if the discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis.

9. **Risk Level 3 – Analytical Methods**

   a. Risk Level 3 dischargers shall refer to Table 3 below for test methods, detection limits, and reporting units.

b. **pH**: Risk Level 3 dischargers shall perform pH analysis on-site with a calibrated pH meter or a pH test kit. Risk Level 3 dischargers shall record pH monitoring results on paper and retain these records in accordance with Section I.14, below.

c. **Turbidity**: Risk Level 3 dischargers shall perform turbidity analysis using a calibrated turbidity meter (turbidimeter), either on-site or at an accredited lab. Acceptable test methods include Standard Method 2130 or USEPA Method 180.1. The results will be recorded in the site log book in Nephelometric Turbidity Units (NTU).

d. **Suspended sediment concentration (SSC)**: Risk Level 3 dischargers that exceed the turbidity Receiving Water Monitoring Trigger shall perform SSC analysis using ASTM Method D3977-97.

e. **Bioassessment**: Risk Level 3 dischargers shall perform bioassessment sampling and analysis according to Appendix 3 of this General Permit.

10. **Risk Level 3 - Non-Storm Water Discharge Monitoring Requirements**

a. Visual Monitoring Requirements:

i. Risk Level 3 dischargers shall visually observe (inspect) each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources.

ii. Risk Level 3 dischargers shall conduct one visual observation (inspection) quarterly in each of the following periods: January-March, April-June, July-September, and October-December. Visual observation (inspections) are only required during daylight hours (sunrise to sunset).

iii. Risk Level 3 dischargers shall ensure that visual observations (inspections) document the presence or evidence of any non-storm water discharge (authorized or unauthorized), pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.), and source. Risk Level 3 dischargers shall maintain on-site records indicating the personnel performing the visual observation (inspections), the dates and approximate time each drainage area and non-storm water discharge was observed, and the response taken to eliminate unauthorized non-storm water discharges and to

reduce or prevent pollutants from contacting non-storm water discharges.

b. Effluent Sampling Locations:

i. Risk Level 3 dischargers shall sample effluent at all discharge points where non-storm water and/or authorized non-storm water is discharged off-site.

ii. Risk Level 3 dischargers shall send all non-storm water sample analyses to a laboratory certified for such analyses by the State Department of Health Services.

iii. Risk Level 3 dischargers shall monitor and report run-on from surrounding areas if there is reason to believe run-on may contribute to an exceedance of NALs.

11. **Risk Level 3 – Non-Visible Pollutant Monitoring Requirements**

a. Risk Level 3 dischargers shall collect one or more samples during any breach, malfunction, leakage, or spill observed during a visual inspection which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water.

b. Risk Level 3 dischargers shall ensure that water samples are large enough to characterize the site conditions.

c. Risk Level 3 dischargers shall collect samples at all discharge locations that can be safely accessed.

d. Risk Level 3 dischargers shall collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

e. Risk Level 3 dischargers shall analyze samples for all non-visible pollutant parameters (if applicable) - parameters indicating the presence of pollutants identified in the pollutant source assessment required (Risk Level 3 dischargers shall modify their CSMPs to address these additional parameters in accordance with any updated SWPPP pollutant source assessment).

f. Risk Level 3 dischargers shall collect a sample of storm water that has not come in contact with the disturbed soil or the materials stored or used on-site (uncontaminated sample) for comparison with the discharge sample.

g. Risk Level 3 dischargers shall compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis.[7]

h. Risk Level 3 dischargers shall keep all field /or analytical data in the SWPPP document.

12. **Risk Level 3 – Watershed Monitoring Option**

Risk Level 3 dischargers who are part of a qualified regional watershed-based monitoring program may be eligible for relief from the requirements in Sections I.5. The Regional Water Board may approve proposals to substitute an acceptable watershed-based monitoring program by determining if the watershed-based monitoring program will provide substantially similar monitoring information in evaluating discharger compliance with the requirements of this General Permit.

13. **Risk Level 3 – Particle Size Analysis for Project Risk Justification**

Risk Level 3 dischargers justifying an alternative project risk shall report a soil particle size analysis used to determine the RUSLE K-Factor. ASTM D-422 (Standard Test Method for Particle-Size Analysis of Soils), as revised, shall be used to determine the percentages of sand, very fine sand, silt, and clay on the site.

14. **Risk Level 3 – Records**

Risk Level 3 dischargers shall retain records of all storm water monitoring information and copies of all reports (including Annual Reports) for a period of at least three years. Risk Level 3 dischargers shall retain all records on-site while construction is ongoing. These records include:

a. The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation.

b. The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements.

c. The date and approximate time of analyses.

[7] For laboratory analysis, all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136. Field discharge samples shall be collected and analyzed according to the specifications of the manufacturer of the sampling devices employed.

d. The individual(s) who performed the analyses.

e. A summary of all analytical results from the last three years, the method detection limits and reporting units, the analytical techniques or methods used, and the chain of custody forms.

f. Rain gauge readings from site inspections.

g. Quality assurance/quality control records and results.

h. Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records (see Sections I.3 and I.10 above).

i. Visual observation and sample collection exception records (see Section I.6 above).

j. The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.

15. **Risk Level 3 – NAL Exceedance Report**

a. Risk Level 3 dischargers shall electronically submit all storm event sampling results to the State Water Board no later than 10 days after the conclusion of the storm event. The Regional Boards have the authority to require the submittal of an NAL Exceedance Report.

b. Risk Level 3 dischargers shall certify each NAL Exceedance Report in accordance with the Special Provisions for Construction Activity In this General Permit.

c. Risk Level 3 dischargers shall retain an electronic or paper copy of each NAL Exceedance Report for a minimum of three years after the date the annual report is filed.

d. Risk Level 3 dischargers shall include in the NAL Exceedance Report:

i. The analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as “less than the method detection limit”).

ii. The date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation.

iii. A description of the current BMPs associated with the effluent sample that exceeded the NAL and the proposed corrective actions taken.

16. **Risk Level 3 – Bioassessment**

a. Risk Level 3 dischargers with a total project-related ground disturbance exceeding 30 acres shall:

i. Conduct bioassessment monitoring, as described in Appendix 3.

ii. Include the collection and reporting of specified in stream biological data and physical habitat.

iii. Use the bioassessment sample collection and Quality Assurance & Quality Control (QA/QC) protocols developed by the State of California's Surface Water Ambient Monitoring Program (SWAMP).[8]

b. Risk Level 3 dischargers qualifying for bioassessment, where construction commences out of an index period for the site location shall:

i. Receive Regional Board approval for the sampling exception.

ii. Conduct bioassessment monitoring, as described in Appendix 3.

iii. Include the collection and reporting of specified instream biological data and physical habitat.

iv. Use the bioassessment sample collection and Quality Assurance & Quality Control (QA/QC) protocols developed by the State of California's Surface Water Ambient Monitoring Program (SWAMP).

OR

v. Make a check payable to: Cal State Chico Foundation (SWAMP Bank Account) or San Jose State Foundation (SWAMP Bank Account) and include the WDID# on the check for the amount calculated for the exempted project.

[8] http://www.waterboards.ca.gov/water_issues/programs/swamp/.

vi. Send a copy of the check to the Regional Water Board office for the site's region.

vii. Invest $**7,500.00 X The number of samples required** into the SWAMP program as compensation (upon regional board approval).

**Table 3 – Risk Level 3 Test Methods, Detection Limits, Reporting Units and Applicable NALs**

| Parameter | Test Method / Protocol | Discharge Type | Min. Detection Limit | Reporting Units | Numeric Action Level | Numeric Effluent Limitation | Receiving Water Monitoring Trigger |
|---|---|---|---|---|---|---|---|
| pH | Field test with calibrated portable instrument | Risk Level 3 Discharges | 0.2 | pH units | lower NAL = 6.5<br>upper NAL = 8.5 | N/A | lower limit = 6.0<br>upper limit = 9.0 |
| Turbidity | EPA 0180.1 and/or field test with calibrated portable instrument | Risk Level 3 Discharges other than ATS | 1 | NTU | 250 NTU | N/A | 500 NTU |
| | | For ATS discharges | 1 | NTU | N/A | 10 NTU for Daily Weighted Average<br>&<br>20 NTU for Any Single Sample | 10 NTU for Daily Weighted Average<br>&<br>20 NTU for Any Single Sample |
| SSC | ASTM Method D 3977-97[9] | Risk Level 3 (if Receiving Water Monitoring Trigger exceeded) | 5 | mg/L | N/A | N/A | N/A |
| Bioassessment | (STE) Level I of (SAFIT),[10] fixed-count of 600 org/sample | Risk Level 3 projects> 30 acres | N/A | N/A | N/A | N/A | N/A |

[9] ASTM, 1999, Standard Test Method for Determining Sediment Concentration in Water Samples: American Society of Testing and Materials, D 3977-97, Vol. 11.02, pp. 389-394.

[10] The current SAFIT STEs (28 November 2006) list requirements for both the Level I and Level II taxonomic effort, and are located at: http://www.swrcb.ca.gov/swamp/docs/safit/ste_list.pdf. When new editions are published by SAFIT, they will supersede all previous editions. All editions will be posted at the State Water Board's SWAMP website.

# ATTACHMENT F:
# Active Treatment System (ATS) Requirements

**Table 1 – Numeric Effluent Limitations, Numeric Action Levels, Test Methods, Detection Limits, and Reporting Units**

| Parameter | Test Method | Discharge Type | Min. Detection Limit | Units | Numeric Action Level | Numeric Effluent Limitation |
|---|---|---|---|---|---|---|
| Turbidity | EPA 0180.1 and/or field test with a calibrated portable instrument | For ATS discharges | 1 | NTU | N/A | 10 NTU for Daily Flow-Weighted Average & 20 NTU for Any Single Sample |

**A.** Dischargers choosing to implement an Active Treatment System (ATS) on their site shall comply with all of the requirements in this Attachment.

**B.** The discharger shall maintain a paper copy of each ATS specification onsite in compliance with the record retention requirements in the Special Provisions of this General Permit.

**C. ATS Design, Operation and Submittals**

1. The ATS shall be designed and approved by a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Professional in Storm Water Quality (CPSWQ); a California registered civil engineer; or any other California registered engineer.

2. The discharger shall ensure that the ATS is designed in a manner to preclude the accidental discharge of settled floc[1] during floc pumping or related operations.

3. The discharger shall design outlets to dissipate energy from concentrated flows.

4. The discharger shall install and operate an ATS by assigning a lead person (or project manager) who has either a minimum of five years construction storm

[1] Floc is defined as a clump of solids formed by the chemical action in ATS systems.

water experience or who is a licensed contractors specifically holding a California Class A Contractors license.[2]

5. The discharger shall prepare an ATS Plan that combines the site-specific data and treatment system information required to safely and efficiently operate an ATS. The ATS Plan shall be electronically submitted to the State Water Board at least 14 days prior to the planned operation of the ATS and a paper copy shall be available onsite during ATS operation. At a minimum, the ATS Plan shall include:

   a. ATS Operation and Maintenance Manual for All Equipment.

   b. ATS Monitoring, Sampling & Reporting Plan, including Quality Assurance/Quality Control (QA/QC).

   c. ATS Health and Safety Plan.

   d. ATS Spill Prevention Plan.

6. The ATS shall be designed to capture and treat (within a 72-hour period) a volume equivalent to the runoff from a 10-year, 24-hour storm event using a watershed runoff coefficient of 1.0.

**D. Treatment – Chemical Coagulation/Flocculation**

1. Jar tests shall be conducted using water samples selected to represent typical site conditions and in accordance with ASTM D2035-08 (2003).

2. The discharger shall conduct, at minimum, six site-specific jar tests (per polymer with one test serving as a control) for each project to determine the proper polymer and dosage levels for their ATS.

3. Single field jar tests may also be conducted during a project if conditions warrant, for example if construction activities disturb changing types of soils, which consequently cause change in storm water and runoff characteristics.

**E. Residual Chemical and Toxicity Requirements**

1. The discharger shall utilize a residual chemical test method that has a method detection limit (MDL) of 10% or less than the maximum allowable threshold

[2] Business and Professions Code Division 3, Chapter 9, Article 4, Class A Contractor: A general engineering contractor is a contractor whose principal contracting business is in connection with fixed works requiring specialized engineering knowledge and skill. [http://www.cslb.ca.gov/General-Information/library/licensing-classifications.asp].

concentration[3] (MATC) for the specific coagulant in use and for the most sensitive species of the chemical used.

2. The discharger shall utilize a residual chemical test method that produces a result within one hour of sampling.

3. The discharger shall have a California State certified laboratory validate the selected residual chemical test. Specifically the lab will review the test protocol, test parameters, and the detection limit of the coagulant. The discharger shall electronically submit this documentation as part of the ATS Plan.

4. If the discharger cannot utilize a residual chemical test method that meets the requirements above, the discharger shall operate the ATS in Batch Treatment[4] mode.

5. A discharger planning to operate in Batch Treatment mode shall perform toxicity testing in accordance with the following:

   a. The discharger shall initiate acute toxicity testing on effluent samples representing effluent from each batch prior to discharge[5]. All bioassays shall be sent to a laboratory certified by the Department of Health Services (DHS) Environmental Laboratory Accreditation Program (ELAP). The required field of testing number for Whole Effluent Toxicity (WET) testing is E113.[6]

   b. Acute toxicity tests shall be conducted with the following species and protocols. The methods to be used in the acute toxicity testing shall be those outlined for a 96-hour acute test in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms, USEPA-841-R-02-012" for Fathead minnow, *Pimephales promelas* (fathead minnow). Acute toxicity for *Oncorhynchus mykiss* (Rainbow Trout) may be used as a substitute for testing fathead minnows.

   c. All toxicity tests shall meet quality assurance criteria and test acceptability criteria in the most recent versions of the EPA test method for WET testing.

   d. The discharger shall electronically report all acute toxicity testing.

[3] The Maximum Allowable Threshold Concentration (MATC) is the allowable concentration of residual, or dissolved, coagulant/flocculant in effluent. The MATC shall be coagulant/flocculant-specific, and based on toxicity testing conducted by an independent, third-party laboratory. A typical MATC would be:
The MATC is equal to the geometric mean of the NOEC (No Observed Effect Concentration) and LOEC (Lowest Observed Effect Concentration) Acute and Chronic toxicity results for most sensitive species determined for the specific coagulant. The most sensitive species test shall be used to determine the MATC.

[4] Batch Treatment mode is defined as holding or recirculating the treated water in a holding basin or tank(s) until treatment is complete or the basin or storage tank(s) is full.

[5] This requirement only requires that the test be initiated prior to discharge.

[6] http://www.dhs.ca.gov/ps/ls/elap/pdf/FOT_Desc.pdf.

## F. Filtration

1. The ATS shall include a filtration step between the coagulant treatment train and the effluent discharge. This is commonly provided by sand, bag, or cartridge filters, which are sized to capture suspended material that might pass through the clarifier tanks.

2. Differential pressure measurements shall be taken to monitor filter loading and confirm that the final filter stage is functioning properly.

## G. Residuals Management

1. Sediment shall be removed from the storage or treatment cells as necessary to ensure that the cells maintain their required water storage (i.e., volume) capability.

2. Handling and disposal of all solids generated during ATS operations shall be done in accordance with all local, state, and federal laws and regulations.

## H. ATS Instrumentation

1. The ATS shall be equipped with instrumentation that automatically measures and records effluent water quality data and flow rate.

2. The minimum data recorded shall be consistent with the Monitoring and Reporting requirements below, and shall include:

   a. Influent Turbidity

   b. Effluent Turbidity

   c. Influent pH

   d. Effluent pH

   e. Residual Chemical

   f. Effluent Flow rate

   g. Effluent Flow volume

3. Systems shall be equipped with a data recording system, such as data loggers or webserver-based systems, which records each measurement on a frequency no longer than once every 15 minutes.

4. Cumulative flow volume shall be recorded daily. The data recording system shall have the capacity to record a minimum of seven days continuous data.

5. Instrumentation systems shall be interfaced with system control to provide auto shutoff or recirculation in the event that effluent measurements exceed turbidity or pH.

6. The system shall also assure that upon system upset, power failure, or other catastrophic event, the ATS will default to a recirculation mode or safe shut down.

7. Instrumentation (flow meters, probes, valves, streaming current detectors, controlling computers, etc.) shall be installed and maintained per manufacturer's recommendations, which shall be included in the QA/QC plan.

8. The QA/QC plan shall also specify calibration procedures and frequencies, instrument method detection limit or sensitivity verification, laboratory duplicate procedures, and other pertinent procedures.

9. The instrumentation system shall include a method for controlling coagulant dose, to prevent potential overdosing. Available technologies include flow/turbidity proportional metering, periodic jar testing and metering pump adjustment, and ionic charge measurement controlling the metering pump.

## I. ATS Effluent Discharge

1. ATS effluent shall comply with all provisions and prohibitions in this General Permit, specifically the NELs.

2. NELs for discharges from an ATS:

   a. Turbidity of all ATS discharges shall be less than 10 NTU for daily flow-weighted average of all samples and 20 NTU for any single sample.

   b. Residual Chemical shall be < 10% of MATC[7] for the most sensitive species of the chemical used.

[7] The Maximum Allowable Threshold Concentration (MATC) is the allowable concentration of residual, or dissolved, coagulant/flocculant in effluent. The MATC shall be coagulant/flocculant-specific, and based on toxicity testing conducted by an independent, third-party laboratory. The MATC is equal to the geometric mean of the NOEC (No Observed Effect Concentration) and LOEC (Lowest Observed Effect Concentration) Acute and Chronic toxicity results for most sensitive species determined for the specific coagulant. The most sensitive species test shall be used to determine the MATC.

3. If an analytical effluent sampling result exceeds the turbidity NEL (as listed in Table 1), the discharger is in violation of this General Permit and shall electronically file the results in violation within 24-hours of obtaining the results.

4. If ATS effluent is authorized to discharge into a sanitary sewer system, the discharger shall comply with any pre-treatment requirements applicable for that system. The discharger shall include any specific criteria required by the municipality in the ATS Plan.

5. Compliance Storm Event:

   Discharges of storm water from ATS shall comply with applicable NELs (above) unless the storm event causing the discharges is determined after the fact to be equal to or larger than the Compliance Storm Event (expressed in inches of rainfall). The Compliance Storm Event for ATS discharges is the 10 year, 24 hour storm, as determined using these maps:

   http://www.wrcc.dri.edu/pcpnfreq/nca10y24.gif
   http://www.wrcc.dri.edu/pcpnfreq/sca10y24.gif

   This exemption is dependent on the submission of rain gauge data verifying the storm event is equal to or larger than the Compliance Storm.

## J. Operation and Maintenance Plan

1. Each Project shall have a site-specific Operation and Maintenance (O&M) Manual covering the procedures required to install, operate and maintain the ATS.[8]

2. The O&M Manual shall only be used in conjunction with appropriate project-specific design specifications that describe the system configuration and operating parameters.

3. The O&M Manual shall have operating manuals for specific pumps, generators, control systems,and other equipment.

## K. Sampling and Reporting Quality Assurance/ Quality Check (QA/QC) Plan

4. A project-specific QA/QC Plan shall be developed for each project. The QA/QC Plan shall include at a minimum:

   a. Calibration – Calibration methods and frequencies for all system and field instruments shall be specified.

[8] The manual is typically in a modular format covering generalized procedures for each component that is utilized in a particular system.

b. Method Detection Limits (MDLs) – The methods for determining MDLs shall be specified for each residual coagulant measurement method. Acceptable minimum MDLs for each method, specific to individual coagulants, shall be specified.

c. Laboratory Duplicates – Requirements for monthly laboratory duplicates for residual coagulant analysis shall be specified.

## L. Personnel Training

1. Operators shall have training specific to using an ATS and liquid coagulants for storm water discharges in California.

2. The training shall be in the form of a formal class with a certificate and requirements for testing and certificate renewal.

3. Training shall include a minimum of eight hours classroom and 32 hours field training. The course shall cover the following topics:

   a. Coagulation Basics –Chemistry and physical processes

   b. ATS System Design and Operating Principles

   c. ATS Control Systems

   d. Coagulant Selection – Jar testing, dose determination, etc.

   e. Aquatic Safety/Toxicity of Coagulants, proper handling and safety

   f. Monitoring, Sampling, and Analysis

   g. Reporting and Recordkeeping

   h. Emergency Response

## M. Active Treatment System (ATS) Monitoring Requirements

Any discharger who deploys an ATS on their site shall conduct the following:

1. Visual Monitoring

   a. A designated responsible person shall be on site daily at all times during treatment operations.

b. Daily on-site visual monitoring of the system for proper performance shall be conducted and recorded in the project data log.

   i. The log shall include the name and phone number of the person responsible for system operation and monitoring.

   ii. The log shall include documentation of the responsible person's training.

2. Operational and Compliance Monitoring

   a. Flow shall be continuously monitored and recorded at not greater than 15-minute intervals for total volume treated and discharged.

   b. Influent and effluent pH must be continuously monitored and recorded at not greater than 15-minute intervals.

   c. Influent and effluent turbidity (expressed in NTU) must be continuously monitored and recorded at not greater than 15-minute intervals.

   d. The type and amount of chemical used for pH adjustment, if any, shall be monitored and recorded.

   e. Dose rate of chemical used in the ATS system (expressed in mg/L) shall be monitored and reported 15-minutes after startup and every 8 hours of operation.

   f. Laboratory duplicates – monthly laboratory duplicates for residual coagulant analysis must be performed and records shall be maintained onsite.

   g. Effluent shall be monitored and recorded for residual chemical/additive levels.

   h. If a residual chemical/additive test does not exist and the ATS is operating in a batch treatment mode of operation refer to the toxicity monitoring requirements below.

3. Toxicity Monitoring

   A discharger operating in batch treatment mode shall perform toxicity testing in accordance with the following:

   a. The discharger shall initiate acute toxicity testing on effluent samples representing effluent from each batch prior to discharge.[9] All bioassays shall be sent to a laboratory certified by the Department of Health Services (DHS)

[9] This requirement only requires that the test be initiated prior to discharge.

Environmental Laboratory Accreditation Program (ELAP). The required field of testing number for Whole Effluent Toxicity (WET) testing is E113.[10]

b. Acute toxicity tests shall be conducted with the following species and protocols. The methods to be used in the acute toxicity testing shall be those outlined for a 96-hour acute test in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms, USEPA-841-R-02-012" for Fathead minnow, *Pimephales promelas or* Rainbow trout *Oncorhynchus mykiss* may be used as a substitute for fathead minnow.

c. All toxicity tests shall meet quality assurance criteria and test acceptability criteria in the most recent versions of the EPA test method for WET testing.[11]

4. Reporting and Recordkeeping

At a minimum, every 30 days a LRP representing the discharger shall access the State Water Boards Storm Water Mulit-Application and Report Tracking system (SMARTS) and electronically upload field data from the ATS. Records must be kept for three years after the project is completed .

5. Non-compliance Reporting

a. Any indications of toxicity or other violations of water quality objectives shall be reported to the appropriate regulatory agency as required by this General Permit.

b. Upon any measurements that exceed water quality standards, the system operator shall immediately notify his supervisor or other responsible parties, who shall notify the Regional Water Board.

c. If any monitoring data exceeds any applicable NEL in this General Permit, the discharger shall electronically submit a NEL Violation Report to the State Water Board within 24 hours after the NEL exceedance has been identified.

i. ATS dischargers shall certify each NEL Violation Report in accordance with the Special Provisions for Construction Activity in this General Permit.

ii. ATS dischargers shall retain an electronic or paper copy of each NEL Violation Report for a minimum of three years after the date the annual report is filed.

iii. ATS dischargers shall include in the NEL Violation Report:

[10] http://www.dhs.ca.gov/ps/ls/elap/pdf/FOT_Desc.pdf.
[11] http://www.epa.gov/waterscience/methods/wet/.

(1) The analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit");

(2) The date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation; and

(3) A description of the current onsite BMPs, and the proposed corrective actions taken to manage the NEL exceedance.

iv. Compliance Storm Exemption - In the event that an applicable NEL has been exceeded during a storm event equal to or larger than the Compliance Storm Event, ATS dischargers shall report the on-site rain gauge reading and nearby governmental rain gauge readings for verification.

| | A | B | C | D | E | F | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Version 8/17/2011 | | | | | | | | | | | | |
| 2 | | **Risk Determination Worksheet** | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | |
| 4 | | | **Step 1** | Determine Sediment Risk via one of the options listed: | | | | | | | | | |
| 5 | | | | 1. GIS Map Method - EPA Rainfall Erosivity Calculator & GIS map | | | | | | | | | |
| 6 | | | | 2. Individual Method - EPA Rainfall Erosivity Calculator & Individual Data | | | | | | | | | |
| 7 | | | **Step 2** | Determine Receiving Water Risk via one of the options listed: | | | | | | | | | |
| 8 | | | | 1. GIS map of Sediment Sensitive Watersheds provided | | | | | | | | | |
| 9 | | | | 2. Site Specific Analysis (support documentation required) | | | | | | | | | |
| 10 | | | **Step 3** | Determine Combined Risk Level | | | | | | | | | |
| 11 | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | |
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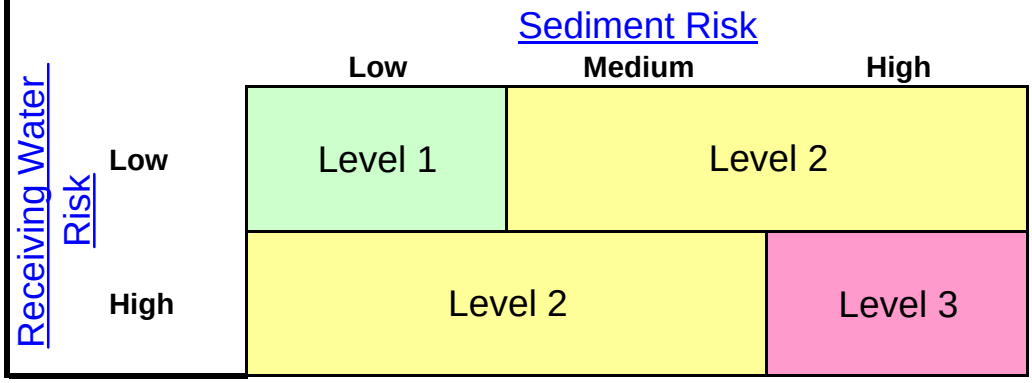
| 19 | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | |

| | A | B | C |
|---|---|---|---|
| 1 | **Sediment Risk Factor Worksheet** | | **Entry** |
| 2 | **A) R Factor** | | |
| 3 | Analyses of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of at least 22 years. "Isoerodent" maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site. | | |
| 4 | http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm | | |
| 5 | **R Factor Value** | | 0 |
| 6 | **B) K Factor (weighted average, by area, for all site soils)** | | |
| 7 | The soil-erodibility factor K represents: (1) susceptibility of soil or surface material to erosion, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff. Use Site-specific data must be submitted. | | |
| 8 | Site-specific K factor guidance | | |
| 9 | **K Factor Value** | | 0 |
| 10 | **C) LS Factor (weighted average, by area, for all slopes)** | | |
| 11 | The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for the site prior to construction. | | |
| 12 | LS Table | | |
| 13 | **LS Factor Value** | | 0 |
| 14 | | | |
| 15 | **Watershed Erosion Estimate (=RxKxLS) in tons/acre** | | 0 |
| 16 | **Site Sediment Risk Factor** | | **Low** |
| 17 | Low Sediment Risk: < 15 tons/acre | | |
| 18 | Medium Sediment Risk: >=15 and <75 tons/acre | | |
| 19 | High Sediment Risk: >= 75 tons/acre | | |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | **GIS Map Method:** | | |
| 24 | **1.** The R factor for the project is calculated using the online calculator at: | | |
| 25 | http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm | | |
| 26 | | | |
| 27 | **2.** The K and LS factors may be obtained by accessing the GIS maps located on the State Water Board FTP website at: | | |
| 28 | ftp://swrcb2a.waterboards.ca.gov/pub/swrcb/dwq/cgp/Risk/ | | |
| 29 | | | |

| Receiving Water (RW) Risk Factor Worksheet | Entry | Score |
|---|---|---|
| **A. Watershed Characteristics** | **yes/no** | |
| A.1. Does the disturbed area discharge (either directly or indirectly) to a **303(d)-listed waterbody impaired by sediment** (For help with impaired waterbodies please visit the link below) or has a **USEPA approved TMDL implementation plan for sediment**?: | **no** | **Low** |
| http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml | | |
| **OR** | | |
| A.2. Does the disturbed area discharge to a waterbody with designated beneficial uses of SPAWN & COLD & MIGRATORY? (For help please review the appropriate Regional Board Basin Plan) | | |
| http://www.waterboards.ca.gov/waterboards_map.shtml | | |
| Region 1 Basin Plan | | |
| Region 2 Basin Plan | | |
| Region 3 Basin Plan | | |
| Region 4 Basin Plan | | |
| Region 5 Basin Plan | | |
| Region 6 Basin Plan | | |
| Region 7 Basin Plan | | |
| Region 8 Basin Plan | | |
| Region 9 Basin Plan | | |

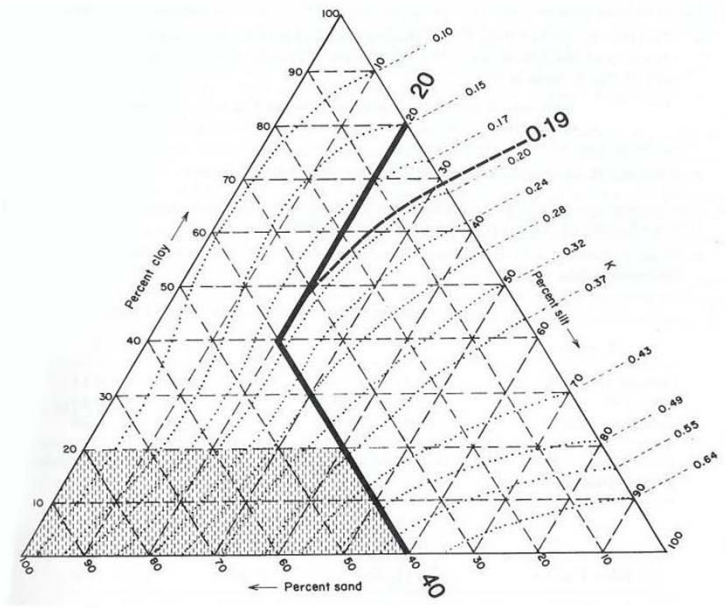
# Combined Risk Level Matrix




| | |
|---|---|
| **Project Sediment Risk:** | **Low** |
| **Project RW Risk:** | **Low** |
| **Project Combined Risk:** | **Level 1** |

**Soil Erodibility Factor (K)**

The K factor can be determined by using the nomograph method, which requires that a particle size analysis (ASTM D-422) be done to determine the percentages of sand, very fine sand, silt and clay. Use the figure below to determine appropriate K value.




Erickson triangular nomograph used to estimate soil erodibility (K) factor.
The figure above is the USDA nomograph used to determine the K factor for a soil, based on its texture (% silt plus very fine sand, % sand, % organic matter, soil structure, and permeability). *Nomograph from Erickson 1977 as referenced in Goldman et. al., 1986.*

| Sheet Flow Length (ft) | Average Watershed Slope (%) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **0.2** | **0.5** | **1.0** | **2.0** | **3.0** | **4.0** | **5.0** | **6.0** | **8.0** | **10.0** | **12.0** | **14.0** | **16.0** | **20.0** | **25.0** | **30.0** | **40.0** | **50.0** | **60.0** |
| **<3** | 0.05 | 0.07 | 0.09 | 0.13 | 0.17 | 0.20 | 0.23 | 0.26 | 0.32 | 0.35 | 0.36 | 0.38 | 0.39 | 0.41 | 0.45 | 0.48 | 0.53 | 0.58 | 0.63 |
| **6** | 0.05 | 0.07 | 0.09 | 0.13 | 0.17 | 0.20 | 0.23 | 0.26 | 0.32 | 0.37 | 0.41 | 0.45 | 0.49 | 0.56 | 0.64 | 0.72 | 0.85 | 0.97 | 1.07 |
| **9** | 0.05 | 0.07 | 0.09 | 0.13 | 0.17 | 0.20 | 0.23 | 0.26 | 0.32 | 0.38 | 0.45 | 0.51 | 0.56 | 0.67 | 0.80 | 0.91 | 1.13 | 1.31 | 1.47 |
| **12** | 0.05 | 0.07 | 0.09 | 0.13 | 0.17 | 0.20 | 0.23 | 0.26 | 0.32 | 0.39 | 0.47 | 0.55 | 0.62 | 0.76 | 0.93 | 1.08 | 1.37 | 1.62 | 1.84 |
| **15** | 0.05 | 0.07 | 0.09 | 0.13 | 0.17 | 0.20 | 0.23 | 0.26 | 0.32 | 0.40 | 0.49 | 0.58 | 0.67 | 0.84 | 1.04 | 1.24 | 1.59 | 1.91 | 2.19 |
| **25** | 0.05 | 0.07 | 0.10 | 0.16 | 0.21 | 0.26 | 0.31 | 0.36 | 0.45 | 0.57 | 0.71 | 0.85 | 0.98 | 1.24 | 1.56 | 1.86 | 2.41 | 2.91 | 3.36 |
| **50** | 0.05 | 0.08 | 0.13 | 0.21 | 0.30 | 0.38 | 0.46 | 0.54 | 0.70 | 0.91 | 1.15 | 1.40 | 1.64 | 2.10 | 2.67 | 3.22 | 4.24 | 5.16 | 5.97 |
| **75** | 0.05 | 0.08 | 0.14 | 0.25 | 0.36 | 0.47 | 0.58 | 0.69 | 0.91 | 1.20 | 1.54 | 1.87 | 2.21 | 2.86 | 3.67 | 4.44 | 5.89 | 7.20 | 8.37 |
| **100** | 0.05 | 0.09 | 0.15 | 0.28 | 0.41 | 0.55 | 0.68 | 0.82 | 1.10 | 1.46 | 1.88 | 2.31 | 2.73 | 3.57 | 4.59 | 5.58 | 7.44 | 9.13 | 10.63 |
| **150** | 0.05 | 0.09 | 0.17 | 0.33 | 0.50 | 0.68 | 0.86 | 1.05 | 1.43 | 1.92 | 2.51 | 3.09 | 3.68 | 4.85 | 6.30 | 7.70 | 10.35 | 12.75 | 14.89 |
| **200** | 0.06 | 0.10 | 0.18 | 0.37 | 0.57 | 0.79 | 1.02 | 1.25 | 1.72 | 2.34 | 3.07 | 3.81 | 4.56 | 6.04 | 7.88 | 9.67 | 13.07 | 16.16 | 18.92 |
| **250** | 0.06 | 0.10 | 0.19 | 0.40 | 0.64 | 0.89 | 1.16 | 1.43 | 1.99 | 2.72 | 3.60 | 4.48 | 5.37 | 7.16 | 9.38 | 11.55 | 15.67 | 19.42 | 22.78 |
| **300** | 0.06 | 0.10 | 0.20 | 0.43 | 0.69 | 0.98 | 1.28 | 1.60 | 2.24 | 3.09 | 4.09 | 5.11 | 6.15 | 8.23 | 10.81 | 13.35 | 18.17 | 22.57 | 26.51 |
| **400** | 0.06 | 0.11 | 0.22 | 0.48 | 0.80 | 1.14 | 1.51 | 1.90 | 2.70 | 3.75 | 5.01 | 6.30 | 7.60 | 10.24 | 13.53 | 16.77 | 22.95 | 28.60 | 33.67 |
| **600** | 0.06 | 0.12 | 0.24 | 0.56 | 0.96 | 1.42 | 1.91 | 2.43 | 3.52 | 4.95 | 6.67 | 8.45 | 10.26 | 13.94 | 18.57 | 23.14 | 31.89 | 39.95 | 47.18 |
| **800** | 0.06 | 0.12 | 0.26 | 0.63 | 1.10 | 1.65 | 2.25 | 2.89 | 4.24 | 6.03 | 8.17 | 10.40 | 12.69 | 17.35 | 23.24 | 29.07 | 40.29 | 50.63 | 59.93 |
| **1000** | 0.06 | 0.13 | 0.27 | 0.69 | 1.23 | 1.86 | 2.55 | 3.30 | 4.91 | 7.02 | 9.57 | 12.23 | 14.96 | 20.57 | 27.66 | 34.71 | 48.29 | 60.84 | 72.15 |

LS Factors for Construction Sites. *Table from Renard et. al., 1997.*

# APPENDIX 2:
# Post-Construction Water Balance Performance Standard Spreadsheet

The discharger shall submit with their Notice of Intent (NOI) the following information to demonstrate compliance with the New and Re-Development Water Balance Performance Standard.

## Map Instructions

The discharger must submit a small-scale topographic map of the site to show the existing contour elevations, pre- and post-construction drainage divides, and the total length of stream in each watershed area. Recommended scales include 1 in. = 20 ft., 1 in. = 30 ft., 1 in. = 40 ft., or 1 in = 50 ft. The suggested contour interval is usually 1 to 5 feet, depending upon the slope of the terrain. The contour interval may be increased on steep slopes. Other contour intervals and scales may be appropriate given the magnitude of land disturbance.

## Spreadsheet Instructions

The intent of the spreadsheet is to help dischargers calculate the project-related increase in runoff volume and select impervious area and runoff reduction credits to reduce the project-related increase in runoff volume to pre-project levels.

The discharger has the option of using the spreadsheet (**Appendix 2.1)** or a more sophisticated, watershed process-based model (e.g. Storm Water Management Model, Hydrological Simulation Program Fortran) to determine the project-related increase in runoff volume.

***In* Appendix 4.1**, ***you must complete the worksheet for each land use/soil type combination for each project sub-watershed.***

**Steps 1 through 9 pertain specifically to the Runoff Volume Calculator:**

Step 1: Enter the county where the project is located in cell H3.

Step 2: Enter the soil type in cell H6.

Step 3: Enter the existing pervious (dominant) land use type in cell H7.

Step 4: Enter the proposed pervious (dominant) land use type in cell H8.

Step 5: Enter the total project site area in cell H11 or J11.

Step 6: Enter the sub-watershed area in cell H12 or J12.

Step 7: Enter the existing rooftop area in cell H17 or J17, the existing non-rooftop impervious area in cell H18 or J18, the proposed rooftop area in cell H19 or J19, and the proposed non-rooftop impervious area in cell H20 or J20

Step 8: Work through each of the impervious area reduction credits and claim credits where applicable. Volume that cannot be addressed using non-structural practices must be captured in structural practices and approved by the Regional Water Board.

Step 9: Work through each of the impervious volume reduction credits and claim credits where applicable. Volume that cannot be addressed using non-structural practices must be captured in structural practices and approved by the Regional Water Board.

**Non-structural Practices Available for Crediting**

- ***Porous Pavement***
- ***Tree Planting***
- ***Downspout Disconnection***
- ***Impervious Area Disconnection***
- ***Green Roof***
- ***Stream Buffer***
- ***Vegetated Swales***
- ***Rain Barrels and Cisterns***
- ***Landscaping Soil Quality***

# Post-Construction Water Balance Calculator

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | User may make changes from any cell that is orange or brown in color (similar to the cells to the immediate right). Cells in green are calculated for you. | | (Step 1a) If you know the 85th percentile storm event for your location enter it in the box below | | (Step 1b) If you can not answer 1a then select the county where the project is located (click on the cell to the right for drop-down): This will determine the average 85th percentile 24 hr. storm event for your site, which will appear under precipitation to left. | | | | ***SACRAMENTO*** | |
| | | | | | (Step 1c) If you would like a more percise value select the location closest to your site. If you do not recgonize any of these locations, leave this drop-down menu at location. The average value for the County will be used. | | | | **SACRAMENTO FAA ARPT** | |
| | ***Project Information*** | | | | ***Runoff Calculations*** | | | | | |
| | ***Project Name:*** | ***Optional*** | | | (Step 2) Indicate the Soil Type (dropdown menu to right): | | ***Group C Soils*** | | **Low infiltration. Sandy clay loam. Infiltration rate 0.05 to 0.15 inch/hr when wet.** | |
| | ***Waste Discharge Identification (WDID):*** | ***Optional*** | | | (Step 3) Indicate the existing **dominant** non-built land Use Type (dropdown menu to right): | | ***Wood & Grass: <50% ground cover*** | | | |
| | ***Date:*** | ***Optional*** | | | (Step 4) Indicate the proposed **dominant** non-built land Use Type (dropdown menu to right): | | ***Lawn, Grass, or Pasture covering more than 75% of the open space*** | | | |
| | ***Sub Drainage Area Name (from map):*** | ***Optional*** | | | | | **Complete Either** | | | |
| | ***Runoff Curve Numbers*** | | | | | | **Sq Ft** | **Acres** | **Acres** | |
| | **Existing Pervious Runoff Curve Number** | **82** | | | *(Step 5) Total Project Site Area:* | | | **5.00** | **5.00** | |
| | **Proposed Development Pervious Runoff Curve Number** | **74** | | | *(Step 6) Sub-watershed Area:* | | | **5.00** | **5.00** | |
| | ***Design Storm*** | | | | *Percent of total project :* | | | **100%** | | |
| | Based on the County you indicated above, we have included the 85 percentile average 24 hr event - P85 (in)^ for your area. | **0.62** | **in** | | | | | | | |
| | The Amount of rainfall needed for runoff to occur (Existing runoff curve number -P from existing RCN (in)^) | **0.44** | **In** | | ***(Step 7) Sub-watershed Conditions*** | | **Complete Either** | | **Calculated Acres** | |
| | P used for calculations (in) (the greater of the above two criteria) | **0.62** | **In** | | Sub-watershed Area (acres) | | **Sq Ft** | **Acres** | **5.00** | |
| | ^Available at www.cabmphandbooks.com | | | | Existing Rooftop Impervious Coverage | | | **0** | **0.00** | |
| | | | | | Existing Non-Rooftop Impervious Coverage | | | **0** | **0.00** | |
| | | | | | Proposed Rooftop Impervious Coverage | | | **0** | **0.00** | |
| | | | | | Proposed Non-Rooftop Impervious Coverage | | | **0** | **0.00** | |
| | | | | | ***Credits*** | | **Acres** | | **Square Feet** | |
| | | | | | Porous Pavement | | **0.00** | | **0** | |
| | | | | | Tree Planting | | **0.00** | | **0** | |
| | **Pre-Project Runoff Volume (cu ft)** | **247** | **Cu.Ft.** | | Downspout Disconnection | | **0.00** | | **0** | |
| | **Project-Related Runoff Volume Increase w/o credits (cu ft)** | **0** | **Cu.Ft.** | | Impervious Area Disconnection | | **0.00** | | **0** | |
| | | | | | Green Roof | | **0.00** | | **0** | |
| | | | | | Stream Buffer | | **0.00** | | **0** | |
| | **Project-Related Volume Increase with Credits (cu ft)** | **0** | **Cu.Ft.** | | Vegetated Swales | | **0.00** | | **0** | |
| | | | | | **Subtotal** | | **0.00** | | **0** | |
| | | | | | **Subtotal Runoff Volume Reduction Credit** | | **0 Cu. Ft.** | | | |
| | You have achieved your minimum requirements | | | | ***(Step 9) Impervious Volume Reduction Credits*** | | **Volume (cubic feet)** | | | |
| | | | | | Rain Barrels/Cisterns | | **0 Cu. Ft.** | | | |
| | | | | | Soil Quality | | **0 Cu. Ft.** | | | |
| | | | | | **Subtotal Runoff Volume Reduction** | | **0 Cu. Ft.** | | | |
| | | | | | **Total Runoff Volume Reduction Credit** | | **0 Cu. Ft.** | | | |

**Porous Pavement Credit Worksheet**

Please fill out a porous pavement credit worksheet for each project sub-watershed.

*For the PROPOSED Development:*

| **Proposed Porous Pavement** | Runoff Reduction* | Fill in either Acres or SqFt | | Equivalent Acres |
|---|---|---|---|---|
| | | In SqFt. | In Acres | |
| Area of **Brick without Grout** on less than 12 inches of base with at least 20% void space over soil | 0.45 | | | 0.00 |
| Area of **Brick without Grout** on more than 12 inches of base with at least 20% void space over soil | 0.90 | | | 0.00 |
| Area of **Cobbles** less than 12 inches deep and over soil | 0.30 | | | 0.00 |
| Area of **Cobbles** less than 12 inches deep and over soil | 0.60 | | | 0.00 |
| Area of **Reinforced Grass Pavement** on less than 12 inches of base with at least 20% void space over soil | 0.45 | | | 0.00 |
| Area of **Reinforced Grass Pavement** on at least 12 inches of base with at least 20% void space over soil | 0.90 | | | 0.00 |
| Area of **Porous Gravel Pavement** on less than 12 inches of base with at least 20% void space over soil | 0.38 | | | 0.00 |
| Area of **Porous Gravel Pavement** on at least 12 inches of base with at least 20% void space over soil | 0.75 | | | 0.00 |
| Area of **Poured Porous Concrete or Asphalt Pavement** with less than 4 inches of gravel base (washed stone) | 0.40 | | | 0.00 |
| Area of **Poured Porous Concrete or Asphalt Pavement** with 4 to 8 inches of gravel base (washed stone) | 0.60 | | | 0.00 |
| Area of **Poured Porous Concrete or Asphalt Pavement** with 8 to 12 inches of gravel base (washed stone) | 0.80 | | | 0.00 |
| Area of **Poured Porous Concrete or Asphalt Pavement** with 12 or more inches of gravel base (washed stone) | 1.00 | | | 0.00 |

*=1-Rv**

Return to Calculator

**Using Site Design Techniques to meet Development Standards for Stormwater Quality (BASMAA 2003)

**NCDENR Stormwater BMP Manual (2007)

**Tree Planting Credit Worksheet**
Please fill out a tree canopy credit worksheet for each project sub-watershed.

| Tree Canopy Credit Criteria | Number of Trees Planted | Credit (acres) |
|---|---|---|
| Number of proposed evergreen trees to be planted (credit = number of trees x 0.005)* | 0 | 0.00 |
| Number of proposed deciduous trees to be planted (credit = number of trees x 0.0025)* | | 0.00 |
| | Square feet Under Canopy | |
| Square feet under an existing tree canopy, that will remain on the property, with an average diameter at 4.5 ft above grade (i.e., diameter at breast height or DBH) is LESS than 12 in diameter. | | 0.00 |
| Square feet under an existing tree canopy that will remain on the property, with an average diameter at 4.5 ft above grade (i.e., diameter at breast height or DBH) is 12 in diameter or GREATER. | | 0.00 |
| Please describe below how the project will ensure that these trees will be maintained. | | |

0

Return to Calculator

* credit amount based on credits from Stormwater Quality Design Manual for the Sacramento and South Placer Regions

**Downspout Disconnection Credit Worksheet**

Please fill out a downspout disconnection credit worksheet for each project subwatershed. If you answer yes to all questions, all rooftop area draining to each downspout will be subtracted from your proposed rooftop impervious coverage.

| Downspout Disconnection Credit Criteria | | |
|---|---|---|
| Do downspouts and any extensions extend at least six feet from a basement and two feet from a crawl space or concrete slab? | ○ Yes | ◉ No |
| Is the area of rooftop connecting to each disconnected downspout 600 square feet or less? | ○ Yes | ◉ No |
| Is the roof runoff from the design storm event fully contained in a raised bed or planter box or does it drain as sheet flow to a landscaped area large enough to contain the roof runoff from the design storm event? | ○ Yes | ◉ No |
| The Stream Buffer and/or Vegetated Swale credits **will not** be taken in this sub-watershed area? | ○ Yes | ◉ No |

| | | | | |
|---|---|---|---|---|
| Percentage of existing | 0.00 | Acres | of rooftop surface has disconnected downspouts | |
| Percentage of the proposed | 0.00 | Acres | of rooftop surface has disconnected downspouts | 50 |

Return to Calculator

**Impervious Area Disconnection Credit Worksheet**

Please fill out an impervious area disconnection credit worksheet for each project sub-watershed. If you answer yes to all questions, all non-rooftop impervious surface area will be subtracted from your proposed non-rooftop impervious coverage.

| Non-Rooftop Disconnection Credit Criteria | Response |
|---|---|
| Is the maximum contributing impervious flow path length less than 75 feet or, if equal or greater than 75 feet, is a storage device (e.g. French drain, bioretention area, gravel trench) implemented to achieve the required disconnection length? | ◉ Yes ○ No |
| Is the impervious area to any one discharge location less than 5,000 square feet? | ◉ Yes ○ No |
| The Stream Buffer credit **will not** be taken in this sub-watershed area? | ◉ Yes ○ No |

| | | | |
|---|---|---|---|
| Percentage of existing | 0.00 | Acres non-rooftop surface area disconnected | |
| Percentage of the proposed | 0.00 | Acres non-rooftop surface area disconnected | 70 |

Return to Calculator

**Green Roof Credit Worksheet**

Please fill out a greenroof credit worksheet for each project sub-watershed. If you answer yes to all questions, 70% of the greenroof area will be subtracted from your proposed rooftop impervious coverage.

| Green Roof Credit Criteria | | | | Response |
|---|---|---|---|---|
| Is the roof slope less than 15% or does it have a grid to hold the substrate in place until it forms a thick vegetation mat? | | | | ◉ Yes ○ No |
| Has a professional engineer assessed the necessary load reserves and designed a roof structure to meet state and local codes? | | | | ◉ Yes ○ No |
| Is the irrigation needed for plant establishment and/or to sustain the green roof during extended dry periods, is the source from stored, recycled, reclaimed, or reused water? | | | | ◉ Yes ○ No |
| Percentage of existing | 0.00 | Acres | rooftop surface area in greenroof | |
| Percentage of the proposed | 0.00 | Acres | rooftop surface area in greenroof | |

Return to Calculator

**Stream Buffer Credit Worksheet**

Please fill out a stream buffer credit worksheet for each project sub-watershed. If you answer yes to all questions, you may subtract all impervious surface draining to each stream buffer that has not been addressed using the Downspout and/or Impervious Area Disconnection credits.

| Stream Buffer Credit Criteria | | | | Response |
|---|---|---|---|---|
| Does runoff enter the floodprone width* or within 500 feet (whichever is larger) of a stream channel as sheet flow**? | | | | ○ Yes ◉ No |
| Is the contributing overland slope 5% or less, or if greater than 5%, is a level spreader used? | | | | ○ Yes ◉ No |
| Is the buffer area protected from vehicle or other traffic barriers to reduce compaction? | | | | ○ Yes ◉ No |
| Will the stream buffer be maintained in an ungraded and uncompacted condition and will the vegetation be maintained in a natural condition? | | | | ○ Yes ◉ No |
| Percentage of existing | 0.00 | Acres | impervious surface area draining into a stream buffer: | |
| Percentage of the proposed | 0.00 | Acres | impervious surface area that will drain into a stream buffer: | |
| Please describe below how the project will ensure that the buffer areas will remain in ungraded and uncompacted condition and that the vegetation will be maintained in a natural condition. | | | | |
| | | | | |

Return to Calculator

* floodprone width is the width at twice the bankfull depth.
** the maximum contributing length shall be 75 feet for impervious area

**Vegetated Swale Credit Worksheet**

Please fill out a vegetated swale worksheet for each project subwatershed. If you answer yes to all questions, you may subtract all impervious surface draining to each stream buffer that has not been addressed using the Downspout Disconnection credit.

**Vegetated Swale Credit Criteria**

| | |
|---|---|
| Have all vegetated swales been designed in accordance with Treatment Control BMP 30 (TC-30 - Vegetated Swale) from the California Stormwater BMP Handbook, New Development and Redevelopment (available at www.cabmphandbooks.com)? | ○ Yes ◉ No |
| Is the maximum flow velocity for runoff from the design storm event less than or equal to 1.0 foot per second? | ○ Yes ◉ No |

| | | | |
|---|---|---|---|
| Percentage of existing | 0.00 | Acres of impervious area draining to a vegetated swale | |
| Percentage of the proposed | 0.00 | Acres of impervious area draining to a vegetated swale | |

Return to Calculator

**Rain Barrel/Cistern Credit Worksheet**

Please fill out a rain barrel/cistern worksheet for each project sub-watershed.

| Rain Barrel/Cistern Credit Criteria | Response |
|---|---|
| Total number of rain barrel(s)/cisterns | |
| Average capacity of rain barrel(s)/cistern(s) (in gallons) | |
| Total capacity rain barrel(s)/cistern(s) (in cu ft) [1] | 0 |

[1] accounts for 10% loss

Return to Calculator

Please fill out a soil quality worksheet for each project sub-watershed.

| | Response |
|---|---|
| Will the landscaped area be lined with an impervious membrane? | |
| Will the soils used for landscaping meet the ideal bulk densities listed in Table 1 below? [1] | ○ Yes ◉ No |
| If you answered yes to the question above, and you know the area-weighted bulk density within the top 12 inches for soils used for landscaping (in g/cm$^3$)* , fill in the cell to the right and skip to cell G11. If not select from the drop-down menu in G10. | 1.3 |
| If you answered yes to the question above, but you do not know the exact bulk density, which of the soil types in the drop down menu to the right best describes the top 12 inches for soils used for landscaping (in g/cm$^3$). | Sandy loams, loams |
| What is the average depth of your landscaped soil media meeting the above criteria (inches)? | 12 |
| What is the total area of the landscaped areas meeting the above criteria (in acres)? | 2.97 |

Return to Calculator

Table 1

| | |
|---|---|
| Sands, loamy sands | <1.6 |
| Sandy loams, loams | <1.4 |
| Sandy clay loams, loams, clay loams | <1.4 |
| Silts, silt loams | <1.3 |
| Silt loams, silty clay loams | <1.1 |
| Sandy clays, silty clays, some clay loams (35-45% clay) | <1.1 |
| Clays (>45% clay) | <1.1 |

Porosity (%) 50.94%

Mineral grains in many soils are mainly quartz and feldspar, so 2.65 a good average for particle density. To determine percent porosity, use the formula: Porosity (%) = (1-Bulk Density/2.65) X 100

[1] USDA NRCS. "Soil Quality Urban Technical Note No.2-Urban Soil Compaction". March 2000. http://soils.usda.gov/sqi/management/files/sq_utn_2.pdf

* To determine how to calculate density see: http://www.globe.gov/tctg/bulkden.pdf?sectionID=94

# APPENDIX 3
# Bioassessment Monitoring Guidelines

Bioassessment monitoring is required for projects that meet all of the following criteria:

1. The project is rated Risk Level 3 or LUP Type 3
2. The project directly discharges runoff to a freshwater wadeable stream (or streams) that is either: (a) listed by the State Water Board or USEPA as impaired due to sediment, and/or (b) tributary to any downstream water body that is listed for sediment; and/or have the beneficial use SPAWN & COLD & MIGRATORY
3. Total project-related ground disturbance exceeds 30 acres.

For all such projects, the discharger shall conduct bioassessment monitoring, as described in this section, to assess the effect of the project on the biological integrity of receiving waters.
Bioassessment shall include:

1. The collection and reporting of specified instream biological data
2. The collection and reporting of specified instream physical habitat data

<u>Bioassessment Exception</u>
If a site qualifies for bioassessment, but construction commences out of an index period for the site location, the discharger shall:

1. Receive Regional Water Board approval for the sampling exception
2. Make a check payable to: Cal State Chico Foundation (SWAMP Bank Account) or San Jose State Foundation (SWAMP Bank Account) and include the WDID# on the check for the amount calculated for the exempted project.
3. Send a copy of the check to the Regional Water Board office for the site's region
4. Invest **7,500.00 X The number of samples required** into the SWAMP program as compensation (upon Regional Water Board approval).
5. Conduct bioassessment monitoring, as described in Appendix 4
6. Include the collection and reporting of specified instream biological data and physical habitat
7. Use the bioassessment sample collection and Quality Assurance & Quality Control (QA/QC) protocols developed by the State of California's Surface Water Ambient Monitoring Program (SWAMP)

<u>Site Locations and Frequency</u>
Macroinvertebrate samples shall be collected both before ground disturbance is initiated and after the project is completed. The "after" sample(s) shall be collected after at least one winter season resulting in surface runoff has transpired after project-related ground disturbance has ceased. "Before" and "after" samples shall be collected both upstream and downstream of the project's

discharge. Upstream samples should be taken immediately before the sites outfall and downstream samples should be taken immediately after the outfall (when safe to collect the samples). Samples should be collected for each freshwater wadeable stream that is listed as impaired due to sediment, or tributary to a water body that is listed for sediment. Habitat assessment data shall be collected concurrently with all required macroinvertebrate samples.

Index Period (Timing of Sample Collection)
Macroinvertebrate sampling shall be conducted during the time of year (i.e., the "index period") most appropriate for bioassessment sampling, depending on ecoregion. This map is posted on the State Water Board's Website: http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml

Field Methods for Macroinvertebrate Collections
In collecting macroinvertebrate samples, the discharger shall use the "Reachwide Benthos (Multi-habitat) Procedure" specified in *Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California* (Ode 2007).[1]

Physical - Habitat Assessment Methods
The discharger shall conduct, concurrently with all required macroinvertebrate collections, the "Full" suite of physical habitat characterization measurements as specified in *Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California* (Ode 2007), and as summarized in the Surface Water Ambient Monitoring Program's *Stream Habitat Characterization Form — Full Version*.

Laboratory Methods
Macroinvertebrates shall be identified and classified according to the Standard Taxonomic Effort (STE) Level I of the Southwestern Association of Freshwater Invertebrate Taxonomists (SAFIT),[2] and using a fixed-count of 600 organisms per sample.

Quality Assurance
The discharger or its consultant(s) shall have and follow a quality assurance (QA) plan that covers the required bioassessment monitoring. The QA plan shall include, or be supplemented to include, a specific requirement for external QA checks (i.e., verification of taxonomic identifications and correction of data where

[1] This document is available on the Internet at: ~~http://www.swrcb.ca.gov/swamp/docs/phab_sopr6.pdf~~. http://swamp.mpsl.mlml.calstate.edu/wp-content/uploads/2009/04/swamp_sop_bioassessment_collection_020107.pdf.

[2] The current SAFIT STEs (28 November 2006) list requirements for both the Level I and Level II taxonomic effort, and are located at: ~~http://www.swrcb.ca.gov/swamp/docs/safit/ste_list.pdf~~ http://www.safit.org/Docs/ste_list.pdf. When new editions are published by SAFIT, they will supersede all previous editions. All editions will be posted at the State Water Board's SWAMP website.

errors are identified). External QA checks shall be performed on one of the discharger's macroinvertebrate samples collected per calendar year, or ten percent of the samples per year (whichever is greater). QA samples shall be randomly selected. The external QA checks shall be paid for by the discharger, and performed by the California Department of Fish and Game's Aquatic Bioassessment Laboratory. An alternate laboratory with equivalent or better expertise and performance may be used if approved in writing by State Water Board staff.

Sample Preservation and Archiving

The original sample material shall be stored in 70 percent ethanol and retained by the discharger until: 1) all QA analyses specified herein and in the relevant QA plan are completed; and 2) any data corrections and/or re-analyses recommended by the external QA laboratory have been implemented. The remaining subsampled material shall be stored in 70 percent ethanol and retained until completeness checks have been performed according to the relevant QA plan. The identified organisms shall be stored in 70 percent ethanol, in separate glass vials for each final ID taxon. (For example, a sample with 45 identified taxa would be archived in a minimum of 45 vials, each containing all individuals of the identified taxon.) Each of the vials containing identified organisms shall be labeled with taxonomic information (i.e., taxon name, organism count) and collection information (i.e., site name/site code, waterbody name, date collected, method of collection). The identified organisms shall be archived (i.e., retained) by the discharger for a period of not less than three years from the date that all QA steps are completed, and shall be checked at least once per year and "topped off" with ethanol to prevent desiccation. The identified organisms shall be relinquished to the State Water Board upon request by any State Water Board staff.

Data Submittal

The macroinvertebrate results (i.e., taxonomic identifications consistent with the specified SAFIT STEs, and number of organisms within each taxa) shall be submitted to the State Water Board in electronic format. The State Water Board's Surface Water Ambient Monitoring Program (SWAMP) is currently developing standardized formats for reporting bioassessment data. All bioassessment data collected after those formats become available shall be submitted using the SWAMP formats. Until those formats are available, the biological data shall be submitted in MS-Excel (or equivalent) format.[3]

The physical/habitat data shall be reported using the standard format titled *SWAMP Stream Habitat Characterization Form — Full Version*.[4]

[3] Any version of Excel, 2000 or later, may be used.
[4] Available at: http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/reports/fieldforms_fullversion052908.pdf

Invasive Species Prevention

In conducting the required bioassessment monitoring, the discharger and its consultants shall take precautions to prevent the introduction or spread of aquatic invasive species. At minimum, the discharger and its consultants shall follow the recommendations of the California Department of Fish and Game to minimize the introduction or spread of the New Zealand mudsnail.[5]

[5] Instructions for controlling the spread of NZ mudsnails, including decontamination methods, can be found at: http://www.dfg.ca.gov/invasives/mudsnail/
More information on AIS More information on AIS
http://www.waterboards.ca.gov/water_issues/programs/swamp/ais/

## Appendix 4 Non Sediment TMDLs

### Region 1 Lost River-DIN and CBOD

| Region 1<br>Source: Cal Trans Construction<br>TMDL Completion Date: 12 30 2008<br>TMDL Type: River, Lake<br>Watershed Area= 2996 $mi^2$ | **Pollutant Stressors/WLA** | |
|---|---|---|
| | **Dissolved inorganic nitrogen (DIN) (metric tons/yr)** | **Carbonaceous biochemical oxygen demand (CBOD) (metric tons/yr)** |
| Lost River from the Oregon border to Tule Lake | .1 | .2 |
| Tule Lake Refuge | .1 | .2 |
| Lower Klamath Refuge | .1 | .2 |

### Region 2 San Francisco Bay-Mercury

| Region 2<br>Source:Non-Urban Stormwater Runoff<br>TMDL Type: Bay | **Name** | **Pollutant Stressor/WLA** | **TMDL Completion Date** |
|---|---|---|---|
| | San Francisco Bay | Mercury 25 kg/year | 08 09 2006 |

### Region 4 Ballona Creek-Metals and Selenium

| Region 4<br>Source: NPDES General Construction<br>TMDL Completion Date: 12 22 2005<br>TMDL Type: Creek | **Pollutant Stressors/WLA** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Copper (Cu)** | | **Lead (Pb)** | | **Selenium (Se)** | | **Zinc (Zn)** | |
| | g/day | g/day/acre | g/day | g/day/acre | g/day | g/day/acre | g/day | g/day/acre |
| Ballona Creek | 4.94E-07 x Daily storm volume (L) | 2.20E-10 x Daily storm volume (L) | 1.62E-06 x Daily storm volume (L) | 7.20E-10 x Daily storm volume (L) | 1.37E-07 x Daily storm volume (L) | 6.10E-11 x Daily storm volume (L) | 3.27E-06 x Daily storm volume (L) | 1.45E-09 x Daily storm volume (L) |

**General Construction Storm Water Permits:**
Waste load allocations will be incorporated into the State Board general permit upon renewal or into a watershed-specific general permit developed by the Regional Board.

- Dry-weather Implementation Non-storm water flows authorized by the General Permit for Storm Water Discharges Associated with Construction Activity (Water Quality Order No. 99-08 DWQ), or any successor order, are exempt from the dry-weather waste load allocation equal to zero as long as they comply with the provisions of sections C.3 and A.9 of the Order No. 99-08 DWQ, which state that these authorized non-storm discharges shall be:
  (1) infeasible to eliminate
  (2) comply with BMPs as described in the Storm Water Pollution Prevention Plan prepared by the permittee, and
  (3) not cause or contribute to a violation of water quality standards, or comparable provisions in any successor order.
  Unauthorized non-storm water flows are already prohibited by Order No. 99-08 DWQ.
- Wet-weather Implementation Within seven years of the effective date of the TMDL, the construction industry will submit the results of BMP effectiveness studies to determine BMPs that will achieve compliance with the final waste load allocations assigned to construction storm water permittees.
- Regional Board staff will bring the recommended BMPs before the Regional Board for consideration within eight years of the effective date of the TMDL.
- General construction storm water permittees will be considered in compliance with final waste load allocations if they implement these Regional Board approved BMPs. All permittees must implement the approved BMPs within nine years of the effective date of the TMDL. If no effectiveness studies are conducted and no BMPs are approved by the Regional Board within eight years of the effective date of the TMDL, each general construction storm water permit holder will be subject to site-specific BMPs and monitoring requirements to demonstrate compliance with final waste load allocations.

## Region 4 Calleaguas Creek-OC Pesticides, PCBs, and Siltation

**Interim Requirements**

| **Region 4 Calleaguas Creek**<br>Source: Minor NPDES point sources/WDRs<br>TMDL Completion Date: 3 14 2006<br>TMDL Type:Creek | **Pollutant Stressor** | **WLA Daily Max (µg/L)** | **WLA Monthly Ave (µg/L)** |
|---|---|---|---|
| | Chlordane | 1.2 | 0.59 |
| | 4,4-DDD | 1.7 | 0.84 |
| | 4,4-DDE | 1.2 | 0.59 |
| | 4,4-DDT | 1.2 | 0.59 |
| | Dieldrin | 0.28 | 0.14 |
| | PCB's | 0.34 | 0.17 |
| | Toxaphene | 0.33 | 0.16 |

| Final WLA (ng/g) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Region 4 Calleaguas Creek**<br>Source: Stormwater Permittees<br>TMDL Completion Date: 3 14 2006<br>TMDL Type:Creek | Chlordane | 4,4-DDD | 4,4-DDE | 4,4-DDT | Dieldrin | PCB's | Toxaphene |
| Mugu Lagoon* | 3.3 | 2.0 | 2.2 | 0.3 | 4.3 | 180.0 | 360.0 |
| Callegaus Creek | 3.3 | 2.0 | 1.4 | 0.3 | 0.2 | 120.0 | 0.6 |
| Revolon Slough (SW)* | 0.9 | 2.0 | 1.4 | 0.3 | 0.1 | 130.0 | 1.0 |
| Arroyo Las posas(SW)* | 3.3 | 2.0 | 1.4 | 0.3 | 0.2 | 120.0 | 0.6 |
| Arroyo Simi | 3.3 | 2.0 | 1.4 | 0.3 | 0.2 | 120.0 | 0.6 |
| Conejo Creek | 3.3 | 2.0 | 1.4 | 0.3 | 0.2 | 120.0 | 0.6 |
| **Interim Requirements (ng/g)** | | | | | | | |
| Mugu Lagoon* | 25.0 | 69.0 | 300.0 | 39.0 | 19.0 | 180. | 22900.0 |
| Callegaus Creek | 17.0 | 66.0 | 470.0 | 110.0 | 3.0 | 3800.0 | 260.0 |
| Revolon Slough (SW)* | 48.0 | 400.0 | 1600.0 | 690.0 | 5.7 | 7600.0 | 790.0 |
| Arroyo Las posas(SW)* | 3.3 | 290.0 | 950.0 | 670.0 | 1.1 | 25700.0 | 230.0 |
| Arroyo Simi | 3.3 | 14.0 | 170.0 | 25.0 | 1.1 | 25700.0 | 230.0 |
| Conejo Creek | 3.4 | 5.3 | 20.0 | 2.0 | 3.0 | 3800.0 | 260.0 |

*(SW)=Subwatershed

*Mugu Lagoon includes Duck pond/Agricultural Drain/Mugu/Oxnard Drain #2

Compliance with sediment based WLAs is measured as an instream annual average at the base of each subwatershed where the discharges are located.

## Region 4 Calleguas Creek-Salts

| Final Dry Weather Pollutant WLA (mg/L) | | | | | |
|---|---|---|---|---|---|
| **Region 4 Calleaguas Creek**<br>Source Permitted Stormwater Dischargers TMDL<br>Completion Date: 12 2 2008<br>TMDL Type:Creek | **Critical Condition Flow Rate (mgd)** | **Chloride (lb/day)** | **TDS (lb/day)** | **Sulfate (lb/day)** | **Boron (lb/day)** |
| Simi | 1.39 | 1738.0 | 9849.0 | 2897.0 | 12.0 |
| Las Posas | 0.13 | 157.0 | 887.0 | 261.0 | N/A |
| Conejo | 1.26 | 1576.0 | 8931.0 | 2627.0 | N/A |

| | | | | | |
|---|---|---|---|---|---|
| Camarillo | 0.06 | 72.0 | 406.0 | 119.0 | N/A |
| Pleasant Valley (Calleguas) | 0.12 | 150.0 | 850.0 | 250.0 | N/A |
| Pleasant Valley (Revolon) | 0.25 | 314.0 | 1778.0 | 523.0 | 2.0 |

| **Dry Weather Interim Pollutant WLA (mg/L)** | | | | |
|---|---|---|---|---|
| | **Chloride (mg/L)** | **TDS (mg/L)** | **Sulfate (mg/L)** | **Boron (mg/L)** |
| Simi | 230.0 | 1720.0 | 1289.0 | 1.3 |
| Las Posas | 230.0 | 1720.0 | 1289.0 | 1.3 |
| Conejo | 230.0 | 1720.0 | 1289.0 | 1.3 |
| Camarillo | 230.0 | 1720.0 | 1289.0 | 1.3 |
| Pleasant Valley (Calleguas) | 230.0 | 1720.0 | 1289.0 | 1.3 |
| Pleasant Valley (Revolon) | 230.0 | 1720.0 | 1289.0 | 1.3 |

- General Construction permittees are assigned a dry weather wasteload allocation equal to the average dry weather critical condition flow rate multiplied by the numeric target for each constituent. Waste load allocations apply in the receiving water at the base of each subwatershed. Dry weather allocations apply when instream flow rates are below the 86th percentile flow and there has been no measurable precipitation in the previous 24 hours.
- Because wet weather flows transport a large mass of salts at low concentrations, these dischargers meet water quality objectives during wet weather.
- Interim limits are assigned for dry weather discharges from areas covered by NPDES stormwater permits to allow time to implement appropriate actions. The interim limits are assigned as concentration based receiving water limits set to the 95th percentile of the discharger data as a monthly average limit except for chloride. The 95th percentile for chloride was 267 mg/L which is higher than the recommended criteria set forth in the Basin Plan for protection of sensitive beneficial uses including aquatic life. Therefore, the interim limit for chloride for Permitted Stormwater Dischargers is set equal to 230 mg/L to ensure protection of sensitive beneficial uses in the Calleguas Creek watershed.

## Region 4 San Gabriel River and Tributaries-Metals and Selenium

| **Region 4 San Gabriel River and Tributaries**<br>Source: Construction Stormwater Dischargers<br>TMDL Completion Date: 3 2007<br>TMDL Type: Creek | **Pollutant Stressor** | **Wet weather Allocations** | **Dry Weather Allocations** | **% of Watershed** |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| San Gabriel Reach 2 | Lead (Pb) | 0.7% * 166 µg/l * Daily Storm Vol | N/A | 0.7% |
| San Gabriel Reach 2 | Lead (Pb) Mass based | 0.8 kg/d | N/A | 0.7% |
| Coyote Creek | Copper (Cu) | 0.285 kg/d | 0 | 5.0% |
| Coyote Creek | Lead (Pb) | 1.70 kg/d | N/A | 5.0% |
| Coyote Creek | Zinc (Zn) | 2.4 kg/d | N/A | 5.0% |
| San Jose Creek Reach 1 and 2 | Selenium | 5 µg/L | 5 µg/L | 5.0% |

Wet-weather allocations for lead in San Gabriel River Reach 2. Concentration-based allocations apply to non-stormwater NPDES discharges. Stormwater allocations are expressed as a percent of load duration curve. Mass-based values presented in table are based on a flow of 260 cfs (daily storm volume = 6.4 $x10^{8}$ liters).

There are 1555 acres of water in the entire watershed, 37.4 acres of water in the Reach 1 subwatershed (2.4%), and 269 acres in the Coyote Creek subwatershed (17%).

**General Construction Storm Water Permits**

Waste load allocations for the general construction storm water permits may be incorporated into the State Board general permit upon renewal or into a watershed-specific general permit developed by the Regional Board. An estimate of direct atmospheric deposition is developed based on the percent area of surface water in the watershed. Approximately 0.4% of the watershed area draining to San Gabriel River Reach 2 is comprised of water and approximately 0.2% of the watershed area draining to Coyote Creek is comprised of water.

## Region 4 The Harbor Beaches of Ventura County-Bacteria

The TMDL has a multi-part numeric target based on the bacteriological water quality objectives for marine water to protect the water contact recreation use. These targets are the most appropriate indicators of public health risk in recreational waters. Bacteriological objectives are set forth in Chapter 3 of the Basin Plan. The objectives are based on four bacteria indicators and include both geometric mean limits and single sample limits. The Basin Plan objectives that serve as the numeric targets for this TMDL are:

The General NPDES Construction permit is seen as a minor contributor and is given no allocation

General NPDES permits, individual NPDES permits, the Statewide Industrial Storm Water General Permit, the Statewide Construction Activity Storm Water General Permit, and WDR permittees in the Channel Islands Harbor subwatershed are assigned WLAs of zero (0) days of allowable exceedances for all three time periods and for the single sample limits and the rolling 30-day geometric mean. Any future enrollees under a general NPDES permit, individual NPDES permit, the Statewide Industrial Storm Water General Permit, the Statewide Construction Activity Storm Water General Permit, and WDR will also be subject to a WLA of zero (0) days of allowable exceedances.

## Region 4 Resolution No. 03-009 Los Angeles River and Tributaries-Nutrients

Minor Point Sources
Waste loads are allocated to minor point sources enrolled under NPDES or WDR permits including but not limited to Tapia WRP, Whittier Narrows WRP, Los Angeles Zoo WRP, industrial and construction stormwater, and municipal storm water and urban runoff from municipal separate storm sewer systems (MS4s)

| **Region 4** Minor Point Sources for NPDES/WDR Permits TMDL Completion Date: 7 10 2003 TMDL Type: River | Pollutant Stressor/WLA | | | | |
|---|---|---|---|---|---|
| | **Total Ammonia ($NH_3$)** | | **Nitrate-nitrogen ($NO_3$-N)** | **Nitrite-nitrogen ($NO_2$-N)** | **$NO_3$-N + $NO_3$-N** |
| | 1 Hr Ave mg/l | 30 Day Ave mg/l | 30 Day Ave mg/l | | 30 Day Ave mg/l |
| LA River Above Los Angeles-Glendale WRP (LAG) | 4.7 | 1.6 | 8.0 | 1.0 | 8.0 |
| LA River Below LAG | 8.7 | 2.4 | 8.0 | 1.0 | 8.0 |
| Los Angeles Tributaries | 10.1 | 2.3 | 8.0 | 1.0 | 8.0 |

## Malibu Creek Attachment A to Resolution No. 2004-019R-Bacteria

12 13 2004 The WLAs for permittees under the NPDES General Stormwater Construction Permit are zero (0) days of allowable exceedances for all three time periods and for the single sample limits and the rolling 30-day geometric mean.

## Region 4 Marina del Rey Harbor, Mothers' Beach and Back Basins

## Attachment A to Resolution No. 2003-012-Bacteria

8 7 2003 As discussed in "Source Analysis", discharges from general NPDES permits, general industrial storm water permits and general construction storm water permits are not expected to be a significant source of bacteria. Therefore, the WLAs for these discharges are zero (0) days of allowable exceedances for all three time periods and for the single sample limits and the rolling 30-day geometric mean. Any future enrollees under a general NPDES permit, general industrial storm water permit or general construction storm water permit within the MdR Watershed will also be subject to a WLA of zero days of allowable exceedances.

## Region 4 San Gabriel River and Tributaries-Metals and Selenium

Dry Weather Selenium WLA
A zero WLA is assigned to the industrial and construction stormwater permits during dry weather. Non-storm water discharges are already prohibited or restricted by existing general permits.

| **Region 4**<br>General Construction Permittees<br>TMDL Completion Date: 7 13 2006<br>TMDL Type: River | **Total Recoverable Metals (kg/day)** | | |
|---|---|---|---|
| | **Copper (Cu)<br>Kg/day** | **Lead (Pb)<br>Kg/day** | **Zinc (Zn)<br>Kg/day** |
| San Gabriel River Reach 2 and upstream reaches/tributaries | **XXXX** | Daily storm volume x 1.24 µg/L | **XXXX** |
| Coyote Creek and Tributaries | Daily storm volume x 0.7 µg/L | Daily storm volume x 4.3 µg/L | Daily storm volume x 6.2 µg/L |

Each enrollee under the general construction stormwater permit receives a WLA on a per acre basis

| **Region 4**<br>General Construction Permittees TMDL<br>Completion Date: 7 13 2006<br>TMDL Type: River | **Total Recoverable Metals (kg/day/acre)** | | |
|---|---|---|---|
| | **Copper (Cu)<br>Kg/acre/day** | **Lead (Pb)<br>Kg/acre/day** | **Zinc (Zn)<br>Kg/acre/day** |
| San Gabriel River Reach 2 and upstream reaches/tributaries | **XXXX** | Daily storm volume x 0.56 µg/L | **XXXX** |

| | | | |
|---|---|---|---|
| Coyote Creek and Tributaries | Daily storm volume x 0.12 µg/L | Daily storm volume x 0.70 µg/L | Daily storm volume x 1.01 µg/L |

For the general industrial and construction storm water permits, the daily storm volume is measured at USGS station 11085000 for discharges to Reach 2 and above and at LACDPW flow gauge station F354-R for discharges to Coyote Creek.

**General construction storm water permits**
WLAs will be incorporated into the State Board general permit upon renewal or into a watershed-specific general permit developed by the Regional Board.

**Dry-weather implementation**
Non-storm water flows authorized by the General Permit for Storm Water Discharges Associated with Construction Activity (NPDES Permit No. CAS000002), or any successor permit, are exempt from the dry-weather WLA equal to zero as long as they comply with the provisions of sections C.3.and A.9 of the Order No. 99-08 DWQ, which state that these authorized non-storm discharges shall be (1) infeasible to eliminate (2) comply with BMPs as described in the Storm Water Pollution Prevention Plan prepared by the permittee, and (3) not cause or contribute to a violation of water quality standards, or comparable provisions in any successor order. Unauthorized non-storm water flows are already prohibited by Permit No. CAS000002.

**Upon permit issuance, renewal, or re-opener**
Non-storm water flows not authorized by Order No. 99-08 DWQ, or any successor order, shall achieve dry-weather WLAs. WLAs shall be expressed as NPDES water quality-based effluent limitations specified in accordance with federal regulations and state policy on water quality control. Effluent limitations may be expressed as permit conditions, such as the installation, maintenance, and monitoring of Regional Board-approved BMPs.

**Six years from the effective date of the TMDL**
The construction industry will submit the results of wet-weather BMP effectiveness studies to the Los Angeles Regional Board for consideration. In the event that no effectiveness studies are conducted and no BMPs are approved, permittees shall be subject to site-specific BMPs and monitoring to demonstrate BMP effectiveness.

**Seven years from the effective date of the TMDL**
The Los Angeles Regional Board will consider results of the wet weather BMP effectiveness studies and consider approval of BMPs.

**Eight years from the effective date of the TMDL**
All general construction storm water permittees shall implement Regional Board-approved BMPs.

Total Maximum Daily Loads (TMDLs) for San Diego Creek,
Upper and Lower Newport Bay, Orange County, California

| **Region 8**<br>NPDES Construction Permit<br>TMDL Completion Date: 1 24 1995<br><br>TMDL Type: River. Cr, Bay | Organochlorine Compounds | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Total DDT** | | **Chlordane** | | **Total PCBs** | | **Toxaphene** | |
| | g/day | g/yr | g/day | g/yr | g/day | g/yr | g/day | g/yr |
| San Diego Creek | .27 | 99.8 | **.18*** | **64.3*** | **.09*** | **31.5*** | .004 | 1.5 |
| Upper Newport Bay | .11 | 40.3 | .06 | 23.4 | .06 | 23.2 | **X** | **X** |
| Lower Newport Bay | .04 | 14.9 | .02 | 8.6 | .17 | 60.7 | **X** | **X** |

*Red= Informational WLA only, not for enforcement purposes

**Organochlorine Compounds TMDLs Implementation Tasks and Schedule**

Regional Board staff shall develop a SWPPP Improvement Program that identifies the Regional Board's expectations with respect to the content of SWPPPs, including documentation regarding the selection and implementation of BMPs, and a sampling and analysis plan. The Improvement Program shall include specific guidance regarding the development and implementation of monitoring plans, including the constituents to be monitored, sampling frequency and analytical protocols. The SWPPP Improvement Program shall be completed by (*the date of OAL approval of this BPA*). ***No later than two months*** from completion of the Improvement Program, Board staff shall assure that the requirements of the Program are communicated to interested parties, including dischargers with existing authorizations under the General Construction Permit. Existing, authorized dischargers shall revise their project SWPPPs as needed to address the Program requirements as soon as possible but ***no later than (three months of completion of the SWPPP Improvement Program)***. Applicable SWPPPs that do not adequately address the Program requirements shall be considered inadequate and enforcement by the Regional Board shall proceed accordingly. The Caltrans and Orange County MS4 permits shall be revised as needed to assure that the permittees communicate the Regional Board's SWPPP expectations, based on the SWPPP Improvement Program, with the Standard Conditions of Approval.

## Appendix 4 Sediment TMDLs

Implemented Sediment TMDLs in California. Construction was listed as a source in all fo these TMDLs in relation to road construction. Although construction was mentioned as a source, it was not given a specific allocation amount. The closest allocation amount would be for the road activity management WLA. **Implementation Phase** – Adoption process by the Regional Board, the State Water Resources Control Board, the Office of Administrative Law, and the US Environmental Protection Agency completed and TMDL being implemented.

| A. Region | Type | Name | Pollutant Stressor | Potential Sources | TMDL Completion Date | Watershed Acres | WLA tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 1 R1.epa.albionfinaltmdl | R | Albion River | Sedimentation | Road Construction | 2001 | 43 acres | See A (table 6) |

| B Region | Type | Name | Pollutant Stressor | Potential Sources | TMDL Completion Date | Watershed Acres | WLA tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 1 R1.epa.EelR-middle.mainSed.temp | R | Middle Main Eel River and Tributaries (from Dos Rios to the South Fork) | Sedimentation | Road Construction | 2005-2006 | 521 $mi^2$ | 100 |

| C Region | Type | Name | Pollutant Stressor | Potential Sources | TMDL Completion Date | Watershed Acres | WLA tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 1 R1.epa.EelRsouth.sed.temp | R | South Fork Eel River | Sedimentation | Road Construction | 12 1999 | See chart | 473 |

| D Region | Type | Name | Pollutant Stressor | Potential Sources | TMDL Completion Date | Watershed Acres | WLA tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 1 R1.epa.bigfinaltmdl | R | Big River | Sedimentation | Road Construction | 12 2001 | 181 $mi^2$ watershed drainage | TMDL = loading capacity = nonpoint sources + background = |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | 393 t mi2 yr |

| E Region | Type | Name | Pollutant Stressor | Potential Sources | TMDL Completion Date | Watershed Acres | WLA tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 1 R1.epa.EelR-lower.Sed.temp-121807-signed | R | Lower Eel River | Sedimentation | Road Construction | 12 2007 | 300 square-mile watershed | 898 |

| F Region | Type | Name | Pollutant Stressor | Potential Sources | TMDL Completion Date | Watershed Acres | WLA tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 1 R1.epa.EelR-middle.Sed.temp- | R | Middle Fork Eel River | Sedimentation | Road Construction | 12 2003 | 753 $mi^2$ (approx. 482,000 acres) | 82 |

| G Region | Type | Name | Pollutant Stressor | Potential Sources | TMDL Completion Date | Watershed Acres $Mi^2$ | WLA tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 1 R1.epa.EelRnorth-Sed.temp.final-121807-signed | R | North Fork Eel River | Sedimentation | Road Construction | 12 30 2002 | 289 (180,020 acres) | 20 |

| H Region | Type | Name | Pollutant Stressor | Potential Sources | TMDL Completion Date | Watershed Acres $Mi^2$ | WLA tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 1 R1.epa.EelR-upper.mainSed.temp- | R | Upper Main Eel River and Tributaries (including Tomki Creek, Outlet Creek and Lake Pillsbury) | Sedimentation | Road Construction | 12 29 2004 | 688 (approx. 440,384 acres) | 14 |

| I Region | Type | Name | Pollutant Stressor | Potential Sources | TMDL Completion Date | Watershed Acres | WLA tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 1 R1.epa.gualalafinaltmdl | R | Gualala River | Sedimentation | Road Construction | Not sure | 300 (191,145 acres) | 7 |

| J Region | Type | Name | Pollutant Stressor | Potential Sources | TMDL Completion Date | Watershed Acres $mi^2$ | WLA tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 1 R1.epa.Mad-sed.turbidity | R | Mad River | Sedimentation | Road Construction | 12 21 2007 | 480 | 174 |

| K Region | Type | Name | Pollutant Stressor | Potential Sources | TMDL Completion Date | Watershed Acres $mi^2$ | WLA tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 1 R1.epa.mattole.sediment | R | Mattole River | Sedimentation | Road Construction | 12 30 2003 | 296 | 27 or 520+27 = 547 |

| L Region | Type | Name | Pollutant Stressor | Potential Sources | TMDL Completion Date | Watershed Acres $mi^2$ | WLA tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 1 R1.epa.navarro.sed.temp | R | Navarro River | Sedimentation | Road Construction | Not sure | 315 (201,600 acres). | 50 |

| M Region | Type | Name | Pollutant Stressor | Potential Sources | TMDL Completion Date | Watershed Acres $mi^2$ | WLA tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 1 R1.epa.noyo.sediment | R | Noyo River | Sedimentation | Road Construction | 12 16 1999 | 113 (72,323 acres) | 68 (three areas measured) Table 16 in the TMDL |

| **N Region** | **Type** | **Name** | **Pollutant Stressor** | **Potential Sources** | **TMDL Completion Date** | **Watershed Acres** $mi^2$ | **WLA** tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 1 R1.epa.RedwoodCk.sed | Cr | Redwood Creek | Sedimentation | Road Construction | 12 30 1998 | 278 | 1900 Total allocation |

| **O Region** | **Type** | **Name** | **Pollutant Stressor** | **Potential Sources** | **TMDL Completion Date** | **Watershed Acres** $mi^2$ | **WLA – Roads** tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 1 R1.epa.tenmile.sed | R | Ten Mile River | Sedimentation | Road Construction | 2000 | 120 | 9 |

| **P Region** | **Type** | **Name** | **Pollutant Stressor** | **Potential Sources** | **TMDL Completion Date** | **Watershed Acres** $mi^2$ | **WLA management** tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 1 R1.epa.trinity.sed | R | Trinity River | Sedimentation | Road Construction | 12 20 2001 | 2000 of 3000 covered in this TMDL | See rows below |
| 1 | Cr | Horse Linto Creek | Sedimentation | Road Construction | 12 20 2001 | 64 | 528 |
| 1 | Cr | Mill creek and Tish Tang | Sedimentation | Road Construction | 12 20 2001 | 39 | 210 |
| 1 | Cr | Willow Creek | Sedimentation | Road Construction | 12 20 2001 | 43 | 94 |
| 1 | Cr | Campbell Creek and Supply Creek | Sedimentation | Road Construction | 12 20 2001 | 11 | 1961 |
| 1 | Cr | Lower Mainstem and Coon Creek | Sedimentation | Road Construction | 12 20 2001 | 32 | 63 |
| 1 | R | Reference | Sedimentation | Road | 12 20 2001 | 434 | 24 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Subwatershed [1] | | Construction | | | |
| 1 | Cr | Canyon Creek | Sedimentation | Road Construction | 12 20 2001 | 64 | 326 |
| 1 | R | Upper Tributaries[2] | Sedimentation | Road Construction | 12 20 2001 | 72 | 67 |
| 1 | R | Middle Tributaries[3] | Sedimentation | Road Construction | 12 20 2001 | 54 | 53 |
| 1 | R | Lower Tributaries[4] | Sedimentation | Road Construction | 12 20 2001 | 96 | 55 |
| 1 | Cr | Weaver and Rush Creeks | Sedimentation | Road Construction | 12 20 2001 | 72 | 169 |
| 1 | Cr | Deadwood Creek Hoadley Gulch Poker Bar | Sedimentation | Road Construction | 12 20 2001 | 47 | 68 |
| 1 | L | Lewiston Lake | Sedimentation | Road Construction | 12 20 2001 | 25 | 49 |
| 1 | Cr | Grassvalley Creek | Sedimentation | Road Construction | 12 20 2001 | 37 | 44 |
| 1 | Cr | Indian Creek | Sedimentation | Road Construction | 12 20 2001 | 34 | 81 |
| 1 | Cr | Reading and Browns Creek | Sedimentation | Road Construction | 12 20 2001 | 104 | 66 |
| 1 | Cr | Reference Subwatersheds[5] | Sedimentation | Road Construction | 12 20 2001 | 235 | 281 |
| 1 | L, Cr | Westside tributaries[6] | Sedimentation | Road Construction | 12 20 2001 | 93 | 105 |
| 1 | R, Cr, G | Upper trinity[7] | Sedimentation | Road Construction | 12 20 2001 | 161 | 690 |
| 1 | R, Cr, G | East Fork Tributaries[8] | Sedimentation | Road Construction | 12 20 2001 | 115 | 65 |

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|---|---|---|---|---|---|---|---|
| 1 | R, L | Eastside Tributaries[9] | Sedimentation | Road Construction | 12 20 2001 | 89 | 60 |

1 New River, Big French, Manzanita, North Fork, East Fork, North Fork
2 Dutch, Soldier, Oregon gulch, Conner Creek
3 Big Bar, Prairie Creek, Little French Creek
4 Swede, Italian, Canadian, Cedar Flat, Mill, McDonald, Hennessy, Quimby, Hawkins, Sharber
5 Stuarts Fork, Swift Creek, Coffee Creek
6 Stuart Arm, Stoney Creek, Mule Creek, East Fork, Stuart Fork, West Side Trinity Lake, Hatchet Creek, Buckeye Creek,
7 Upper Trinity River, Tangle Blue, Sunflower, Graves, Bear Upper Trinity Mainstream, Ramshorn Creek, Ripple Creek, Minnehaha Creek, Snowslide Gulch, Scorpion Creek
8 East Fork Trinity, Cedar Creek, Squirrel Gulch
9 East Side Tributaries, Trinity Lake

| **Q Region** | **Type** | **Name** | **Pollutant Stressor** | **Potential Sources** | **TMDL Completion Date** | **Watershed Acres** $mi^2$ | **WLA** tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 1 R1.epa.trinity.so.sed | R, Cr | South Fork Trinity River and Hayfork Creek | Sedimentation | Road Construction | 12 1998 | Not given, 19 miles long | 33 (road total) |

| **R Region** | **Type** | **Name** | **Pollutant Stressor** | **Potential Sources** | **TMDL Completion Date** | **Watershed Acres** $mi^2$ | **WLA** tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 1 R1.epa.vanduzen.sed | R, Cr | Van Duzen River and Yager Creek | Sedimentation | Various | 12 16 1999 | 429 | 1353 total allocation |
| 1 | | Upper Basin | Sedimentation | Road Construction | | | 7 |
| 1 | | Middle Basin | Sedimentation | Road Construction | | | 22 |
| 1 | | Lower Basin | Sedimentation | Road Construction | | | 20 |

| **S Region** | **Type** | **Name** | **Pollutant Stressor** | **Potential** | **TMDL** | **Watershed** | **WLA** tons $mi^2$ |
|---|---|---|---|---|---|---|---|

9

| | | | | **Sources** | **Completion Date** | **Acres** $mi^2$ | yr |
|---|---|---|---|---|---|---|---|
| 6 R6.blackwood.sed | Cr | Blackwood Creek (Placer County) | Bedded Sediment | Various | 9 2007 | 11 | 17272 total |

| **T Region** | **Type** | **Name** | **Pollutant Stressor** | **Potential Sources** | **TMDL Completion Date** | **Watershed Acres** $mi^2$ | **WLA** tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 6 R6.SquawCk.sed | R | Squaw Creek (Placer County) | Sedimentation /controllable sources | Various – basin plan amendment | 4 13 2006 | 8.2 | 10,900 |

Adopted TMDLs for Construction Sediment Sources

| Region | Type | Name | Pollutant Stressor | Potential Sources | **TMDL Completion Date** | **Watershed Area** $mi^2$ | Waste load Allocation tons $mi^2$ yr |
|---|---|---|---|---|---|---|---|
| 8 | R | Newport Bay San Diego Creek Watershed | Sedimentation | Construction Land Development | 1999 | 2.24 (1432 acres) | 125,000 tons per Year (no more than 13,000 tons per year from construction sites) |

# APPENDIX 5:
# Glossary

**Active Areas of Construction**
All areas subject to land surface disturbance activities related to the project including, but not limited to, project staging areas, immediate access areas and storage areas. All previously active areas are still considered active areas until final stabilization is complete. [The construction activity Phases used in this General Permit are the Preliminary Phase, Grading and Land Development Phase, Streets and Utilities Phase, and the Vertical Construction Phase.]

**Active Treatment System (ATS)**
A treatment system that employs chemical coagulation, chemical flocculation, or electrocoagulation to aid in the reduction of turbidity caused by fine suspended sediment.

**Acute Toxicity Test**
A chemical stimulus severe enough to rapidly induce a negative effect; in aquatic toxicity tests, an effect observed within 96 hours or less is considered acute.

**Air Deposition**
Airborne particulates from construction activities.

**Approved Signatory**
A person who has been authorized by the Legally Responsible Person to sign, certify, and electronically submit Permit Registration Documents, Notices of Termination, and any other documents, reports, or information required by the General Permit, the State or Regional Water Board, or U.S. EPA. The Approved Signatory must be one of the following:

1. For a corporation or limited liability company: a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (a) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation or limited liability company; or (b) the manager of the facility if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

2. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

3. For a municipality, State, Federal, or other public agency: a principal executive officer, ranking elected official, city manager, council president, or any other authorized public employee with managerial responsibility over the

construction or land disturbance project (including, but not limited to, project manager, project superintendent, or resident engineer);

4. For the military: any military officer or Department of Defense civilian, acting in an equivalent capacity to a military officer, who has been designated;

5. For a public university: an authorized university official;

6. For an individual: the individual, because the individual acts as both the Legally Responsible Person and the Approved Signatory; or

7. For any type of entity not listed above (e.g. trusts, estates, receivers): an authorized person with managerial authority over the construction or land disturbance project.

**Beneficial Uses**
As defined in the California Water Code, beneficial uses of the waters of the state that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

**Best Available Technology Economically Achievable (BAT)**
As defined by USEPA, BAT is a technology-based standard established by the Clean Water Act (CWA) as the most appropriate means available on a national basis for controlling the direct discharge of toxic and nonconventional pollutants to navigable waters. The BAT effluent limitations guidelines, in general, represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

**Best Conventional Pollutant Control Technology (BCT)**
As defined by USEPA, BCT is a technology-based standard for the discharge from existing industrial point sources of conventional pollutants including biochemical oxygen demand (BOD), total suspended sediment (TSS), fecal coliform, pH, oil and grease.

Best Professional Judgment (BPJ)
The method used by permit writers to develop technology-based NPDES permit conditions on a case-by-case basis using all reasonably available and relevant data.

**Best Management Practices (BMPs)**
BMPs are scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures,

and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

**Chain of Custody (COC)**
Form used to track sample handling as samples progress from sample collection to the analytical laboratory. The COC is then used to track the resulting analytical data from the laboratory to the client. COC forms can be obtained from an analytical laboratory upon request.

**Coagulation**
The clumping of particles in a discharge to settle out impurities, often induced by chemicals such as lime, alum, and iron salts.

**Common Plan of Development**
Generally a contiguous area where multiple, distinct construction activities may be taking place at different times under one plan. A plan is generally defined as any piece of documentation or physical demarcation that indicates that construction activities may occur on a common plot. Such documentation could consist of a tract map, parcel map, demolition plans, grading plans or contract documents. Any of these documents could delineate the boundaries of a common plan area. However, broad planning documents, such as land use master plans, conceptual master plans, or broad-based CEQA or NEPA documents that identify potential projects for an agency or facility are not considered common plans of development.

**Daily Average Discharge**
The discharge of a pollutant measured during any 24-hour period that reasonably represents a calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged during the day. For pollutants with limitations expressed in other units of measurement (e.g., concentration) the daily discharge is calculated as the average measurement of the pollutant throughout the day (40 CFR 122.2). In the case of pH, the pH must first be converted from a log scale.

**Debris**
Litter, rubble, discarded refuse, and remains of destroyed inorganic anthropogenic waste.

**Direct Discharge**
A discharge that is routed directly to waters of the United States by means of a pipe, channel, or ditch (including a municipal storm sewer system), or through surface runoff.

**Discharger**
The Legally Responsible Person (see definition) or entity subject to this General Permit.

**Dose Rate (for ATS)**
In exposure assessment, dose (e.g. of a chemical) per time unit (e.g. mg/day), sometimes also called dosage.

**Drainage Area**
The area of land that drains water, sediment, pollutants, and dissolved materials to a common outlet.

**Effluent**
Any discharge of water by a discharger either to the receiving water or beyond the property boundary controlled by the discharger.

**Effluent Limitation**
Any numeric or narrative restriction imposed on quantities, discharge rates, and concentrations of pollutants which are discharged from point sources into waters of the United States, the waters of the contiguous zone, or the ocean.

**Erosion**
The process, by which soil particles are detached and transported by the actions of wind, water, or gravity.

**Erosion Control BMPs**
Vegetation, such as grasses and wildflowers, and other materials, such as straw, fiber, stabilizing emulsion, protective blankets, etc., placed to stabilize areas of disturbed soils, reduce loss of soil due to the action of water or wind, and prevent water pollution.

**Field Measurements**
Testing procedures performed in the field with portable field-testing kits or meters.

**Final Stabilization**
All soil disturbing activities at each individual parcel within the site have been completed in a manner consistent with the requirements in this General Permit.

**First Order Stream**
Stream with no tributaries.

**Flocculants**
Substances that interact with suspended particles and bind them together to form flocs.

**Good Housekeeping BMPs**
BMPs designed to reduce or eliminate the addition of pollutants to construction site runoff through analysis of pollutant sources, implementation of proper handling/disposal practices, employee education, and other actions.

**Grading Phase (part of the Grading and Land Development Phase)**
Includes reconfiguring the topography and slope including; alluvium removals; canyon cleanouts; rock undercuts; keyway excavations; land form grading; and stockpiling of select material for capping operations.

**Hydromodification**
Hydromodification is the alteration of the hydrologic characteristics of coastal and non-coastal waters, which in turn could cause degradation of water resources. Hydromodification can cause excessive erosion and/or sedimentation rates, causing excessive turbidity, channel aggradation and/or degradation.

**Identified Organisms**
Organisms within a sub-sample that is specifically identified and counted.

**Inactive Areas of Construction**
Areas of construction activity that are not active and those that have been active and are not scheduled to be re-disturbed for at least 14 days.

**Index Period**
The period of time during which bioassessment samples must be collected to produce results suitable for assessing the biological integrity of streams and rivers. Instream communities naturally vary over the course of a year,and sampling during the index period ensures that samples are collected during a time frame when communities are stable so that year-to-year consistency is obtained. The index period approach provides a cost-effective alternative to year-round sampling. Furthermore, sampling within the appropriate index period will yield results that are comparable to the assessment thresholds or criteria for a given region, which are established for the same index period. Because index periods differ for different parts of the state, it is essential to know the index period for your area.

**K Factor**
The soil erodibility factor used in the Revised Universal Soil Loss Equation (RUSLE). It represents the combination of detachability of the soil, runoff potential of the soil, and the transportability of the sediment eroded from the soil.

**Legally Responsible Person**
The Legally Responsible Person (LRP) will typically be the project proponent. The categories of persons or entities that are eligible to serve as the LRP are set forth below. For any construction or land disturbance project where multiple persons or entities are eligible to serve as the LRP, those persons or entities

shall select a single LRP. In exceptional circumstances, a person or entity that qualifies as the LRP may provide written authorization to another person or entity to serve as the LRP. In such a circumstance, the person or entity that provides the authorization retains all responsibility for compliance with the General Permit. Except as provided in category 2(d), a contractor who does not satisfy the requirements of any of the categories below is not qualified to be an LRP.

The following persons or entities may serve as an LRP:

1. A person, company, agency, or other entity that possesses a real property interest (including, but not limited to, fee simple ownership, easement, leasehold, or other rights of way) in the land upon which the construction or land disturbance activities will occur for the regulated site.

2. In addition to the above, the following persons or entities may also serve as an LRP:

    a. For linear underground/overhead projects, the utility company, municipality, or other public or private company or agency that owns or operates the LUP;

    b. For land controlled by an estate or similar entity, the person who has day-to-day control over the land (including, but not limited to, a bankruptcy trustee, receiver, or conservator);

    c. For pollution investigation and remediation projects, any potentially responsible party that has received permission to conduct the project from the holder of a real property interest in the land; or

    d. For U.S. Army Corp of Engineers projects, the U.S. Army Corps of Engineers may provide written authorization to its bonded contractor to serve as the LRP, provided, however, that the U.S. Army Corps of Engineers is also responsible for compliance with the general permit, as authorized by the Clean Water Act or the Federal Facilities Compliance Act.

**Likely Precipitation Event**
Any weather pattern that is forecasted to have a 50% or greater chance of producing precipitation in the project area. The discharger shall obtain likely precipitation forecast information from the National Weather Service Forecast Office (e.g., by entering the zip code of the project's location at http://www.srh.noaa.gov/forecast).

**Maximum Allowable Threshold Concentration (MATC)**
The allowable concentration of residual, or dissolved, coagulant/flocculant in effluent. The MATC shall be coagulant/flocculant-specific, and based on toxicity

testing conducted by an independent, third-party laboratory. A typical MATC would be:

The MATC is equal to the geometric mean of the NOEC (No Observed Effect Concentration) and LOEC (Lowest Observed Effect Concentration) Acute and Chronic toxicity results for most sensitive species determined for the specific coagulant. The most sensitive species test shall be used to determine the MATC.

**Natural Channel Evolution**
The physical trend in channel adjustments following a disturbance that causes the river to have more energy and degrade or aggrade more sediment. Channels have been observed to pass through 5 to 9 evolution types. Once they pass though the suite of evolution stages, they will rest in a new state of equilibrium.

**Non-Storm Water Discharges**
Discharges are discharges that do not originate from precipitation events. They can include, but are not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, vehicle wash water, sanitary wastes, concrete washout water, paint wash water, irrigation water, or pipe testing water.

**Non-Visible Pollutants**
Pollutants associated with a specific site or activity that can have a negative impact on water quality, but cannot be seen though observation (ex: chlorine). Such pollutants being discharged are not authorized.

**Numeric Action Level (NAL)**
Level is used as a warning to evaluate if best management practices are effective and take necessary corrective actions. Not an effluent limit.

**Original Sample Material**
The material (i.e., macroinvertebrates, organic material, gravel, etc.) remaining after the subsample has been removed for identification.

**pH**
Unit universally used to express the intensity of the acid or alkaline condition of a water sample. The pH of natural waters tends to range between 6 and 9, with neutral being 7. Extremes of pH can have deleterious effects on aquatic systems.

**Post-Construction BMPs**
Structural and non-structural controls which detain, retain, or filter the release of pollutants to receiving waters after final stabilization is attained.

**Preliminary Phase (Pre-Construction Phase - Part of the Grading and Land Development Phase)**
Construction stage including rough grading and/or disking, clearing and grubbing operations, or any soil disturbance prior to mass grading.

**Project**

**Qualified SWPPP Developer**
Individual who is authorized to develop and revise SWPPPs.

**Qualified SWPPP Practitioner**
Individual assigned responsibility for non-storm water and storm water visual observations, sampling and analysis, and responsibility to ensure full compliance with the permit and implementation of all elements of the SWPPP, including the preparation of the annual compliance evaluation and the elimination of all unauthorized discharges.

**Qualifying Rain Event**
Any event that produces 0.5 inches or more precipitation with a 48 hour or greater period between rain events.

**R Factor**
Erosivity factor used in the Revised Universal Soil Loss Equation (RUSLE). The R factor represents the erosivity of the climate at a particular location. An average annual value of R is determined from historical weather records using erosivity values determined for individual storms. The erosivity of an individual storm is computed as the product of the storm's total energy, which is closely related to storm amount, and the storm's maximum 30-minute intensity.

**Rain Event Action Plan (REAP)**
Written document, specific for each rain event, that when implemented is designed to protect all exposed portions of the site within 48 hours of any likely precipitation event.

**Remaining Sub sampled Material**
The material (e.g., organic material, gravel, etc.) that remains after the organisms to be identified have been removed from the subsample for identification. (Generally, no macroinvertebrates are present in the remaining subsampled material, but the sample needs to be checked and verified using a complete Quality Assurance (QA) plan)

**Routine Maintenance**
Activities intended to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

**Runoff Control BMPs**
Measures used to divert runon from offsite and runoff within the site.

**Run-on**
Discharges that originate offsite and flow onto the property of a separate project site.

**Revised Universal Soil Loss Equation (RUSLE)**
Empirical model that calculates average annual soil loss as a function of rainfall and runoff erosivity, soil erodibility, topography, erosion controls, and sediment controls.

**Sampling and Analysis Plan**
Document that describes how the samples will be collected, under what conditions, where and when the samples will be collected, what the sample will be tested for, what test methods and detection limits will be used, and what methods/procedures will be maintained to ensure the integrity of the sample during collection, storage, shipping and testing (i.e., quality assurance/quality control protocols).

**Sediment**
Solid particulate matter, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface either above or below sea level.

**Sedimentation**
Process of deposition of suspended matter carried by water, wastewater, or other liquids, by gravity. It is usually accomplished by reducing the velocity of the liquid below the point at which it can transport the suspended material.

**Sediment Control BMPs**
Practices that trap soil particles after they have been eroded by rain, flowing water, or wind. They include those practices that intercept and slow or detain the flow of storm water to allow sediment to settle and be trapped (e.g., silt fence, sediment basin, fiber rolls, etc.).

**Settleable Solids (SS)**
Solid material that can be settled within a water column during a specified time frame. It is typically tested by placing a water sample into an Imhoff settling cone and then allowing the solids to settle by gravity for a given length of time. Results are reported either as a volume (mL/L) or a mass (mg/L) concentration.

**Sheet Flow**
Flow of water that occurs overland in areas where there are no defined channels where the water spreads out over a large area at a uniform depth.

**Site**

**Soil Amendment**
Any material that is added to the soil to change its chemical properties, engineering properties, or erosion resistance that could become mobilized by storm water.

**Streets and Utilities Phase**
Construction stage including excavation and street paving, lot grading, curbs, gutters and sidewalks, public utilities, public water facilities including fire hydrants, public sanitary sewer systems, storm sewer system and/or other drainage improvements.

**Structural Controls**
Any structural facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution

**Suspended Sediment Concentration (SSC)**
The measure of the concentration of suspended solid material in a water sample by measuring the dry weight of all of the solid material from a known volume of a collected water sample. Results are reported in mg/L.

**Total Suspended Solids (TSS)**
The measure of the suspended solids in a water sample includes inorganic substances, such as soil particles and organic substances, such as algae, aquatic plant/animal waste, particles related to industrial/sewage waste, etc. The TSS test measures the concentration of suspended solids in water by measuring the dry weight of a solid material contained in a known volume of a sub-sample of a collected water sample. Results are reported in mg/L.

**Toxicity**
The adverse response(s) of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.

**Turbidity**
The cloudiness of water quantified by the degree to which light traveling through a water column is scattered by the suspended organic and inorganic particles it contains. The turbidity test is reported in Nephelometric Turbidity Units (NTU) or Jackson Turbidity Units (JTU).

**Vertical Construction Phase**
The Build out of structures from foundations to roofing, including rough landscaping.

**Waters of the United States**
Generally refers to surface waters, as defined by the federal Environmental Protection Agency in 40 C.F.R. § 122.2.[1]

**Water Quality Objectives (WQO)**
Water quality objectives are defined in the California Water Code as limits or levels of water quality constituents or characteristics, which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

[1] The application of the definition of "waters of the United States" may be difficult to determine; there are currently several judicial decisions that create some confusion. If a landowner is unsure whether the discharge must be covered by this General Permit, the landowner may wish to seek legal advice.

# APPENDIX 6:
# Acronym List

| | |
|---|---|
| ASBS | Areas of Special Biological Significance |
| ASTM | American Society of Testing and Materials; Standard Test Method for Particle-Size Analysis of Soils |
| ATS | Active Treatment System |
| BASMAA | Bay Area Storm water Management Agencies Association |
| BAT | Best Available Technology Economically Achievable |
| BCT | Best Conventional Pollutant Control Technology |
| BMP | Best Management Practices |
| BOD | Biochemical Oxygen Demand |
| BPJ | Best Professional Judgment |
| CAFO | Confined Animal Feeding Operation |
| CCR | California Code of Regulations |
| CEQA | California Environmental Quality Act |
| CFR | Code of Federal Regulations |
| CGP | NPDES General Permit for Storm Water Discharges Associated with Construction Activities |
| CIWQS | California Integrated Water Quality System |
| CKD | Cement Kiln Dust |
| COC | Chain of Custody |
| CPESC | Certified Professional in Erosion and Sediment Control |
| CPSWQ | Certified Professional in Storm Water Quality |
| CSMP | Construction Site Monitoring Program |
| CTB | Cement Treated Base |
| CTR | California Toxics Rule |
| CWA | Clean Water Act |
| CWC | California Water Code |
| CWP | Center for Watershed Protection |
| DADMAC | Diallyldimethyl-ammonium chloride |
| DDNR | Delaware Department of Natural Resources |
| DFG | Department of Fish and Game |
| DHS | Department of Health Services |
| DWQ | Division of Water Quality |
| EC | Electrical Conductivity |
| ELAP | Environmental Laboratory Accreditation Program |
| EPA | Environmental Protection Agency |
| ESA | Environmentally Sensitive Area |
| ESC | Erosion and Sediment Control |
| HSPF | Hydrologic Simulation Program Fortran |
| JTU | Jackson Turbidity Units |
| LID | Low Impact Development |
| LOEC | Lowest Observed Effect Concentration |
| LRP | Legally Responsible Person |
| LUP | Linear Underground/Overhead Projects |

| | |
|---|---|
| MATC | Maximum Allowable Threshold Concentration |
| MDL | Method Detection Limits |
| MRR | Monitoring and Reporting Requirements |
| MS4 | Municipal Separate Storm Sewer System |
| MUSLE | Modified Universal Soil Loss Equation |
| NAL | Numeric Action Level |
| NEL | Numeric Effluent Limitation |
| NICET | National Institute for Certification in Engineering Technologies |
| NOAA | National Oceanic and Atmospheric Administration |
| NOEC | No Observed Effect Concentration |
| NOI | Notice of Intent |
| NOT | Notice of Termination |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| NTR | National Toxics Rule |
| NTU | Nephelometric Turbidity Units |
| O&M | Operation and Maintenance |
| PAC | Polyaluminum chloride |
| PAM | Polyacrylamide |
| PASS | Polyaluminum chloride Silica/sulfate |
| POC | Pollutants of Concern |
| PoP | Probability of Precipitation |
| POTW | Publicly Owned Treatment Works |
| PRDs | Permit Registration Documents |
| PWS | Planning Watershed |
| QAMP | Quality Assurance Management Plan |
| QA/QC | Quality Assurance/Quality Control |
| REAP | Rain Event Action Plan |
| Regional Board | Regional Water Quality Control Board |
| ROWD | Report of Waste Discharge |
| RUSLE | Revised Universal Soil Loss Equation |
| RW | Receiving Water |
| SMARTS | Storm water Multi Application Reporting and Tracking System |
| SS | Settleable Solids |
| SSC | Suspended Sediment Concentration |
| SUSMP | Standard Urban Storm Water Mitigation Plan |
| SW | Storm Water |
| SWARM | Storm Water Annual Report Module |
| SWAMP | Surface Water Ambient Monitoring Program |
| SWMM | Storm Water Management Model |
| SWMP | Storm Water Management Program |
| SWPPP | Storm Water Pollution Prevention Plan |
| TC | Treatment Control |
| TDS | Total Dissolved Solids |

| | |
|---|---|
| TMDL | Total Maximum Daily Load |
| TSS | Total Suspended Solids |
| USACOE | U.S. Army Corps of Engineers |
| USC | United States Code |
| USEPA | United States Environmental Protection Agency |
| USGS | United States Geological Survey |
| WDID | Waste Discharge Identification Number |
| WDR | Waste Discharge Requirements |
| WLA | Waste Load Allocation |
| WET | Whole Effluent Toxicity |
| WRCC | Western Regional Climate Center |
| WQBEL | Water Quality Based Effluent Limitation |
| WQO | Water Quality Objective |
| WQS | Water Quality Standard |

# APPENDIX 7:
# State and Regional Water Resources Control Board Contacts

**NORTH COAST REGION (1)**
5550 Skylane Blvd, Ste. A
Santa Rose, CA 95403
(707) 576-2220 FAX: (707)523-0135

**SAN FRANCISCO BAY REGION (2)**
1515 Clay Street, Ste. 1400
Oakland, CA 94612
(510) 622-2300 FAX: (510) 622-2640

**CENTRAL COAST REGION (3)**
895 Aerovista Place, Ste 101
San Luis Obispo, CA 93401
(805) 549-3147 FAX: (805) 543-0397

**LOS ANGELES REGION (4)**
320 W. 4th Street, Ste. 200
Los Angeles, CA 90013
(213) 576-6600 FAX: (213) 576-6640

**CENTRAL VALLEY REGION (5S)**
11020 Sun Center Dr., #200
Rancho Cordova, CA 95670-6114
(916) 464-3291 FAX: (916) 464-4645

**FRESNO BRANCH OFFICE (5F)**
1685 E St.
Fresno, CA 93706
(559) 445-5116 FAX: (559) 445-5910

**REDDING BRANCH OFFICE (5R)**
364 Knollcrest Drive, Ste. 205
Redding, CA 96002
(530) 224-4845 FAX: (530) 224-4857

**LAHONTAN REGION (6 SLT)**
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150
(530) 542-5400 FAX: (530) 544-2271

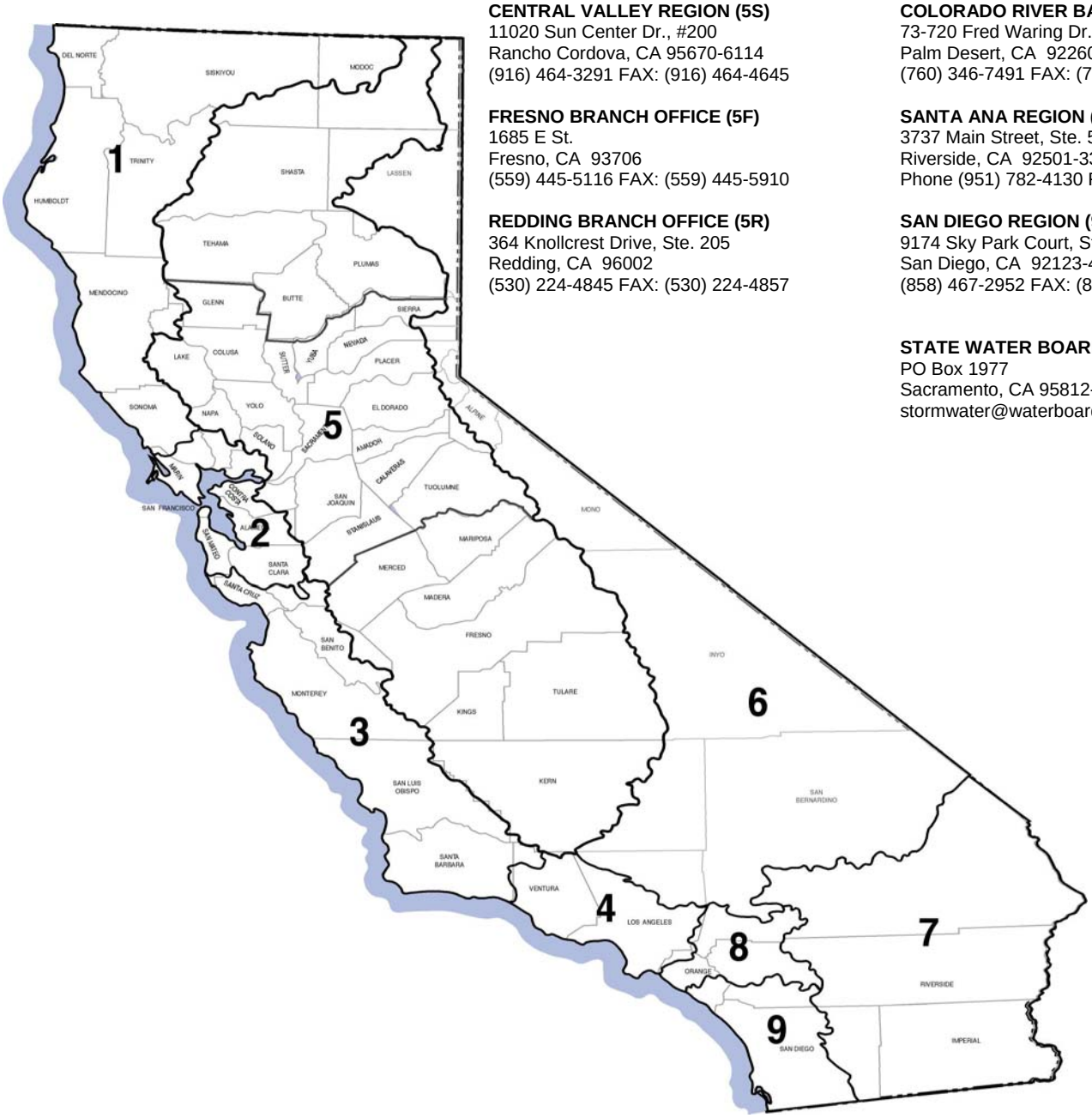
**VICTORVILLE OFFICE (6V)**
14440 Civic Drive, Ste. 200
Victorville, CA 92392-2383
(760) 241-6583 FAX: (760) 241-7308

**COLORADO RIVER BASIN REGION (7)**
73-720 Fred Waring Dr., Ste. 100
Palm Desert, CA 92260
(760) 346-7491 FAX: (760) 341-6820

**SANTA ANA REGION (8)**
3737 Main Street, Ste. 500
Riverside, CA 92501-3339
Phone (951) 782-4130 FAX: (951) 781-6288

**SAN DIEGO REGION (9)**
9174 Sky Park Court, Ste. 100
San Diego, CA 92123-4340
(858) 467-2952 FAX: (858) 571-6972

**STATE WATER BOARD**
PO Box 1977
Sacramento, CA 95812-1977
stormwater@waterboards.ca.gov



State Water Resources Control Board
Division of Water Quality
1001 I Street • Sacramento, California 95814 • (916) 341-5455
**Mailing Address: P.O. Box 100 • Sacramento, California • 95812-0100**
Fax (916) 341-5463 • http://www.waterboards.ca.gov

**Linda S. Adams**
Secretary for
Environmental Protection

Arnold Schwarzenegger
Governor

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# I. BACKGROUND

## A. History

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]) was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the CWA added Section 402(p), which establishes a framework for regulating municipal and industrial storm water discharges under the NPDES Program. On November 16, 1990, the U.S. Environmental Protection Agency (USEPA) published final regulations that established storm water permit application requirements for specified categories of industries. The regulations provide that discharges of storm water to waters of the United States from construction projects that encompass five or more acres of soil disturbance are effectively prohibited unless the discharge is in compliance with an NPDES Permit. Regulations (Phase II Rule) that became final on December 8, 1999 lowered the permitting threshold from five acres to one acre.

While federal regulations allow two permitting options for storm water discharges (Individual Permits and General Permits), the State Water Board has elected to adopt only one statewide General Permit at this time that will apply to most storm water discharges associated with construction activity.

On August 19, 1999, the State Water Board reissued the General Construction Storm Water Permit (Water Quality Order 99-08-DWQ). On December 8, 1999 the State Water Board amended Order 99-08-DWQ to apply to sites as small as one acre.

The General Permit accompanying this fact sheet regulates storm water runoff from construction sites. Regulating many storm water discharges under one permit will greatly reduce the administrative burden associated with permitting individual storm water discharges. To obtain coverage under this General Permit, dischargers shall electronically file the Permit Registration Documents (PRDs), which includes a Notice of Intent (NOI), Storm Water Pollution Prevention Plan (SWPPP), and other compliance related documents required by this General Permit and mail the appropriate permit fee to the State Water Board. It is expected that as the storm water program develops, the Regional Water Quality Control Boards (Regional Water Boards) may issue General Permits or Individual Permits containing more specific permit provisions. When this occurs, this General Permit will no longer regulate those dischargers.

## B. Legal Challenges and Court Decisions

### 1. Early Court Decisions

Shortly after the passage of the CWA, the USEPA promulgated regulations exempting most storm water discharges from the NPDES permit requirements. (See 40 C.F.R. § 125.4 (1975); see also *Natural Resources Defense Council v. Costle* (D.C. Cir. 1977) 568 F.2d 1369, 1372 (*Costle*); *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1163 (*Defenders of Wildlife*).) When environmental groups challenged this exemption in federal court, the District of Columbia Court of Appeals invalidated the regulation, holding that the USEPA "does not have authority to exempt categories of point sources from the permit requirements of [CWA] § 402." (*Costle*, 568 F.2d at 1377.) The *Costle* court rejected the USEPA's argument that effluent-based storm sewer regulation was administratively infeasible because of the variable nature of storm water pollution and the number of affected storm sewers throughout the country. (*Id.* at 1377-82.) Although the court acknowledged the practical problems relating to storm sewer regulation, the court found the USEPA had the flexibility under the CWA to design regulations that would overcome these problems. (*Id.* at 1379-83.) In particular, the court pointed to general permits and permits based on requiring best management practices (BMPs).

During the next 15 years, the USEPA made numerous attempts to reconcile the statutory requirement of point source regulation with the practical problem of regulating possibly millions of diverse point source discharges of storm water. (See *Defenders of Wildlife*, 191 F.3d at 1163; see also Gallagher, Clean Water Act in Environmental Law Handbook (Sullivan, edit., 2003)
p. 300 (Environmental Law Handbook); Eisen, *Toward a Sustainable Urbanism: Lessons from Federal Regulation of Urban Storm Water Runoff* (1995) 48 Wash. U.J. Urb. & Contemp. L.1, 40-41 [Regulation of Urban Storm Water Runoff].)

In 1987, Congress amended the CWA to require NPDES permits for storm water discharges. (See CWA § 402(p), 33 U.S.C. § 1342(p); *Defenders of Wildlife,* 191 F.3d at 1163; *Natural Resources Defense Council v. USEPA* (9th Cir. 1992) 966 F.2d 1292, 1296.) In these amendments, enacted as part of the Water Quality Act of 1987, Congress distinguished between industrial and municipal storm water discharges. With respect to industrial storm water discharges, Congress provided that NPDES permits "shall meet all applicable provisions of this section and section 1311 [requiring the USEPA to establish effluent limitations under specific timetables]." (CWA § 402(p)(3)(A), 33 U.S.C. § 1342(p)(3)(A); see also *Defenders of Wildlife,* 191 F.3d at 1163-64.)

In 1990, USEPA adopted regulations specifying what activities were considered “industrial” and thus required discharges of storm water associated with those activities to obtain coverage under NPDES permits. (55 Fed. Reg. 47,990 (1990); 40 C.F.R. § 122.26(b)(14).) Construction activities, deemed a subset of the industrial activities category, must also be regulated by an NPDES permit. (40 C.F.R. § 122.26(b)(14)(x)). In 1999, USEPA issued regulations for “Phase II” of storm water regulation, which required most small construction sites (1-5 acres) to be regulated under the NPDES program. (64 Fed. Reg. 68,722; 40 C.F.R. § 122.26(b)(15)(i).)

### 2. Court Decisions on Public Participation

Two recent federal court opinions have vacated USEPA rules that denied meaningful public review of NPDES permit conditions. On January 14, 2003, the Ninth Circuit Court of Appeals held that certain aspects of USEPA’s Phase II regulations governing MS4s were invalid primarily because the general permit did not contain express requirements for public participation. (*Environmental Defense Center v. USEPA* (9th Cir. 2003) 344 F.3d 832.) Specifically, the court determined that applications for general permit coverage (including the Notice of Intent (NOI) and Storm Water Management Program (SWMP)) must be made available to the public, the applications must be reviewed and determined to meet the applicable standard by the permitting authority before coverage commences, and there must be a process to accommodate public hearings. (*Id.* at 852-54.) Similarly, on February 28, 2005, the Second Circuit Court of Appeals held that the USEPA's confined animal feeding operation (CAFO) rule violated the CWA because it allowed dischargers to write their own nutrient management plans without public review. (*Waterkeeper Alliance v. USEPA* (2d Cir. 2005) 399 F.3d 486.) Although neither decision involved the issuance of construction storm water permits, the State Water Board’s Office of Chief Counsel has recommended that the new General Permit address the courts’ rulings where feasible[1].

[1] In *Texas Independent Producers and Royalty Owners Assn. v. USEPA* (7th Cir. 2005) 410 F.3d 964, the Seventh Circuit Court of Appeals held that the USEPA’s construction general permit was not required to provide the public with the opportunity for a public hearing on the Notice of Intent or Storm Water Pollution Prevention Plan. The Seventh Circuit briefly discussed why it agreed with the Ninth Circuit’s dissent in *Environmental Defense Center*, but

The CWA and the USEPA's regulations provide states with the discretion to formulate permit terms, including specifying best management practices (BMPs), to achieve strict compliance with federal technology-based and water quality-based standards. (*Natural Resources Defense Council v. USEPA* (9th Cir. 1992) 966 F.2d 1292, 1308.) Accordingly, this General Permit has developed specific BMPs as well as numeric action levels (NALs) in order to achieve these minimum federal standards. In addition, the General Permit requires a SWPPP and REAP (another dynamic, site-specific plan) to be developed but has removed all language requiring the discharger to implement these plans – instead, the discharger is required to comply with specific requirements. By requiring the dischargers to implement these specific BMPs and NALs, this General Permit ensures that the dischargers do not "write their own permits." As a result this General Permit does not require each discharger's SWPPP and REAP to be reviewed and approved by the Regional Water Boards.

This General Permit also requires dischargers to electronically file all permit-related compliance documents. These documents include, but are not limited to, NOIs, SWPPPs, annual reports, Notice of Terminations (NOTs), and numeric action level (NAL) exceedance reports. Electronically submitted compliance information is immediately available to the public, as well as the Regional Water Quality Control Board (Regional Water Board) offices, via the Internet. In addition, this General Permit enables public review and hearings on permit applications when appropriate. Under this General Permit, the public clearly has a meaningful opportunity to participate in the permitting process.

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generally did not discuss the substantive holdings in *Environmental Defense Center* and *Waterkeeper Alliance*, because neither court addressed the initial question of whether the plaintiffs had standing to challenge the permits at issue. However, notwithstanding the Seventh Circuit's decision, it is not binding or controlling on the State Water Board because California is located within the Ninth Circuit.

## C. Blue Ribbon Panel of Experts and Feasibility of Numeric Effluent Limitations

In 2005 and 2006, the State Water Board convened an expert panel (panel) to address the feasibility of numeric effluent limitations (NELs) in California's storm water permits. Specifically, the panel was asked to address:

"Is it technically feasible to establish numeric effluent limitations, or some other quantifiable limit, for inclusion in storm water permits? How would such limitations or criteria be established, and what information and data would be required?"

"The answers should address industrial general permits, construction general permits, and area-wide municipal permits. The answers should also address both technology-based limitations or criteria and water quality-based limitations or criteria. In evaluating establishment of any objective criteria, the panel should address all of the following:

The ability of the State Water Board to establish appropriate objective limitations or criteria;

How compliance determinations would be made;

The ability of dischargers and inspectors to monitor for compliance; and

The technical and financial ability of dischargers to comply with the limitations or criteria."

Through a series of public participation processes (State Water Board meetings, State Water Board workshops, and the solicitation of written comments), a number of water quality, public process and overall program effectiveness problems were identified. Some of these problems are addressed through this General Permit.

## D. Summary of Panel Findings on Construction Activities

The panel's final report can be downloaded and viewed through links at www.waterboards.ca.gov or by clicking here[2].

The panel made the following observations:

"Limited field studies indicate that traditional erosion and sediment controls are highly variable in performance, resulting in highly variable turbidity levels in the site discharge."

"Site-to-site variability in runoff turbidity from undeveloped sites can also be quite large in many areas of California, particularly in more arid regions with less natural vegetative cover and steep slopes."

[2] http://www.waterboards.ca.gov/stormwtr/docs/numeric/swpanel_final_report.pdf

"Active treatment technologies involving the use of polymers with relatively large storage systems now exist that can provide much more consistent and very low discharge turbidity. However, these technologies have as yet only been applied to larger construction sites, generally five acres or greater. Furthermore, toxicity has been observed at some locations, although at the vast majority of sites, toxicity has not occurred. There is also the potential for an accidental large release of such chemicals with their use."

"To date most of the construction permits have focused on TSS and turbidity, but have not addressed other, potentially significant pollutants such as phosphorus and an assortment of chemicals used at construction sites."

"Currently, there is no required training or certification program for contractors, preparers of soil erosion and sediment control Storm Water Pollution Prevention Plans, or field inspectors."

"The quality of storm water discharges from construction sites that effectively employ BMPs likely varies due to site conditions such as climate, soil, and topography."

"The States of Oregon and Washington have recently adopted similar concepts to the Action Levels described earlier."

In addition, the panel made the following conclusions:

"It is the consensus of the Panel that active treatment technologies make Numeric Limits technically feasible for pollutants commonly associated with storm water discharges from construction sites (e.g. TSS and turbidity) for larger construction sites. Technical practicalities and cost-effectiveness may make these technologies less feasible for smaller sites, including small drainages within a larger site, as these technologies have seen limited use at small construction sites. If chemical addition is not permitted, then Numeric Limits are not likely feasible."

"The Board should consider Numeric Limits or Action Levels for other pollutants of relevance to construction sites, but in particular pH. It is of particular concern where fresh concrete or wash water from cement mixers/equipment is exposed to storm water."

"The Board should consider the phased implementation of Numeric Limits and Action Levels, commensurate with the capacity of the dischargers and support industry to respond."

## E. How the Panel's Findings are Used in this General Permit

The State Water Board carefully considered the findings of the panel and related public comments. The State Water Board also reviewed and considered the comments regarding statewide storm water policy and the reissuance of the Industrial General Permit. From the input received the State Water Board identified some permit and program performance gaps that are addressed in this General Permit. The Summary of Significant Changes (below) in this General Permit are a direct result of this process.

## F. Summary of Significant Changes in This General Permit

The State Water Board has significant changes to Order 99-08-DWQ. This General Permit differs from Order 99-08-DWQ in the following significant ways:

**Rainfall Erosivity Waiver:** this General Permit includes the option allowing a small construction site (>1 and <5 acres) to self-certify if the rainfall erosivity value (R value) for their site's given location and time frame compute to be less than or equal to 5.

**Technology-Based Numeric Action Levels:** this General Permit includes NALs for pH and turbidity.

**Risk-Based Permitting Approach:** this General Permit establishes three levels of risk possible for a construction site. Risk is calculated in two parts: 1) Project Sediment Risk, and 2) Receiving Water Risk.

**Minimum Requirements Specified:** this General Permit imposes more minimum BMPs and requirements that were previously only required as elements of the SWPPP or were suggested by guidance.

**Project Site Soil Characteristics Monitoring and Reporting:** this General Permit provides the option for dischargers to monitor and report the soil characteristics at their project location. The primary purpose of this requirement is to provide better risk determination and eventually better program evaluation.

**Effluent Monitoring and Reporting:** this General Permit requires effluent monitoring and reporting for pH and turbidity in storm water discharges. The purpose of this monitoring is to evaluate whether NALs and NELs for Active Treatment Systems included in this General Permit are exceeded.

**Receiving Water Monitoring and Reporting:** this General Permit requires some Risk Level 3 and LUP Type 3 dischargers to monitor receiving waters and conduct bioassessments.

**Post-Construction Storm Water Performance Standards:** this General Permit specifies runoff reduction requirements for all sites not covered by a Phase I or Phase II MS4 NPDES permit, to avoid, minimize and/or mitigate post-construction storm water runoff impacts.

**Rain Event Action Plan:** this General Permit requires certain sites to develop and implement a Rain Event Action Plan (REAP) that must be designed to protect all exposed portions of the site within 48 hours prior to any likely precipitation event.

**Annual Reporting:** this General Permit requires all projects that are enrolled for more than one continuous three-month period to submit information and annually certify that their site is in compliance with these requirements. The primary purpose of this requirement is to provide information needed for overall program evaluation and pubic information.

**Certification/Training Requirements for Key Project Personnel:** this General Permit requires that key personnel (e.g., SWPPP preparers, inspectors, etc.) have specific training or certifications to ensure their level of knowledge and skills are adequate to ensure their ability to design and evaluate project specifications that will comply with General Permit requirements.

**Linear Underground/Overhead Projects:** this General Permit includes requirements for all Linear Underground/Overhead Projects (LUPs).

# II. RATIONALE

## A. General Permit Approach

A general permit for construction activities is an appropriate permitting approach for the following reasons:

1. A general permit is an efficient method to establish the essential regulatory requirements for a broad range of construction activities under differing site conditions;

2. A general permit is the most efficient method to handle the large number of construction storm water permit applications;

3. The application process for coverage under a general permit is far less onerous than that for individual permit and hence more cost effective;

4. A general permit is consistent with USEPA's four-tier permitting strategy, the purpose of which is to use the flexibility provided by the CWA in designing a workable and efficient permitting system; and

5. A general permit is designed to provide coverage for a group of related facilities or operations of a specific industry type or group of industries. It is appropriate when the discharge characteristics are sufficiently similar, and a standard set of permit requirements can effectively provide environmental protection and comply with water quality standards for discharges. In most cases, the general permit will provide sufficient and appropriate management requirements to protect the quality of receiving waters from discharges of storm water from construction sites.

There may be instances where a general permit is not appropriate for a specific construction project. A Regional Water Board may require any discharger otherwise covered under the General Permit to apply for and obtain an Individual Permit or apply for coverage under a more specific General Permit. The Regional Water Board must determine that this General Permit does not provide adequate assurance that water quality will be protected, or that there is a site-specific reason why an individual permit should be required.

## B. Construction Activities Covered

1. **Construction activity subject to this General Permit:**

Any construction or demolition activity, including, but not limited to, clearing, grading, grubbing, or excavation, or any other activity that results in a land disturbance of equal to or greater than one acre.

Construction activity that results in land surface disturbances of less than one acre if the construction activity is part of a larger common plan of development or sale of one or more acres of disturbed land surface.

Construction activity related to residential, commercial, or industrial development on lands currently used for agriculture including, but not limited to, the construction of buildings related to agriculture that are considered industrial pursuant to USEPA regulations, such as dairy barns or food processing facilities.

Construction activity associated with LUPs including, but not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete

and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.

Discharges of sediment from construction activities associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities.[3]

Storm water discharges from dredge spoil placement that occur outside of U.S. Army Corps of Engineers jurisdiction[4] (upland sites) and that disturb one or more acres of land surface from construction activity are covered by this General Permit. Construction projects that intend to disturb one or more acres of land within the jurisdictional boundaries of a CWA § 404 permit should contact the appropriate Regional Water Board to determine whether this permit applies to the project.

### 2. Linear Underground/Overhead Projects (LUPs) subject to this General Permit:

Underground/overhead facilities typically constructed as LUPs include, but are not limited to, any conveyance, pipe, or pipeline for the transportation of any gaseous, liquid (including water, wastewater for domestic municipal services), liquescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g., telephone, telegraph, radio or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.

Water Quality Order 2003-0007-DWQ regulated construction activities associated with small LUPs that resulted in land disturbances greater than one acre, but less than five acres. These projects were considered non-traditional construction projects. Attachment A of this Order now regulates all construction activities from LUPs resulting in land disturbances greater than one acre.

### 3. Common Plan of Development or Sale

USEPA regulations include the term “common plan of development or sale” to ensure that acreage within a common project does not artificially escape the permit requirements because construction activities are phased, split among smaller parcels, or completed by different owners/developers. In the absence of an

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[3] Pursuant to the Ninth Circuit Court of Appeals’ decision in *NRDC v. EPA* (9th Cir. 2008) 526 F.3d 591, and subsequent denial of the USEPA’s petition for reconsideration in November 2008, oil and gas construction activities discharging storm water contaminated only with sediment are no longer exempt from the NPDES program.

[4] A construction site that includes a dredge and/or fill discharge to any water of the United States (e.g., wetland, channel, pond, or marine water) requires a CWA Section 404 permit from the U.S. Army Corps of Engineers and a CWA Section 401 Water Quality Certification from the Regional Water Board or State Water Board.

exact definition of “common plan of development or sale,” the State Water Board is required to exercise its regulatory discretion in providing a common sense interpretation of the term as it applies to construction projects and permit coverage. An overbroad interpretation of the term would render meaningless the clear “one acre” federal permitting threshold and would potentially trigger permitting of almost any construction activity that occurs within an area that had previously received area-wide utility or road improvements.

Construction projects generally receive grading and/or building permits (Local Permits) from local authorities prior to initiating construction activity. These Local Permits spell out the scope of the project, the parcels involved, the type of construction approved, etc. Referring to the Local Permit helps define “common plan of development or sale.” In cases such as tract home development, a Local Permit will include all phases of the construction project including rough grading, utility and road installation, and vertical construction. All construction activities approved in the Local Permit are part of the common plan and must remain under the General Permit until construction is completed. For custom home construction, Local Permits typically only approve vertical construction as the rough grading, utilities, and road improvements were already independently completed under the a previous Local Permit. In the case of a custom home site, the homeowner must submit plans and obtain a distinct and separate Local Permit from the local authority in order to proceed. It is not the intent of the State Water Board to require permitting for an individual homeowner building a custom home on a private lot of less than one acre if it is subject to a separate Local Permit. Similarly, the installation of a swimming pool, deck, or landscaping that disturbs less than one acre that was not part of any previous Local Permit are not required to be permitted.

The following are several examples of construction activity of less than one acre that would require permit coverage:

a. A landowner receives a building permit(s) to build tract homes on a 100-acre site split into 200 one-third acre parcels, (the remaining acreage consists of streets and parkways) which are sold to individual homeowners as they are completed. The landowner completes and sells all the parcels except for two. Although the remaining two parcels combined are less than one acre, the landowner must continue permit coverage for the two parcels.

b. One of the parcels discussed above is sold to another owner who intends to complete the construction as already approved in the Local Permit. The new landowner must file Permit Registration Documents (PRDs) to complete the construction even if the new landowner is required to obtain a separate Local Permit.

c. Landowner in (1) above purchases 50 additional one half-acre parcels adjacent to the original 200-acre project. The landowner seeks a Local Permit (or amendment to existing Local permit) to build on 20 parcels while leaving the remaining 30 parcels for future development. The landowner must amend PRDs to include the 20 parcels 14 days prior to commencement of construction activity on those parcels.

## C. Construction Activities Not Covered

### 1. Traditional Construction Projects Not Covered

This General Permit does not apply to the following construction activity:

a. Routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.

b. Disturbances to land surfaces solely related to agricultural operations such as disking, harrowing, terracing and leveling, and soil preparation.

c. Discharges of storm water from areas on tribal lands; construction on tribal lands is regulated by a federal permit.

d. Discharges of storm water within the Lake Tahoe Hydrologic Unit. The Lahontan Regional Water Board has adopted its own permit to regulate storm water discharges from construction activity in the Lake Tahoe Hydrologic Unit (Regional Water Board 6SLT). Owners of construction projects in this watershed must apply for the Lahontan Regional Water Board permit rather than the statewide Construction General Permit. Construction projects within the Lahontan region must also comply with the Lahontan Region Project Guideline for Erosion Control (R6T-2005-0007 Section), which can be found at **http://www.waterboards.ca.gov/lahontan/Adopted_Orders/2005/r6t_2005_0007.pdf**

e. Construction activity that disturbs less than one acre of land surface, unless part of a larger common plan of development or the sale of one or more acres of disturbed land surface.

f. Construction activity covered by an individual NPDES Permit for storm water discharges.

g. Landfill construction activity that is subject to the Industrial General Permit.

h. Construction activity that discharges to Combined Sewer Systems.

i. Conveyances that discharge storm water runoff combined with municipal sewage.

j. Discharges of storm water identified in CWA § 402(*l*)(2), 33 U.S.C. § 1342(*l*)(2).

2. **Linear Projects Not Covered**

a. LUP construction activity does not include linear routine maintenance projects. Routine maintenance projects are projects associated with operations and maintenance activities that are conducted on existing lines and facilities and within existing right-of-way, easements, franchise agreements, or other legally binding agreements of the discharger. Routine maintenance projects include, but are not limited to projects that are conducted to:

i. Maintain the original purpose of the facility or hydraulic capacity.

ii. Update existing lines[5] and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.

iii. Repairing leaks.

[5]Update existing lines includes replacing existing lines with new materials or pipes.

Routine maintenance does not include construction of new[6] lines or facilities resulting from compliance with applicable codes, standards, and regulations.

Routine maintenance projects do not include those areas of maintenance projects that are outside of an existing right-of-way, franchise, easements, or agreements. When a project must secure new areas, those areas may be subject to this General Permit based on the area of disturbed land outside the original right-of-way, easement, or agreement.

b. LUP construction activity does not include field activities associated with the planning and design of a project (e.g., activities associated with route selection).

c. Tie-ins conducted immediately adjacent to "energized" or "pressurized" facilities by the discharger are not considered construction activities where all other LUP construction activities associated with the tie-in are covered by an NOI and SWPPP of a third party or municipal agency.

3. **EPA's Small Construction Rainfall Erosivity Waiver**

EPA's Storm Water Phase II Final Rule provides the option for a Small Construction Rainfall Erosivity Waiver. This waiver applies to small construction sites between 1 and 5 acres, and allows permitting authorities to waive those sites that do not have adverse water quality impacts.

Dischargers eligible for this waiver are exempt from Construction General Permit Coverage. In order to obtain the waiver, the discharger must certify to the State Water Board that small construction activity will occur only when the rainfall erosivity factor is less than 5 ("R" in the Revised Universal Soil Loss Equation). The period of construction activity begins at initial earth disturbance and ends with final stabilization. Where vegetation will be used for final stabilization, the date of installation of a practice that provides interim non-vegetative stabilization can be used for the end of the construction period. The operator must agree (as a condition waiver eligibility) to periodically inspect and properly maintain the area until the criteria for final stabilization as defined in the General Permit have been met. If use of this interim stabilization eligibility condition was relied on to qualify for the waiver, signature on the waiver with a certification statement constitutes acceptance of and commitment to complete the final stabilization process. The discharger must submit a waiver certification to the State Board prior to commencing construction activities.

USEPA funded a cooperative agreement with Texas A&M University to develop an online rainfall erosivity calculator. Dischargers can access the calculator from EPA's website at: www.epa.gov/npdes/stormwater/cgp. Use of the calculator allows the discharger to determine potential eligibility for the rainfall erosivity waiver. It may also be useful in determining the time periods during which construction activity could be waived from permit coverage.

[6]New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines.

## D. Obtaining and Terminating Permit Coverage

The appropriate Legally Responsible Person (LRP) must obtain coverage under this General Permit. To obtain coverage, the LRP or the LRP's Approved Signatory must file Permit Registration Documents (PRDs) prior to the commencement of construction activity. Failure to obtain coverage under this General Permit for storm water discharges to waters of the United States is a violation of the CWA and the California Water Code.

To obtain coverage under this General Permit, LRPs must electronically file the PRDs, which include a Notice of Intent (NOI), Storm Water Pollution Prevention Plan (SWPPP), and other documents required by this General Permit, and mail the appropriate permit fee to the State Water Board. It is expected that as the storm water program develops, the Regional Water Boards may issue General Permits or Individual Permits that contain more specific permit provisions. When this occurs, this General Permit will no longer regulate those dischargers that obtain coverage under Individual Permits.

Any information provided to the Regional Water Board shall comply with the Homeland Security Act and any other federal law that concerns security in the United States; any information that does not comply should not be submitted.

The application requirements of the General Permit establish a mechanism to clearly identify the responsible parties, locations, and scope of operations of dischargers covered by the General Permit and to document the discharger's knowledge of the General Permit's requirements.

This General Permit provides a grandfathering exception to existing dischargers subject to Water Quality Order No. 99-08-DWQ. Construction projects covered under Water Quality Order No. 99-08-DWQ shall obtain permit coverage at Risk Level 1. LUP projects covered under Water Quality Order No. 2003-0007-DWQ shall obtain permit coverage at LUP Type 1. The Regional Water Boards have the authority to require Risk Determination to be performed on projects currently covered under Water Quality Order No. 99-08-DWQ and 2003-0007-DWQ where they deem necessary.

LRPs must file a Notice of Termination (NOT) with the Regional Water Board when construction is complete and final stabilization has been reached or ownership has been transferred. The discharger must certify that all State and local requirements have been met in accordance with this General Permit. In order for construction to be found complete, the discharger must install post-construction storm water management measures and establish a long-term maintenance plan. This requirement is intended to ensure that the post-construction conditions at the project site do not cause or contribute to direct or indirect water quality impacts (i.e., pollution and/or hydromodification) upstream and downstream. Specifically, the discharger must demonstrate compliance with the post-construction standards set forth in this General Permit (Section XIII). The discharger is responsible for all compliance issues including all annual fees until the NOT has been filed and approved by the local Regional Water Board.

## E. Discharge Prohibitions

This General Permit authorizes the discharge of storm water to surface waters from construction activities that result in the disturbance of one or more acres of land, provided that the discharger satisfies all permit conditions set forth in the Order. This General Permit prohibits the discharge of pollutants other than storm water and non-storm water discharges authorized by this General Permit or another NPDES permit. This General Permit also prohibits all discharges which contain a hazardous substance in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4, unless a separate NPDES Permit has been issued to regulate those discharges. In addition, this General Permit incorporates discharge prohibitions contained in water quality control plans, as implemented by the nine Regional Water Boards. Discharges to Areas of Special Biological Significance (ASBS) are prohibited unless covered by an exception that the State Water Board has approved.

Non-storm water discharges include a wide variety of sources, including improper dumping, spills, or leakage from storage tanks or transfer areas. Non-storm water discharges may contribute significant pollutant loads to receiving waters. Measures to control spills, leakage, and dumping, and to prevent illicit connections during construction must be addressed through structural as well as non-structural BMPs. The State Water Board recognizes, however, that certain non-storm water discharges may be necessary for the completion of construction projects. Authorized non-storm water discharges may include those from de-chlorinated potable water sources such as: fire hydrant flushing, irrigation of vegetative erosion control measures, pipe flushing and testing, water to control dust, uncontaminated ground water dewatering, and other discharges not subject to a separate general NPDES permit adopted by a region. Therefore this General Permit authorizes such discharges provided they meet the following conditions.

These authorized non-storm water discharges must:

1. be infeasible to eliminate;
2. comply with BMPs as described in the SWPPP;
3. filter or treat, using appropriate technology, all dewatering discharges from sedimentation basins;
4. meet the NALs for pH and turbidity; and
5. not cause or contribute to a violation of water quality standards.

Additionally, authorized non-storm water discharges must not be used to clean up failed or inadequate construction or post-construction BMPs designed to keep materials onsite. Authorized non-storm water dewatering discharges may require a permit because some Regional Water Boards have adopted General Permits for dewatering discharges.

This General Permit prohibits the discharge of storm water that causes or threatens to cause pollution, contamination, or nuisance.

## F. Effluent Standards for All Types of Discharges

### 1. Technology-Based Effluent Limitations

Permits for storm water discharges associated with construction activity must meet all applicable provisions of Sections 301 and 402 of the CWA. These provisions require controls of pollutant discharges that utilize best available technology economically achievable (BAT) for toxic pollutants and non conventional pollutants and best conventional pollutant control technology (BCT) for conventional pollutants. Additionally, these provisions require controls of pollutant discharges to reduce pollutants and any more stringent controls necessary to meet water quality standards. The USEPA has already established such limitations, known as effluent limitation guidelines (ELGs), for some industrial categories. This is not the case with construction discharges. In instances where there are no ELGs the permit writer is to use best professional judgment (BPJ) to establish requirements that the discharger must meet using BAT/BCT technology. This General Permit contains only narrative effluent limitations and does not contain numeric effluent limitations, except for Active Treatment Systems (ATS).

Order No. 2009-0009-DWQ, as originally adopted by the State Water Board on September 2, 2009, contained numeric effluent limitations for pH (within the range of 6.0 and 9.0 pH units) and turbidity (500 NTU) that applied only to Risk Level 3 and LUP Type 3 construction sites. The State Water Board adopted the numeric effluent limitations as technology-based effluent limitations based upon its best professional judgment. The California Building Industry Association, the Building Industry Legal Defense

Foundation, and the California Business Properties Association (petitioners) challenged Order No. 2009-0009-DWQ in *California Building Industry Association et al. v. State Water Resources Control Board*. On December 27, 2011, the Superior Court issued a judgment and writ of mandamus. The Superior Court ruled in favor of the State Water Board on almost all of the issues the petitioners raised, but the Superior Court invalidated the numeric effluent limitations for pH and turbidity for Risk Level 3 and LUP Type 3 sites because it determined that the State Water Board did not have sufficient BMP performance data to support those numeric effluent limitations. Therefore, the Superior Court concluded that the State Water Board did not comply with the federal regulations that apply to the use of best professional judgment. In invalidating the numeric effluent limitations, the Superior Court also suspended two ancillary requirements (a compliance storm event provision and receiving water monitoring at Risk Level 3 and LUP Type 3 sites that violated the numeric effluent limitations) that related solely to the invalidated numeric effluent limitations.

As a result of the Superior Court's writ of mandamus, this Order no longer contains numeric effluent limitations for pH and turbidity, except for ATS. In addition, as a result of the Superior Court's writ of mandamus, the receiving water monitoring requirements for Risk Level 3 and LUP Type 3 sites were suspended until the State Water Board amended this Order to restore the receiving water monitoring requirements. As amended, this Order now requires Risk Level 3 and LUP Type 3 Dischargers with direct discharges to surface waters to conduct receiving water monitoring whenever their effluent exceeds specified receiving water monitoring triggers. The receiving water monitoring triggers were established at the same levels as the previous numeric effluent limitations (effluent pH outside the range of 6.0 and 9.0 pH units or turbidity exceeding 500 NTU). In restoring the receiving water monitoring requirements, the State Water Board determined that it was appropriate to require receiving water monitoring for these types of sites with direct discharges to surface waters that exceeded the receiving water monitoring triggers under any storm event scenarios, because these sites represent the highest threat to receiving water quality. An exceedance of a receiving water monitoring trigger does not constitute a violation of this General Permit. These receiving water monitoring requirements take effect on the effective date of the amendment to this Order.

BAT/BCT technologies not only include passive systems such as conventional runoff and sediment control, but also treatment systems such as coagulation/flocculation using sand filtration, when appropriate. Such technologies allow for effective treatment of soil particles less 0.02 mm (medium silt) in diameter. The discharger must install structural controls, as necessary, such as erosion and sediment controls that meet BAT and BCT to achieve compliance with water quality standards. The narrative effluent limitations constitute compliance with the requirements of the CWA.

Because the permit is an NPDES permit, there is no legal requirement to address the factors set forth in Water Code sections 13241 and 13263, unless the permit is more stringent than what federal law requires. (See *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 618, 627.) None of the requirements in this permit are more stringent than the minimum federal requirements, which include technology-based requirements achieving BAT/BCT and strict compliance with water quality standards. The inclusion of numeric effluent limitations (NELs) in the permit for Active Treatment Systems does not cause the permit to be more stringent than current federal law. NELs and best management practices are simply two different methods of achieving the same federal requirement: strict compliance with state water quality standards. Federal law authorizes both narrative and numeric effluent limitations to meet state water quality standards. The use of NELs to achieve compliance with water quality standards is not a more stringent requirement than the use of BMPs. (State Water Board Order No. WQ 2006-0012 (*Boeing*).) Accordingly, the State Water Board does not need to take into account the factors in Water Code sections 13241 and 13263.

The State Water Board has concluded that the establishment of BAT/BCT will not create or aggravate other environmental problems through increases in air pollution, solid waste generation, or energy consumption. While there may be a slight increase in non-water quality impacts due to the implementation of additional monitoring or the construction of additional BMPs, these impacts will be negligible in comparison with the construction activities taking place on site and would be justified by the water quality benefits associated with compliance.

**pH Receiving Water Monitoring Trigger**

Given the potential contaminants, the minimum standard method for control of pH in runoff requires the use of preventive measures such as avoiding concrete pours during rainy weather, covering concrete and directing flow away from fresh concrete if a pour occurs during rain, covering scrap drywall and stucco materials when stored outside and potentially exposed to rain, and other housekeeping measures. If necessary, pH-impaired storm water from construction sites can be treated in a filter or settling pond or basin, with additional natural or chemical treatment required to meet pH limits set forth in this permit. The basin or pond acts as a collection point and holds storm water for a sufficient period for the contaminants to be settled out, either naturally or artificially, and allows any additional treatment to take place. The State Water Board considers these techniques to be equivalent to BCT. In determining the pH concentration trigger for discharges, the State Water Board used BPJ to set these limitations.

The chosen trigger was established by calculating three standard deviations above and below the mean pH of runoff from highway construction sites[7] in California. Proper implementation of BMPs should result in discharges that are within the range of 6.0 to 9.0 pH Units.

**Turbidity Receiving Water Monitoring Trigger**

The Turbidity receiving water monitoring trigger of 500 NTU is a technology-based trigger and was developed using three different analyses aimed at finding the appropriate threshold to set the technology-based limit to ensure environmental protection, effluent quality and cost-effectiveness. The analyses fell into three, main types: (1) an ecoregion-specific dataset developed by Simon et. al. (2004) [8]; (2) Statewide Regional Water Quality Control Board enforcement data; and (3) published, peer-reviewed studies and reports on in-situ performance of best management practices in terms of erosion and sediment control on active construction sites.

A 1:3 relationship between turbidity (expressed as NTU) and suspended sediment concentration (expressed as mg/L) is assumed based on a review of suspended sediment and turbidity data from three gages used in the USGS National Water Quality Assessment Program:

USGS 11074000 SANTA ANA R BL PRADO DAM CA
USGS 11447650 SACRAMENTO R A FREEPORT CA
USGS 11303500 SAN JOAQUIN R NR VERNALIS CA

The receiving water monitoring trigger represents staff determination that the trigger value is the most practicable based on available data. The turbidity receiving water monitoring trigger represents a bridge between the narrative effluent limitations and receiving water limitations. To support this receiving water monitoring trigger, State Water Board staff analyzed construction site discharge information (monitoring data, estimates) and receiving water monitoring information.

Since the turbidity receiving water monitoring trigger represents an appropriate threshold level expected at a site, compliance with this value does not necessarily represent compliance with either the narrative effluent limitations (as enforced through the BAT/BCT standard) or the receiving water limitations. In the San Diego region, some inland surface waters have a receiving water objective for turbidity equal to 20 NTU. Obviously a discharge up to, but not exceeding, the turbidity receiving water monitoring trigger of

[7] Caltrans Construction Sites Runoff Characterization Study, 2002. Available at: http://www.dot.ca.gov/hq/env/stormwater/pdf/CTSW-RT-02-055.pdf.

500 NTU may still cause or contribute to the exceedance of the 20 NTU standard. Most of the waters of the State are protected by turbidity objectives based on background conditions**.**

Table 1 - Regional Water Board Basin Plans, Water Quality Objectives for Turbidity

| REGIONAL WATER BOARD | WQ Objective | Background/Natural Turbidity | Maximum Increase |
|---|---|---|---|
| 1 | Based on background | All levels | 20% |
| 2 | Based on background | > 50 NTU | 10% |
| 3 | Based on background | 0-50 JTU<br>50-100 JTU<br>> 100 JTU | 20%<br>10 NTU<br>10% |
| 4 | Based on background | 0-50 NTU<br>> 50 NTU | 20%<br>10% |
| 5 | Based on background | 0-5 NTU<br>5-50 NTU<br>50-100 NTU<br>>100 NTU | 1 NTU<br>20%<br>10 NTU<br>10% |
| 6 | Based on background | All levels | 10% |
| 7 | Based on background | N/A | N/A |
| 8 | Based on background | 0-50 NTU<br>50-100 NTU<br>>100 NTU | 20%<br>10 NTU<br>10% |
| 9 | Inland Surface Waters, 20 NTU<br><br>All others, based on background | <br><br><br>0-50 NTU<br>50-100 NTU<br>>100 NTU | <br><br><br>20%<br>10 NTU<br>10% |

Table 2 shows the suspended sediment concentrations at the 1.5 year flow recurrence interval for the 12 ecoregions in California from Simon et. al (2004).

Table 2 - Results of Ecoregion Analysis

| Ecoregion | Percent of California Land Area | Median Suspended Sediment Concentration (mg/L) |
|---|---|---|
| 1 | 9.1 | 874 |
| 4 | 0.2 | 120 |
| 5 | 8.8 | 35.6 |
| 6 | 20.7 | 1530 |
| 7 | 7.7 | 122 |
| 8 | 3.0 | 47.4 |
| 9 | 9.4 | 284 |
| 13 | 5.2 | 143 |
| 14 | 21.7 | 5150 |
| 78 | 8.1 | 581 |
| 80 | 2.4 | 199 |
| 81 | 3.7 | 503 |
| Area-weighted average | | 1633 |

If a 1:3 relationship between turbidity and suspended sediment is assumed, the median turbidity is 544 NTU.

The following table is composed of turbidity readings measured in NTUs from administrative civil liability (ACL) actions for construction sites from 2003 - 2009. This data was derived from the complete listing of construction-related ACLs for the six year period. All ACLs were reviewed and those that included turbidimeter readings at the point of storm water discharge were selected for this dataset.

Table 3 – ACL Sampling Data taken by Regional Water Board Staff

| WDID# | Region | Discharger | Turbidity (NTU) |
|---|---|---|---|
| 5S34C331884 | 5S | Bradshaw Interceptor Section 6B | 1800 |
| 5S05C325110 | 5S | Bridalwood Subdivision | 1670 |
| 5S48C336297 | 5S | Cheyenne at Browns Valley | 1629 |
| 5R32C314271 | 5R | Grizzly Ranch Construction | 1400 |
| 6A090406008 | 6T | El Dorado County Department of Transportation, Angora Creek | 97.4 |
| 5S03C346861 | 5S | TML Development, LLC | 1600 |
| 6A31C325917 | 6T | Northstar Village | See Subdata Set |

Subdata Set - Turbidity for point of storm water runoff discharge at Northstar Village

| Date | Turbidity (NTU) | Location |
|---|---|---|
| 10/5/2006 | 900 | Middle Martis Creek |
| 11/2/2006 | 190 | Middle Martis Creek |
| 01/04/2007 | 36 | West Fork, West Martis Creek |
| 02/08/2007 | 180 | Middle Martis Creek |
| 02/09/2007 | 130 | Middle Martis Creek |
| 02/09/2007 | 290 | Middle Martis Creek |
| 02/09/2007 | 100 | West Fork, West Martis Creek |
| 02/10/2007 | 28 | Middle Martis Creek |
| 02/10/2007 | 23 | Middle Martis Creek |
| 02/10/2007 | 32 | Middle Martis Creek |
| 02/10/2007 | 12 | Middle Martis Creek |
| 02/10/2007 | 60 | West Fork, West Martis Creek |
| 02/10/2007 | 34 | West Fork, West Martis Creek |

A 95% confidence interval for mean turbidity in an ACL order was constructed. The data set used was a small sample size, so the 500 NTU (the value derived as the receiving water monitoring trigger for this General Permit) needed to be verified as a possible population mean. In this case, the population refers to a hypothetical population of turbidity measurements of which our sample of 20 represents. A t-distribution was assumed due to the small sample size:

**Mean:** 512.23 NTU
Standard Deviation: 686.85
**Margin of** Error: 321.45
Confidence Interval: 190.78 NTU (Low)
833.68 NTU (High)

Based on a constructed 95% confidence interval, an ACL order turbidity measurement will be between 190.78 – 833.68 NTU. 500 NTU falls within this range. Using the same data set, a small-sample hypothesis test was also performed to test if the ACL turbidity data set contains enough information to cast doubt on choosing a 500 NTU as a mean. 500 NTU was again chosen due to its proposed use as an acceptable value. The test was carried out using a 95% confidence interval. Results indicated that the ACL turbidity data set *does not* contain significant sample evidence to reject the claim of 500 NTU as an acceptable mean for the ACL turbidity population.

There are not many published, peer-reviewed studies and reports on in-situ performance of best management practices in terms of erosion and sediment control on active construction sites. The most often cited study is a report titled, "Improving the Cost Effectiveness of Highway Construction Site Erosion and Pollution Control" (Horner, Guedry, and Kortenhof 1990, http://www.wsdot.wa.gov/Research/Reports/200/200.1.htm). In a comment letter summarizing this report sent to the State Water Board, the primary author, Dr. Horner, states:

"The most effective erosion control product was wood fiber mulch applied at two different rates along with a bonding agent and grass seed in sufficient time before the tests to achieve germination. Plots treated in this way reduced influent turbidity by more than 97 percent and discharged effluent exhibiting mean and maximum turbidity values of 21 and 73 NTU, respectively. Some other mulch and blanket materials performed nearly as well. These tests demonstrated the control ability of widely available BMPs over a very broad range of erosion potential."

Other technologies studied in this report produced effluent quality at or near 100 NTU. It is the BPJ of the State Water Board staff that erosion control, while preferred, is not always an option on construction sites and that technology performance in a controlled study showing effluent quality directly leaving a BMP is always easier and cheaper to control than effluent being discharged from the project (edge of property, etc.). As a result, it is the BPJ of the State Water Board staff that it is not cost effective or feasible, at this time, for all risk level and type 3 sites in California to achieve effluent discharges with turbidity values that are less than 100 NTU.

To summarize, the analysis showed that: (1) results of the Simon et. al dataset reveals turbidity values in background receiving water in California's ecoregions range from 16 NTU to 1716 NTU (with a mean of 544 NTU); (2) based on a constructed 95% confidence interval, construction sites will be subject to administrative civil liability (ACL) when their turbidity measurement falls between 190.78 – 833.68 NTU; and (3) sites with highly controlled discharges employing and maintaining good erosion control practices can discharge effluent from the BMP with turbidity values less than 100 NTU. State Water Board staff has determined, using its BPJ, that it is most cost effective to set the receiving water monitoring trigger for turbidity at 500 NTU.

i. ***Compliance Storm Event***

While this General Permit no longer contains "compliance storm event" exceptions from technology-based NELs, the "compliance storm event" exception from the ATS NELs remain in effect. See Section K of this Fact Sheet, and Attachment F of this General Permit for more information.

a. **TMDLs and Waste Load Allocations**

Dischargers located within the watershed of a CWA § 303(d) impaired water body, for which a TMDL for sediment has been adopted by the Regional Water Board or USEPA, must comply with the approved TMDL if it identifies "construction activity" or land disturbance as a source of sediment. If it does, the

TMDL should include a specific waste load allocation for this activity/source. The discharger, in this case, may be required by a separate Regional Water Board order to implement additional BMPs, conduct additional monitoring activities, and/or comply with an applicable waste load allocation and implementation schedule. If a specific waste load allocation has been established that would apply to a specific discharge, the Regional Water Board may adopt an order requiring specific implementation actions necessary to meet that allocation. In the instance where an approved TMDL has specified a general waste load allocation to construction storm water discharges, but no specific requirements for construction sites have been identified in the TMDL, dischargers must consult with the state TMDL authority[9] to confirm that adherence to a SWPPP that meets the requirements of the General Permit will be consistent with the approved TMDL.

### 2. Determining Compliance with Effluent Standards

#### a. Technology-Based Numeric Action Levels (NALs)

This General Permit contains technology-based NALs for pH and turbidity, and requirements for effluent monitoring at all Risk level 2 & 3, and LUP Type 2 & 3 sites. Numeric action levels are essentially numeric benchmark values for certain parameters that, if exceeded in effluent sampling, trigger the discharger to take actions. Exceedance of an NAL does not itself constitute a violation of the General Permit. If the discharger fails to take the corrective action required by the General Permit, though, that may consititute a violation.

The primary purpose of NALs is to assist dischargers in evaluating the effectiveness of their on-site measures. Construction sites need to employ many different systems that must work together to achieve compliance with the permit's requirements. The NALs chosen should indicate whether the systems are working as intended.

Another purpose of NALs is to provide information regarding construction activities and water quality impacts. This data will provide the State and Regional Water Boards and the rest of the storm water community with more information about levels and types of pollutants present in runoff and how effective the dischargers BMPs are at reducing pollutants in effluent. The State Water Board also hopes to learn more about the linkage between effluent and receiving water quality. In addition, these requirements will provide information on the mechanics needed to establish compliance monitoring programs at construction sites in future permit deliberations.

##### i. *pH*

The chosen limits were established by calculating one standard deviation above and below the mean pH of runoff from highway construction sites[10] in California. Proper implementation of BMPs should result in discharges that are within the range of 6.5 to 8.5 pH Units.

[9] http://www.waterboards.ca.gov/tmdl/tmdl.html.
[10] Caltrans Construction Sites Runoff Characterization Study, 2002. Available at: http://www.dot.ca.gov/hq/env/stormwater/pdf/CTSW-RT-02-055.pdf.

The Caltrans study included 33 highway construction sites throughout California over a period of four years, which included 120 storm events. All of these sites had BMPs in place that would be generally implemented at all types of construction sites in California.

ii. ***Turbidity***

BPJ was used to develop an NAL that can be used as a learning tool to help dischargers improve their site controls, and to provide meaningful information on the effectiveness of storm water controls. A statewide turbidity NAL has been set at 250 NTU.

## G. Receiving Water Limitations

Construction-related activities that cause or contribute to an exceedance of water quality standards must be addressed. The dynamic nature of construction activity gives the discharger the ability to quickly identify and monitor the source of the exceedances. This is because when storm water mobilizes sediment, it provides visual cues as to where corrective actions should take place and how effective they are once implemented.

This General Permit requires that storm water discharges and authorized non-storm water discharges must not contain pollutants that cause or contribute to an exceedance of any applicable water quality objective or water quality standards. The monitoring requirements in this General Permit for sampling and analysis procedures will help determine whether BMPs installed and maintained are preventing pollutants in discharges from the construction site that may cause or contribute to an exceedance of water quality standards.

Water quality standards consist of designated beneficial uses of surface waters and the adoption of ambient criteria necessary to protect those uses. When adopted by the State Water Board or a Regional Water Board, the ambient criteria are termed "water quality objectives." If storm water runoff from construction sites contains pollutants, there is a risk that those pollutants could enter surface waters and cause or contribute to an exceedance of water quality standards. For that reason, dischargers should be aware of the applicable water quality standards in their receiving waters. (The best method to ensure compliance with receiving water limitations is to implement BMPs that prevent pollutants from contact with storm water or from leaving the construction site in runoff.)

In California, water quality standards are published in the Basin Plans adopted by each Regional Water Board, the California Toxics Rule (CTR), the National Toxics Rule (NTR), and the Ocean Plan.

Dischargers can determine the applicable water quality standards by contacting Regional Water Board staff or by consulting one of the following sources. The actual Basin Plans that contain the water quality standards can be viewed at the website of the appropriate Regional Water Board. (http://www.waterboards.ca.gov/regions.html), the State Water Board site for statewide plans (http://www.waterboards.ca.gov/plnspols/index.html), or the USEPA regulations for the NTR and CTR (40 C.F.R. §§ 131.36-38). Basin Plans and statewide plans are also available by mail from the appropriate Regional Water Board or the State Water Board. The USEPA regulations are available at http://www.epa.gov/. Additional information concerning water quality standards can be accessed through http://www.waterboards.ca.gov/stormwtr/gen_const.html.

## H. Training Qualifications and Requirements

The Blue Ribbon Panel (BRP) made the following observation about the lack of industry-specific training requirements:

"Currently, there is no required training or certification program for contractors, preparers of soil erosion and sediment control Storm Water Pollution Prevention Plans, or field inspectors."

Order 99-08-DWQ required that all dischargers train their employees on how to comply with the permit, but it did not specificy a curriculum or certification program. This has resulted in inconsistent implementation by all affected parties - the dischargers, the local governments where the construction activity occurs, and the regulators required to enforce 99-08-DWQ. This General Permit requires Qualified SWPPP Developers and practitioners to obtain appropriate training, and makes this curriculum mandatory two years after adoption, to allow time for course completion. The State and Regional Water Board are working with many stakeholders to develop the curriculum and mechanisms needed to develop and deliver the courses.

To ensure that the preparation, implementation, and oversight of the SWPPP is sufficient for effective pollution prevention, the Qualified SWPPP Developer and Qualified SWPPP Practitioners responsible for creating, revising, overseeing, and implementing the SWPPP must attend a State Water Board-sponsored or approved Qualified SWPPP Developer and Qualified SWPPP Practitioner training course.

# I. Sampling, Monitoring, Reporting and Record Keeping

### 1. Traditional Construction Monitoring Requirements

This General Permit requires visual monitoring at all sites, and effluent water quality at all Risk Level 2 & 3 sites. It requires receiving water monitoring at some Risk Level 3 sites. All sites are required to submit annual reports, which contain various types of information, depending on the site characteristics and events. A summary of the monitoring and reporting requirements is found in Table 4.

**Table 4 - Required Monitoring Elements for Risk Levels**

| | Visual | Non-visible Pollutant | Effluent | Receiving Water |
|---|---|---|---|---|
| Risk Level 1 | three types required for all Risk Levels: non-storm water, pre-rain and post-rain | As needed for all Risk Levels (see below) | where applicable | not required |
| Risk Level 2 | | | pH, turbidity | not required |
| Risk Level 3 | | | pH, turbidity | (if Receiving Water Monitoring Trigger exceeded) pH, turbidity and SSC. Bioassessment for sites 30 acres or larger. |

#### a. Visual

All dischargers are required to conduct quarterly, non-storm water visual inspections. For these inspections, the discharger must visually observe each drainage area for the presence of (or indications of prior) unauthorized and authorized non-storm water discharges and their sources. For storm-related inspections, dischargers must visually observe storm water discharges at all discharge locations within two business days after a qualifying event. For this requirement, a qualifying rain event is one producing precipitation of ½ inch or more of discharge. Dischargers must conduct a post-storm event inspection to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify any additional BMPs necessary and revise the SWPPP accordingly. Dischargers must maintain on-site records of all visual observations, personnel performing the observations, observation dates, weather conditions, locations observed, and corrective actions taken in response to the observations.

### b. Non-Visible Pollutant Monitoring

This General Permit requires that all dischargers develop a sampling and analysis strategy for monitoring pollutants that are not visually detectable in storm water. Monitoring for non-visible pollutants must be required at any construction site when the exposure of construction materials occurs and where a discharge can cause or contribute to an exceedance of a water quality objective.

Of significant concern for construction discharges are the pollutants found in materials used in large quantities at construction sites throughout California and exposed throughout the rainy season, such as cement, flyash, and other recycled materials or by-products of combustion. The water quality standards that apply to these materials will depend on their composition. Some of the more common storm water pollutants from construction activity are not CTR pollutants. Examples of non-visible pollutants include glyphosate (herbicides), diazinon and chlorpyrifos (pesticides), nutrients (fertilizers), and molybdenum (lubricants). The use of diazinon and chlorpyrifos is a common practice among landscaping professionals and may trigger sampling and analysis requirements if these materials come into contact with storm water. High pH values from cement and gypsum, high pH and SSC from wash waters, and chemical/fecal contamination from portable toilets, also are not CTR pollutants. Although some of these constituents do have numeric water quality objectives in individual Basin Plans, many do not and are subject only to narrative water quality standards (i.e. not causing toxicity). Dischargers are encouraged to discuss these issues with Regional Water Board staff and other storm water quality professionals.

The most effective way to avoid the sampling and analysis requirements, and to ensure permit compliance, is to avoid the exposure of construction materials to precipitation and storm water runoff. Materials that are not exposed do not have the potential to enter storm water runoff, and therefore receiving waters sampling is not required. Preventing contact between storm water and construction materials is one of the most important BMPs at any construction site.

Preventing or eliminating the exposure of pollutants at construction sites is not always possible. Some materials, such as soil amendments, are designed to be used in a manner that will result in exposure to storm water. In these cases, it is important to make sure that these materials are applied according to the manufacturer's instructions and at a time when they are unlikely to be washed away. Other construction materials can be exposed when storage, waste disposal or the application of the material is done in a manner not protective of water quality. For these situations, sampling is required unless there is capture and containment of all storm water that has been exposed. In cases where construction materials may be exposed to storm water, but the storm water is contained and is not allowed to run off the site, sampling will only be required when inspections show that the containment failed or is breached, resulting in potential exposure or discharge to receiving waters.

The discharger must develop a list of potential pollutants based on a review of potential sources, which will include construction materials soil amendments, soil treatments, and historic contamination at the site. The discharger must review existing environmental and real estate documentation to determine the potential for pollutants that could be present on the construction site as a result of past land use activities.

Good sources of information on previously existing pollution and past land uses include:

i. Environmental Assessments;

ii. Initial Studies;

iii. Phase 1 Assessments prepared for property transfers; and

iv. Environmental Impact Reports or Environmental Impact Statements prepared under the requirements of the National Environmental Policy Act or the California Environmental Quality Act.

In some instances, the results of soil chemical analyses may be available and can provide additional information on potential contamination.

The potential pollutant list must include all non-visible pollutants that are known or should be known to occur on the construction site including, but not limited to, materials that:

i. are being used in construction activities;

ii. are stored on the construction site;

iii. were spilled during construction operations and not cleaned up;

iv. were stored (or used) in a manner that created the potential for a release of the materials during past land use activities;

v. were spilled during previous land use activities and not cleaned up; or

vi. were applied to the soil as part of past land use activities.

C. **Effluent Monitoring**

Federal regulations[11] require effluent monitoring for discharges subject to NALs. Subsequently, all Risk Level 2 and 3 dischargers must perform sampling and analysis of effluent discharges to characterize discharges associated with construction activity from the entire area disturbed by the project. Dischargers must collect samples of stored or contained storm water that is discharged subsequent to a storm event producing precipitation of ½ inch or more at the time of discharge.

**Table 5 - Storm Water Effluent Monitoring Requirements by Risk Level**

| | Frequency | Effluent Monitoring (Section E, below) |
|---|---|---|
| Risk Level 1 | when applicable | non-visible pollutant parameters (if applicable) |
| Risk Level 2 | Minimum of 3 samples per day during qualifying rain event characterizing discharges associated with construction activity from the entire project disturbed area. | pH, turbidity, and non-visible pollutant parameters (if applicable) |
| Risk Level 3 | Minimum of 3 samples per day during qualifying rain event characterizing discharges associated with construction activity from the entire project disturbed area. | pH, turbidity, and non-visible pollutant parameters if applicable |

Risk Level 1 dischargers must analyze samples for:

i. any parameters indicating the presence of pollutants identified in the pollutant source assessment required in Attachment C contained in the General Permit.

[11] 40 C.F.R. § 122.44.

Risk Level 2 dischargers must analyze samples for:

i. pH and turbidity;

ii. any parameters indicating the presence of pollutants identified in the pollutant source assessment required in Attachment D contained in the General Permit, and

iii. any additional parameters for which monitoring is required by the Regional Water Board.

Risk Level 3 dischargers must analyze samples for:

i. pH, turbidity;

ii. any parameters indicating the presence of pollutants identified in the pollutant source assessment required in Attachment E contained in the General Permit, and

iii. any additional parameters for which monitoring is required by the Regional Water Board.

2. **Linear Monitoring and Sampling Requirements**

Attachment A, establishes minimum monitoring and reporting requirements for all LUPs. It establishes different monitoring requirements depending on project complexity and risk to water quality. The monitoring requirements for Type 1 LUPs are less than Type 2 & 3 projects because Type 1 projects have a lower potential to impact water quality.

A discharger shall prepare a monitoring program prior to the start of construction and immediately implement the program at the start of construction for LUPs. The monitoring program must be implemented at the appropriate level to protect water quality at all times throughout the life of the project.

a. **Type 1 LUP Monitoring Requirements**

A discharger must conduct daily visual inspections of Type 1 LUPs during working hours while construction activities are occurring. Inspections are to be conducted by qualified personnel and can be conducted in conjunction with other daily activities. Inspections will be conducted to ensure the BMPs are adequate, maintained, and in place at the end of the construction day. The discharger will revise the SWPPP, as appropriate, based on the results of the daily inspections. Inspections can be discontinued in non-active construction areas where soil disturbing activities have been completed and final stabilization has been achieved (e.g., trench has been paved, substructures have been installed, and successful final vegetative cover or other stabilization criteria have been met).

A discharger shall implement the monitoring program for inspecting Type 1 LUPs. This program requires temporary and permanent stabilization BMPs after active construction is completed. Inspection activities will continue until adequate permanent stabilization has been established and will continue in areas where re-vegetation is chosen until minimum vegetative coverage has been established. Photographs shall be taken during site inspections and submitted to the State Water Board.

b. **Type 2 & 3 LUP Monitoring Requirements**

A discharger must conduct daily visual inspections of Type 2 & 3 LUPs during working hours while construction activities are occurring. Inspections are to be conducted by qualified personnel and can be in conjunction with other daily activities.

All dischargers of Type 2 & 3 LUPs are required to conduct inspections by qualified personnel of the construction site during normal working hours prior to all anticipated storm events and after actual storm events. During extended storm events, the discharger shall conduct inspections during normal working hours for each 24-hour period. Inspections can be discontinued in non-active construction areas where soil disturbing activities have been completed and final stabilization has been achieved (e.g., trench has been paved, substructures installed, and successful vegetative cover or other stabilization criteria have been met).

The goals of these inspections are (1) to identify areas contributing to a storm water discharge; (2) to evaluate whether measures to reduce pollutant loadings identified in the SWPPP are adequate and properly installed and functioning in accordance with the terms of the General Permit; and (3) to determine whether additional control practices or corrective maintenance activities are needed. Equipment, materials, and workers must be available for rapid response to failures and emergencies. All corrective maintenance to BMPs shall be performed as soon as possible, depending upon worker safety.

All dischargers shall develop and implement a monitoring program for inspecting Type 2 & 3 LUPs that require temporary and permanent stabilization BMPs after active construction is completed. Inspections will be conducted to ensure the BMPs are adequate and maintained. Inspection activities will continue until adequate permanent stabilization has been established and will continue in areas where revegetation is chosen until minimum vegetative coverage has been established.

A log of inspections conducted before, during, and after the storm events must be maintained in the SWPPP. The log will provide the date and time of the inspection and who conducted the inspection. Photographs must be taken during site inspections and submitted to the State Water Board.

### C. Sampling Requirements for all LUP Project Types

LUPs are also subject to sampling and analysis requirements for visible pollutants (i.e., sedimentation/siltation, turbidity) and for non-visible pollutants.

Sampling for visible pollutants is required for Type 2 & 3 LUPs.

Non-visible pollutant monitoring is required for pollutants associated with construction sites and activities that (1) are not visually detectable in storm water discharges, and (2) are known or should be known to occur on the construction site, and (3) could cause or contribute to an exceedance of water quality objectives in the receiving waters. Sample collection for non-visible pollutants must only be required (1) during a storm event when pollutants associated with construction activities may be discharged with storm water runoff due to a spill, or in the event there was a breach, malfunction, failure, and/or leak of any BMP, and (2) when the discharger has failed to adequately clean the area of material and pollutants. Failure to implement appropriate BMPs will trigger the same sampling requirements as those required for a breach, malfunction and/or leak, or when the discharger has failed to implement appropriate BMPs prior to the next storm event.

Additional monitoring parameters may be required by the Regional Water Boards.

It is not anticipated that many LUPs will be required to collect samples for pollutants not visually detected in runoff due to the nature and character of the construction site and activities as previously described in this fact sheet. Most LUPs are constructed in urban areas with public access (e.g., existing roadways, road shoulders, parking areas, etc.). This raises a concern regarding the potential contribution of pollutants from vehicle use and/or from normal activities of the public (e.g., vehicle washing, landscape fertilization, pest spraying, etc.) in runoff from the project site. Since the dischargers are not the land owners of the project area and are not able to control the presence of these pollutants in the storm water that runs through their projects, it is not the intent of this General Permit to require dischargers to sample for these pollutants. This General Permit does not require the discharger to sample for these types of pollutants except where the discharger has brought materials onsite that contain these pollutants and when a condition (e.g., breach, failure, etc.) described above occurs.

### 3. Receiving Water Monitoring

In order to ensure that receiving water limitations are met, discharges subject to receiving water monitoring triggers (i.e., Risk Level 3 and LUP Type 3 sites) or numeric effluent limitations (i.e., Risk Level 3 and LUP Type 3 sites utilizing ATS with direct discharges into receiving waters) must also monitor the downstream receiving water(s) for turbidity, SSC, and pH (if applicable) when a receiving water monitoring trigger or NEL is exceeded.

#### a. Bioassessment Monitoring

This General Permit requires a bioassessment of receiving waters for dischargers of Risk Level 3 or LUP Type 3 construction projects equal to or larger than 30 acres with direct discharges into receiving waters. Benthic macroinvertebrate samples will be taken upstream and downstream of the site's discharge point in the receiving water. Bioassessments measure the quality of the stream by analyzing the aquatic life present. Higher levels of appropriate aquatic species tend to indicate a healthy stream; whereas low levels of organisms can indicate stream degradation. Active construction sites have the potential to discharge large amounts of sediment and pollutants into receiving waters. Requiring a bioassessment for large project sites, with the most potential to impact water quality, provides a snapshot of the health of the receiving water prior to initiation of construction activities. This snapshot can be used in comparison to the health of the receiving water after construction has commenced.

Each ecoregion (biologically and geographically related area) in the State has a specific yearly peak time where stream biota is in a stable and abundant state. This time of year is called an Index Period. The bioassessment requirements in this General Permit, requires benthic macroinvertebrate sampling within a sites index period. The State Water Board has developed a map designating index periods for the ecoregions in the State (see State Water Board Website).

This General Permit requires the bioassessment methods to be in accordance with the Surface Water Ambient Monitoring Program (SWAMP) in order to provide data consistency within the state as well as generate useable biological stream data.

**Table 6 - Receiving Water Monitoring Requirements**

| | Receiving Water Monitoring Parameters |
|---|---|
| Risk Level 1 /LUP Type 1 | not required |
| Risk Level 2 / LUP Type 2 | not required |
| Risk Level 3 / LUP Type 3 | If Receiving Water Monitoring Trigger exceeded: pH (if applicable), turbidity, and SSC.<br>Bioassessment for sites 30 acres or larger. |

### 4. Reporting Requirements

#### a. NAL Exceedance Report

All Risk Level 3 and LUP Type 3 dischargers must electronically submit all storm event sampling results to the State And Regional Boards, via the electronic data system, no later than 10 days after the conclusion of the storm event.

#### b. Annual Report

All dischargers must prepare and electronically submit an annual report no later than September 1 of each year using the Storm water Multi-Application Reporting and Tracking System (SMARTS). The

Annual Report must include a summary and evaluation of all sampling and analysis results, original laboratory reports, chain of custody forms, a summary of all corrective actions taken during the compliance year, and identification of any compliance activities or corrective actions that were not implemented.

#### 5. Record Keeping

According to 40 C.F.R. Parts 122.21(p) and 122.41(j), the discharger is required to retain paper or electronic copies of all records required by this General Permit for a period of at least three years from the date generated or the date submitted to the State Water Board or Regional Water Boards. A discharger must retain records for a period beyond three years as directed by Regional Water Board.

## J. Risk Determination

### 1. Traditional Projects

#### a. Overall Risk Determination

There are two major requirements related to site planning and risk determination in this General Permit. The project's overall risk is broken up into two elements – (1) project sediment risk (the relative amount of sediment that can be discharged, given the project and location details) and (2) receiving water risk (the risk sediment discharges pose to the receiving waters).

Project Sediment Risk:
Project Sediment Risk is determined by multiplying the R, K, and LS factors from the Revised Universal Soil Loss Equation (RUSLE) to obtain an estimate of project-related bare ground soil loss expressed in tons/acre. The RUSLE equation is as follows:

A = (R)(K)(LS)(C)(P)

Where: A = the rate of sheet and rill erosion
R = rainfall-runoff erosivity factor
K = soil erodibility factor
LS = length-slope factor
C = cover factor (erosion controls)
P = management operations and support practices (sediment controls)

The C and P factors are given values of 1.0 to simulate bare ground conditions.

There is a map option and a manual calculation option for determining soil loss. For the map option, the R factor for the project is calculated using the online calculator at http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm. The product of K and LS are shown on Figure 1. To determine soil loss in tons per acre, the discharger multiplies the R factor times the value for K times LS from the map.

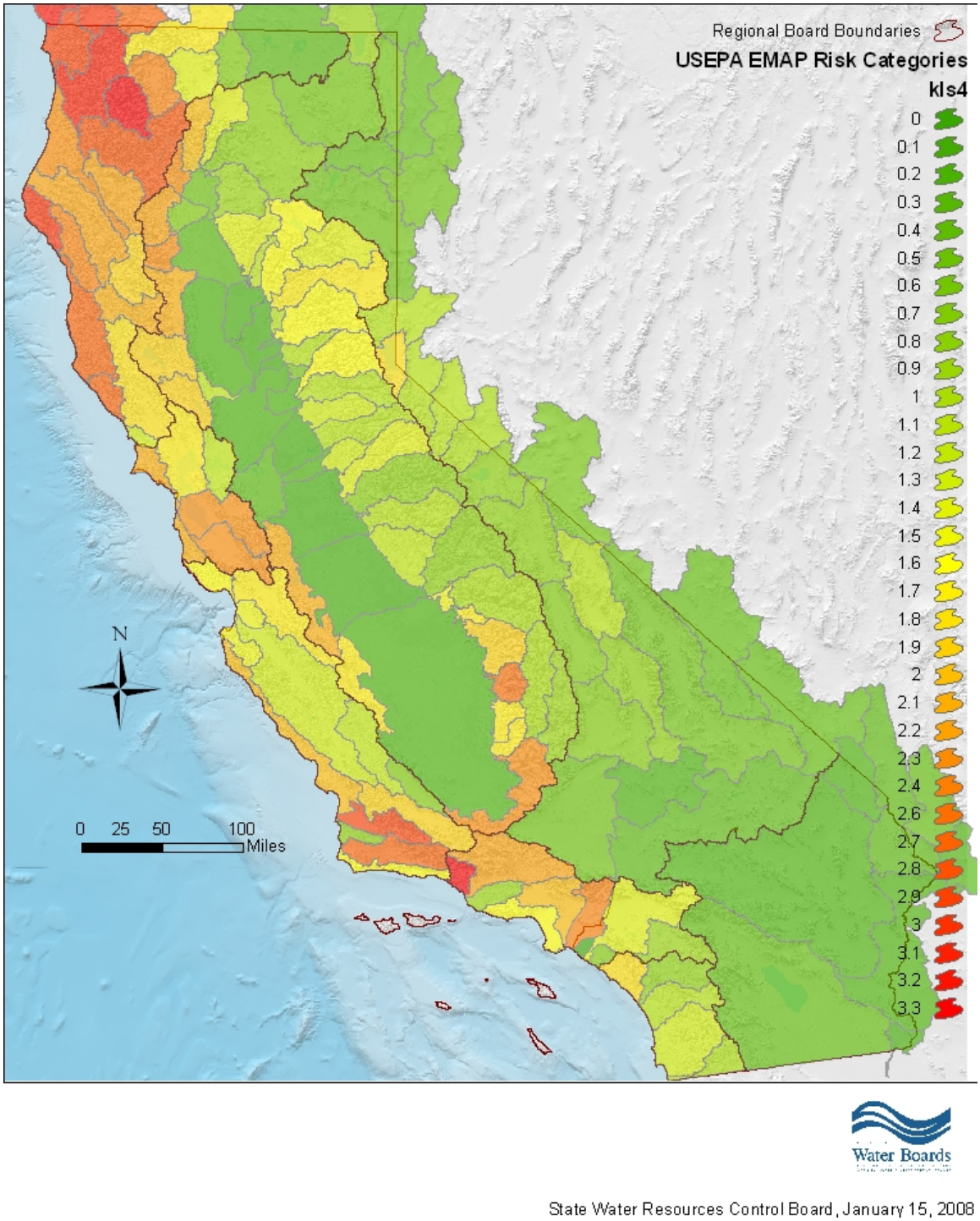



**Figure 1 -Statewide Map of K * LS**

For the manual calculation option, the R factor for the project is calculated using the online calculator at http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm. The K and LS factors are determined using Appendix 1.

Soil loss of less than 15 tons/acre is considered **low** sediment risk.
Soil loss between 15 and 75 tons/acre is **medium** sediment risk.
Soil loss over 75 tons/acre is considered **high** sediment risk.

The soil loss values and risk categories were obtained from mean and standard deviation RKLS values from the USEPA EMAP program. High risk is the mean RKLS value plus two standard deviations. Low risk is the mean RKLS value minus two standard deviations.

Receiving Water Risk:
Receiving water risk is based on whether a project drains to a sediment-sensitive waterbody. A sediment-sensitive waterbody is either

on the most recent 303d list for waterbodies impaired for sediment;
has a USEPA-approved Total Maximum Daily Load implementation plan for sediment; **or**
has the beneficial uses of COLD, SPAWN, and MIGRATORY.

A project that meets at least one of the three criteria has a high receiving water risk. A list of sediment-sensitive waterbodies will be posted on the State Water Board's website. It is anticipated that an interactive map of sediment sensitive water bodies in California will be available in the future.

The Risk Levels have been altered by eliminating the possibility of a Risk Level 4, and expanding the constraints for Risk Levels 1, 2, and 3. Therefore, projects with high receiving water risk and high sediment risk will be considered a Risk Level 3 risk to water quality.

In response to public comments, the Risk Level requirements have also been changed such that Risk Level 1 projects will be subject to minimum BMP and visual monitoring requirements, Risk Level 2 projects will be subject to NALs and some additional monitoring requirements, and Risk Level 3 projects will be subject to NALs, and more rigorous monitoring requirements such as receiving water monitoring and in some cases bioassessment.

**Table 7 - Combined Risk Level Matrix**

| Combined Risk Level Matrix | | | | |
|---|---|---|---|---|
| | | | | |
| Receiving Water Risk | | Sediment Risk | | |
| | | Low | Medium | High |
| | Low | Level 1 | Level 2 | |
| | High | Level 2 | | Level 3 |

### b. Effluent Standards

All dischargers are subject to the narrative effluent limitations specified in the General Permit. The narrative effluent limitations require storm water discharges associated with construction activity to meet all applicable provisions of Sections 301 and 402 of the CWA. These provisions require controls of pollutant discharges that utilize BAT and BCT to reduce pollutants and any more stringent controls necessary to meet water quality standards.

Risk Level 2 dischargers that pose a medium risk to water quality are subject to technology-based NALs for pH and turbidity. Risk Level 3 dischargers that pose a high risk to water quality are also subject to technology-based NALs for pH and turbidity.

### c. Good Housekeeping

Proper handling and managing of construction materials can help minimize threats to water quality. The discharger must consider good housekeeping measures for: construction materials, waste management, vehicle storage & maintenance, landscape materials, and potential pollutant sources. Examples include; conducting an inventory of products used, implementing proper storage & containment, and properly cleaning all leaks from equipment and vehicles.

### d. Non-Storm Water Management

Non-storm water discharges directly connected to receiving waters or the storm drain system have the potential to negatively impact water quality. The discharger must implement measures to control all non-storm water discharges during construction, and from dewatering activities associated with construction. Examples include; properly washing vehicles in contained areas, cleaning streets, and minimizing irrigation runoff.

### e. Erosion Control

The best way to minimize the risk of creating erosion and sedimentation problems during construction is to disturb as little of the land surface as possible by fitting the development to the terrain. When development is tailored to the natural contours of the land, little grading is necessary and, consequently, erosion potential is lower.[14] Other effective erosion control measures include: preserving existing vegetation where feasible, limiting disturbance, and stabilizing and re-vegetating disturbed areas as soon as possible after grading or construction activities. Particular attention must be paid to large, mass-graded sites where the potential for soil exposure to the erosive effects of rainfall and wind is great and where there is potential for significant sediment discharge from the site to surface waters. Until permanent vegetation is established, soil cover is the most cost-effective and expeditious method to protect soil particles from detachment and transport by rainfall. Temporary soil stabilization can be the single most important factor in reducing erosion at construction sites. The discharger is required to consider measures such as: covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. These erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. Erosion control BMPs should be the primary means of preventing storm water contamination, and sediment control techniques should be used to capture any soil that becomes eroded.[12]

Risk Level 3 dischargers pose a higher risk to water quality and are therefore additionally required to ensure that post-construction soil loss is equivalent to or less than the pre-construction levels.

### f. Sediment Control

Sediment control BMPs should be the secondary means of preventing storm water contamination. When erosion control techniques are ineffective, sediment control techniques should be used to capture any soil that becomes eroded. The discharger is required to consider perimeter control measures such as: installing silt fences or placing straw wattles below slopes. These sediment control measures are only

[12] U.S. Environmental Protection Agency. 2007. Developing Your Storm Water Pollution Prevention Plan: A Guide for Construction Sites.

examples of what should be considered and should not preclude new or innovative approaches currently available or being developed.

Because Risk Level 2 and 3 dischargers pose a higher risk to water quality, additional requirements for the application of sediment controls are imposed on these projects. This General Permit also authorizes the Regional Water Boards to require Risk Level 3 dischargers to implement additional site-specific sediment control requirements if the implementation of other erosion or sediment controls are not adequately protecting the receiving waters.

### g. Run-on and Runoff Control

Inappropriate management of run-on and runoff can result in excessive physical impacts to receiving waters from sediment and increased flows. The discharger is required to manage all run-on and runoff from a project site. Examples include: installing berms and other temporary run-on and runoff diversions.

Risk Level 1 dischargers with lower risks to impact water quality are not subject to the run-on and runoff control requirements unless an evaluation deems them necessary or visual inspections show that such controls are required.

### h. Inspection, Maintenance and Repair

All measures must be periodically inspected, maintained and repaired to ensure that receiving water quality is protected. Frequent inspections coupled with thorough documentation and timely repair is necessary to ensure that all measures are functioning as intended.

### i. Rain Event Action Plan (REAP)

A Rain Event Action Plan (REAP) is a written document, specific for each rain event. A REAP should be designed that when implemented it protects all exposed portions of the site within 48 hours of any likely precipitation event forecast of 50% or greater probability.

This General Permit requires Risk Level 2 and 3 dischargers to develop and implement a REAP designed to protect all exposed portions of their sites within 48 hours prior to any likely precipitation event. The REAP requirement is designed to ensure that the discharger has adequate materials, staff, and time to implement erosion and sediment control measures that are intended to reduce the amount of sediment and other pollutants generated from the active site. A REAP must be developed when there is likely a forecast of 50% or greater probability of precipitation in the project area. (The National Oceanic and Atmospheric Administration (NOAA) defines a chance of precipitation as a probability of precipitation of 30% to 50% chance of producing precipitation in the project area.[13] NOAA defines the probability of precipitation (PoP) as the likelihood of occurrence (expressed as a percent) of a measurable amount (0.01 inch or more) of liquid precipitation (or the water equivalent of frozen precipitation) during a specified period of time at any given point in the forecast area.) Forecasts are normally issued for 12-hour time periods. Descriptive terms for uncertainty and aerial coverage are used as follows:

**Table 8 -National Oceanic and Atmospheric Administration (NOAA) Definition of Probability of Precipitation (PoP)**

[13] http://www.crh.noaa.gov/lot/severe/wxterms.php.

| PoP | Expressions of Uncertainty | Aerial Coverage |
|---|---|---|
| 0% | none used | none used |
| 10% | none used | isolated |
| 20% | slight chance | isolated |
| 30-50% | chance | scattered |
| 60-70% | likely | numerous |
| 80-100% | none used | none used |

The discharger must obtain the precipitation forecast information from the National Weather Service Forecast Office (http://www.srh.noaa.gov/).

2. **Linear Projects**

a. **Linear Risk Determination**

LUPs vary in complexity and water quality concerns based on the type of project. This General Permit has varying application requirements based on the project's risk to water quality. Factors that lead to the characterization of the project include location, sediment risk, and receiving water risk.

Based on the location and complexity of a project area or project section area, LUPs are separated into project types. As described below, LUPs have been categorized into three project types.

i. ***Type 1 LUPs***

Type 1 LUPs are those construction projects where:

(1) 70 percent or more of the construction activity occurs on a paved surface and where areas disturbed during construction will be returned to preconstruction conditions or equivalent protection established at the end of the construction activities for the day, or

(2) greater than 30 percent of construction activities occur within the non-paved shoulders or land immediately adjacent to paved surfaces, or where construction occurs on unpaved improved roads, including their shoulders or land immediately adjacent to them where:

Areas disturbed during construction will be returned to pre-construction conditions or equivalent protection established at the end of the construction activities for the day to minimize the potential for erosion and sediment deposition, and

Areas where established vegetation was disturbed during construction will be stabilized and re-vegetated by the end of project. When required, adequate temporary stabilization Best Management Practices (BMPs) will be installed and maintained until vegetation is established to meet minimum cover requirements established in this General Permit for final stabilization.

Type 1 LUPs typically do not have a high potential to impact storm water quality because (1) these construction activities are not typically conducted during a rain event, (2) these projects are normally constructed over a short period of time[14], minimizing the duration that pollutants could potentially be exposed to rainfall; and (3) disturbed soils such as those from trench excavation are required to be hauled away, backfilled into the trench, and/or covered (e.g., metal plates, pavement, plastic covers over spoil piles) at the end of the construction day.

Type 1 LUPs are determined during the risk assessment found in Attachment A.1 to be 1) low sediment risk and low receiving water risk; 2) low sediment risk and medium receiving water risk; and 3) medium sediment risk and low receiving water risk.

This General Permit requires the discharger to ensure a SWPPP is developed for these construction activities that is specific to project type, location and characteristics.

ii. ***Type 2 LUPs:***

Type 2 projects are determined to have a combination of High, Medium, and Low project sediment risk along with High, Medium, and Low receiving water risk. Like Type 1 projects, Type 2 projects are typically constructed over a short period of time. However, these projects have a higher potential to impact water quality because they:

(1) typically occur outside the more urban/developed areas;

(2) have larger areas of soil disturbance that are not closed or restored at the end of the day;

(3) may have onsite stockpiles of soil, spoil and other materials;

(4) cross or occur in close proximity to a wide variety of sensitive resources that may include, but are not limited to, steep topography and/or water bodies; and

(5) have larger areas of disturbed soils that may be exposed for a longer time interval before final stabilization, cleanup and/or reclamation occurs.

This General Permit requires the discharger to develop and implement a SWPPP for these construction activities that are specific for project type, location and characteristics.

iii. ***Type 3 LUPs:***

[14] Short period of time refers to a project duration of weeks to months, but typically less than one year in duration.

Type 3 projects are determined to have a combination of High and Medium project sediment risk along with High and Medium receiving water risk. Similar to Type 2 projects, Type 3 projects have a higher potential to impact water quality because they:

(1) typically occur outside of the more urban/developed areas;

(2) have larger areas of soil disturbance that are not closed or restored at the end of the day;

(3) may have onsite stockpiles of soil, spoil and other materials;

(4) cross or occur in close proximity to a wide variety of sensitive resources that may include, but are not limited to, steep topography and/or water bodies; and

(5) have larger areas of disturbed soils that may be exposed for a longer time interval before final stabilization, cleanup and/or reclamation occurs.

This General Permit requires the discharger to develop and implement a SWPPP for these construction activities that are specific for project type, location, and characteristics.

### b. Linear Effluent Standards

All LUPs are subject to the narrative effluent limitations specified in the General Permit.

Type 2 and Type 3 projects are subject to technology-based NALs for pH and turbidity.

### c. Linear Good Housekeeping

Improper use and handling of construction materials could potentially cause a threat to water quality. In order to ensure proper site management of these construction materials, all LUP dischargers must comply with a minimum set of Good Housekeeping measures specified in Attachment A of this General Permit.

### d. Linear Non-Storm Water Management

In order to ensure control of all non-storm water discharges during construction, all LUP dischargers must comply with the Non-Storm Water Management measures specified in Attachment A of this General Permit.

### e. Linear Erosion Control

This General Permit requires all LUP dischargers to implement effective wind erosion control measures, and soil cover for inactive areas. Type 3 LUPs posing a higher risk to water quality are additionally required to ensure the post-construction soil loss is equivalent to or less than the pre-construction levels.

### f. Linear Sediment Control

In order to ensure control and containment of all sediment discharges, all LUP dischargers must comply with the general Sediment Control measures specified in Attachment A or this General Permit. Additional requirements for sediment controls are imposed on Type 2 & 3 LUPs due to their higher risk to water quality.

### g. Linear Run-on and Runoff Control

Discharges originating outside of a project's perimeter and flowing onto the property can adversely affect the quantity and quality of discharges originating from a project site. In order to ensure proper management of run-on and runoff, all LUPs must comply with the run-on and runoff control measures specified in Attachment A of this General Permit. Due to the lower risk of impacting water quality, Type 1 LUPs are not required to implement run-on and runoff controls unless deemed necessary by the discharger.

### h. Linear Inspection, Maintenance and Repair

Proper inspection, maintenance, and repair activities are important to ensure the effectiveness of on-site measures to control water quality. In order to ensure that inspection, maintenance, and repair activities are adequately performed, the all LUP dischargers a re required to comply with the Inspection, Maintenance, and Repair requirements specified in Attachment A of this General Permit.

## K. ATS[15] Requirements

There are instances on construction sites where traditional erosion and sediment controls do not effectively control accelerated erosion. Under such circumstances, or under circumstances where storm water discharges leaving the site may cause or contribute to an exceedance of a water quality standard, the use of an Active Treatment System (ATS) may be necessary. Additionally, it may be appropriate to use an ATS when site constraints inhibit the ability to construct a correctly sized sediment basin, when clay and/or highly erosive soils are present, or when the site has very steep or long slope lengths.[16]

Although treatment systems have been in use in some form since the mid-1990s, the ATS industry in California is relatively young, and detailed regulatory standards have not yet been developed. Many developers are using these systems to treat storm water discharges from their construction sites. The new ATS requirements set forth in this General Permit are based on those in place for small wastewater treatment systems, ATS regulations from the Central Valley Regional Water Quality Control Board (September 2005 memorandum "2005/2006 Rainy Season – Monitoring Requirements for Storm Water Treatment Systems that Utilize Chemical Additives to Enhance Sedimentation"), the Construction Storm Water Program at the State of Washington's Department of Ecology, as well as recent advances in technology and knowledge of coagulant performance and aquatic safety.

The effective design of an ATS requires a detailed survey and analysis of site conditions. With proper planning, ATS performance can provide exceptional water quality discharge and prevent significant impacts to surface water quality, even under extreme environmental conditions.

These systems can be very effective in reducing the sediment in storm water runoff, but the systems that use additives/polymers to enhance sedimentation also pose a potential risk to water quality (e.g., operational failure, equipment failure, additive/polymer release, etc.). The State Water Board is concerned about the potential acute and chronic impacts that the polymers and other chemical additives may have on fish and aquatic organisms if released in sufficient quantities or concentrations. In addition

[15] An ATS is a treatment system that employs chemical coagulation, chemical flocculation, or electrocoagulation in order to reduce turbidity caused by fine suspended sediment.
[16] Pitt, R., S. Clark, and D. Lake. 2006. Construction Site Erosion and Sediment Controls: Planning, Design, and Performance. DEStech Publications. Lancaster, PA. 370pp.

to anecdotal evidence of polymer releases causing aquatic toxicity in California, the literature supports this concern.[17] For example, cationic polymers have been shown to bind with the negatively charged gills of fish, resulting in mechanical suffocation.[18] Due to the potential toxicity impacts, which may be caused by the release of additives/polymers into receiving waters, this General Permit establishes residual polymer monitoring and toxicity testing requirements have been established in this General Permit for discharges from construction sites that utilize an ATS in order to protect receiving water quality and beneficial uses.

The primary treatment process in an ATS is coagulation/flocculation. ATS's operate on the principle that the added coagulant is bound to suspended sediment, forming floc, which is gravitationally settled in tanks or a basin, or removed by sand filters. A typical installation utilizes an injection pump upstream from the clarifier tank, basin, or sand filters, which is electronically metered to both flow rate and suspended solids level of the influent, assuring a constant dose. The coagulant mixes and reacts with the influent, forming a dense floc. The floc may be removed by gravitational setting in a clarifier tank or basin, or by filtration. Water from the clarifier tank, basin, or sand filters may be routed through cartridge(s) and/or bag filters for final polishing. Vendor-specific systems use various methods of dose control, sediment/floc removal, filtration, etc., that are detailed in project-specific documentation. The particular coagulant/flocculant to be used for a given project is determined based on the water chemistry of the site because the coagulants are specific in their reactions with various types of sediments. Appropriate selection of dosage must be carefully matched to the characteristics of each site.

ATS's are operated in two differing modes, either Batch or Flow-Through. Batch treatment can be defined as Pump-Treat-Hold-Test-Release. In Batch treatment, water is held in a basin or tank, and is not discharged until treatment is complete. Batch treatment involves holding or recirculating the treated water in a holding basin or tank(s) until treatment is complete or the basin or storage tank(s) is full. In Flow-Through treatment, water is pumped into the ATS directly from the runoff collection system or storm water holding pond, where it is treated and filtered as it flows through the system, and is then directly discharged. "Flow-Through Treatment" is also referred to as "Continuous Treatment."

### 1. Effluent Standards

This General Permit establishes NELs for discharges from construction sites that utilize an ATS. These systems lend themselves to NELs for turbidity and pH because of their known reliable treatment. Advanced systems have been in use in some form since the mid-1990s. An ATS is considered reliable, can consistently produce a discharge of less than 10 NTU, and has been used successfully at many sites in several states since 1995 to reduce turbidity to very low levels.[19]

This General Permit contains "compliance storm event" exceptions from the technology-based NELs for ATS discharges. The rationale is that technology-based requirements are developed assuming a certain design storm. In the case of ATS the industry-standard design storm is 10-year, 24-hour (as stated in

[17] RomØen, K., B. Thu, and Ø. Evensen. 2002. Immersion delivery of plasmid DNA II. A study of the potentials of a chitosan based delivery system in rainbow trout (*Oncorhynchus mykiss*) fry. *Journal of Controlled Release* **85**: 215-225.
[18] Bullock, G., V. Blazer, S. Tsukuda, and S. Summerfelt. 2000. Toxicity of acidified chitosan for cultured rainbow trout (*Oncorhynchus mykiss*). *Aquaculture* **185**:273-280.
[19] Currier, B., G. Minton, R. Pitt, L. Roesner, K. Schiff, M. Stenstrom, E. Strassler, and E. Strecker. 2006. The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities.

Attachment F of this General Permit), so the compliance storm event has been established as the 10-year 24-hour event as well to provide consistency.

2. **Training**

Operator training is critical to the safe and efficient operation and maintenance of the ATS, and to ensure that all State Water Board monitoring and sampling requirements are met. The General Permit requires that all ATS operators have training specific to using ATS's liquid coagulants.

## L. Post-Construction Requirements

Under past practices, new and redevelopment construction activities have resulted in modified natural watershed and stream processes. This is caused by altering the terrain, modifying the vegetation and soil characteristics, introducing impervious surfaces such as pavement and buildings, increasing drainage density through pipes and channels, and altering the condition of stream channels through straightening, deepening, and armoring. These changes result in a drainage system where sediment transport capacity is increased and sediment supply is decreased. A receiving channel's response is dependent on dominant channel materials and its stage of adjustment.

Construction activity can lead to impairment of beneficial uses in two main ways. First, during the actual construction process, storm water discharges can negatively affect the chemical, biological, and physical properties of downstream receiving waters. Due to the disturbance of the landscape, the most likely pollutant is sediment, however pH and other non-visible pollutants are also of great concern. Second, after most construction activities are completed at a construction site, the finished project may result in significant modification of the site's response to precipitation. New development and redevelopment projects have almost always resulted in permanent post-construction water quality impacts because more precipitation ends up as runoff and less precipitation is intercepted, evapotranspired, and infiltrated.

General Permit 99-08-DWQ required the SWPPP to include a description of all post-construction BMPs on a site and a maintenance schedule. An effective storm water management strategy must address the full suite of storm events (water quality, channel protection, overbank flood protection, extreme flood protection) (Figure 2).

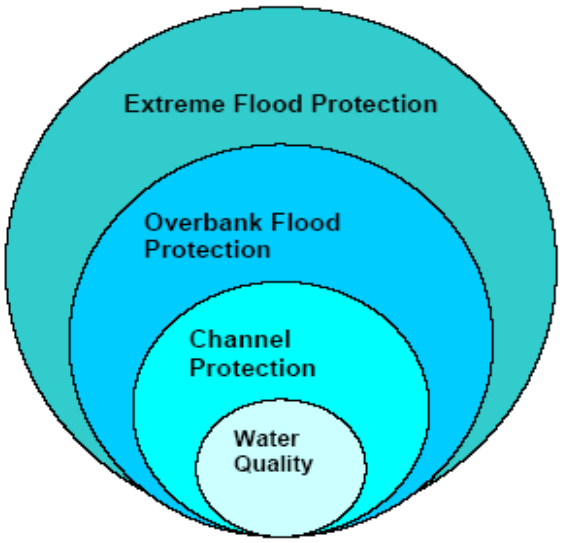



**Figure 2 - Suite of Storm Events**

The post-construction storm water performance standards in this General Permit specifically address water quality and channel protection events. Overbank flood protection and extreme flood protection events are traditionally dealt with in local drainage and flood protection ordinances. However, measures in this General Permit to address water quality and channel protection also reduce overbank and extreme flooding impacts. This General Permit aims to match post-construction runoff to pre-construction runoff for the 85$^{th}$ percentile storm event, which not only reduces the risk of impact to the receiving water's channel morphology but also provides some protection of water quality.

This General Permit clarifies that its runoff reduction requirements only apply to projects that lie outside of jurisdictions covered by a Standard Urban Storm water Management Plan (SUSMP) (or other more protective) post-construction requirements in either Phase I or Phase II permits.

Figures 3 and 4, below, show the General Permit enrollees (to Order 99-08-DWQ, as of March 10, 2008) overlaid upon a map with SUSMP (or more protective) areas in blue and purple. Areas without blue or purple indicate where the General Permit's runoff reduction requirements would actually apply.

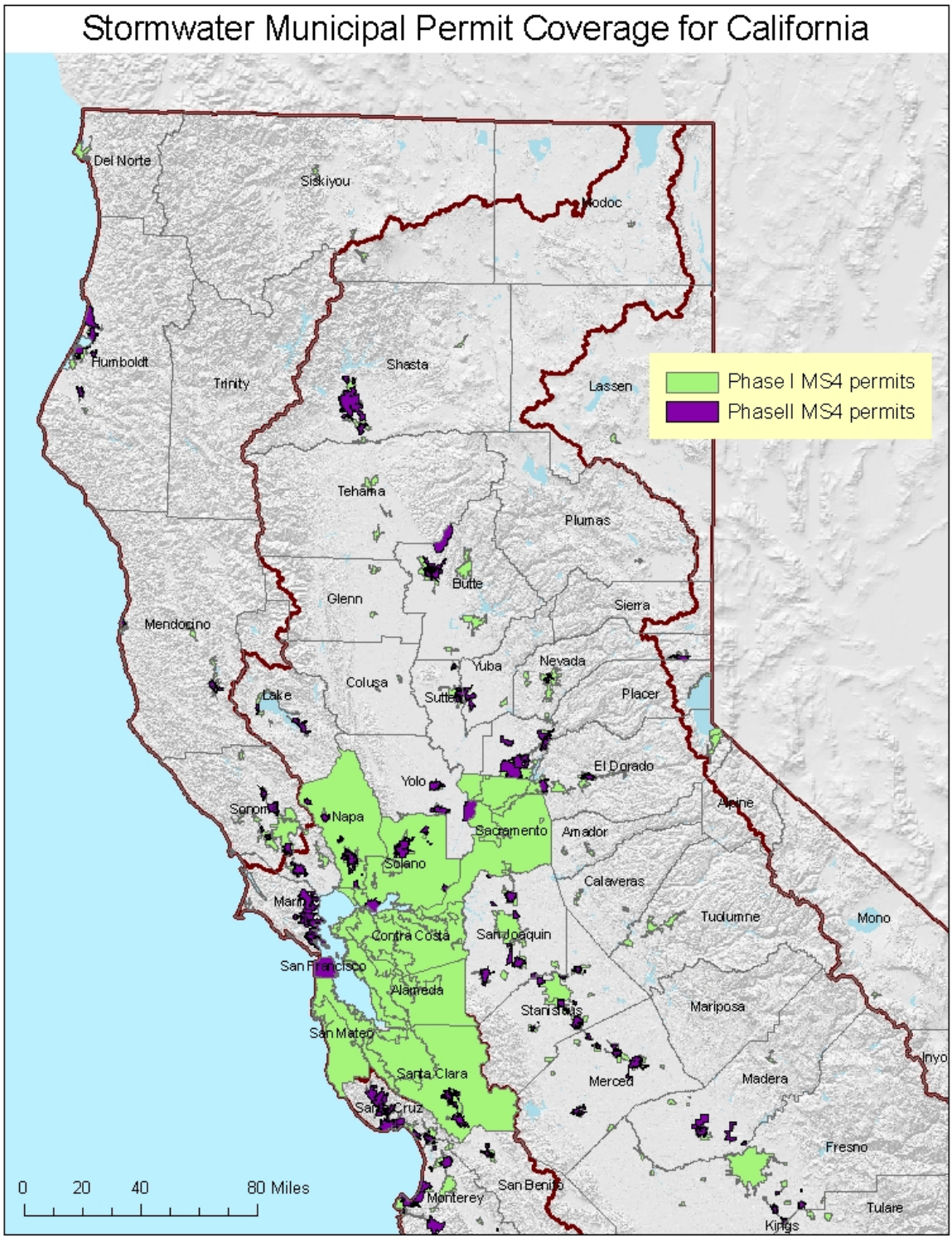
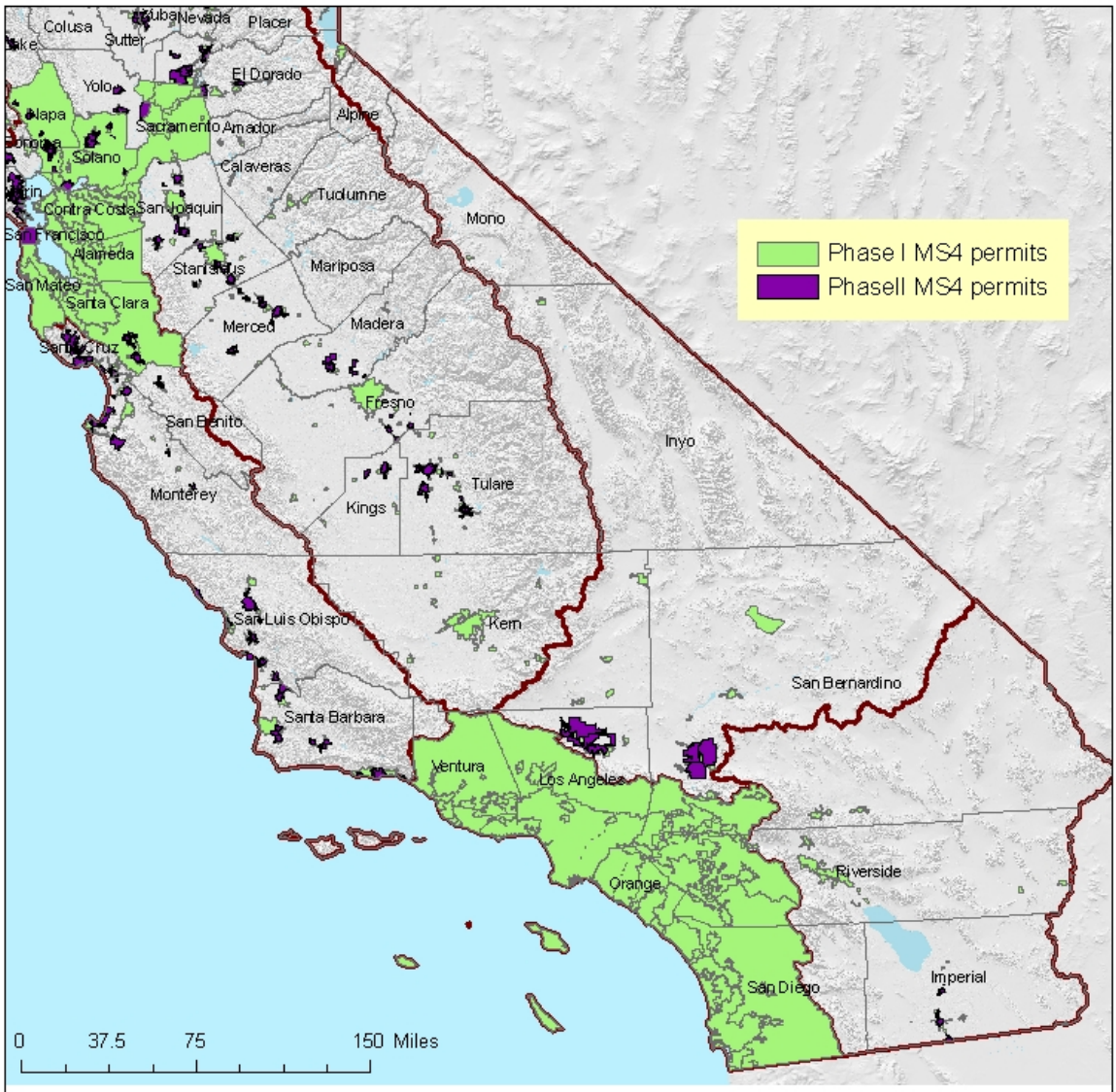



**Figure 3 - Northern CA (2009) Counties / Cities With SUSMP-Plus Coverage**




Stormwater Municipal Permit Coverage for California

**Figure 4 - Southern CA (2009) Counties / Cities With SUSMP-Plus Coverage**

Water Quality:
This General Permit requires dischargers to replicate the pre-project runoff water balance (defined as the amount of rainfall that ends up as runoff) for the smallest storms up to the 85th percentile storm event, or the smallest storm event that generates runoff, whichever is larger. Contemporary storm water management generally routes these flows directly to the drainage system, increasing pollutant loads and potentially causing adverse effects on receiving waters. These smaller water quality events happen much more frequently than larger events and generate much higher pollutant loads on an annual basis. There are other adverse hydrological impacts that result from not designing according to the site's pre-construction water balance. In Maryland, Klein[20] noted that baseflow decreases as the extent of urbanization increases. Ferguson and Suckling[21] noted a similar relation in watersheds in Georgia. On Long Island, Spinello and Simmons[22] noted substantial decreases in base flow in intensely urbanized watersheds.

The permit emphasizes runoff reduction through on-site storm water reuse, interception, evapo-transpiration and infiltration through non-structural controls and conservation design measures (e.g., downspout disconnection, soil quality preservation/enhancement, interceptor trees). Employing these measures close to the source of runoff generation is the easiest and most cost-effective way to comply with the pre-construction water balance standard. Using low-tech runoff reduction techniques close to the source is consistent with a number of recommendations in the literature.[23] In many cases, BMPs implemented close to the source of runoff generation cost less than end-of the pipe measures.[24] Dischargers are given the option of using Appendix 2 to calculate the required runoff volume or a watershed process-based, continuous simulation model such as the EPA's Storm Water Management Model (SWMMM) or Hydrologic Simulation Program Fortran (HSPF). Such methods used by the discharger will be reviewed by the Regional Water Board upon NOT application.

Channel Protection:
In order to address channel protection, a basic understanding of fluvial geomorphic concepts is necessary. A dominant paradigm in fluvial geomorphology holds that streams adjust their channel dimensions (width and depth) in response to long-term changes in sediment supply and bankfull discharge (1.5 to 2 year recurrence interval). The bankfull stage corresponds to the discharge at which channel maintenance is the most effective, that is, the discharge at which the moving sediment, forming or removing bars, forming or changing bends and meanders, and generally doing work that results in the average morphologic characteristics of channels.[25] Lane (1955 as cited in Rosgen 1996[26]) showed the generalized relationship between sediment load, sediment size, stream discharge and stream slope in

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[20] Klein 1979 as cited in Delaware Department of Natural Resources (DDNR). 2004. Green Technology: The Delaware Urban Runoff Management Approach. Dover, DE. 117 pp.
[21] Ferguson and Suckling 1990 as cited Delaware Department of Natural Resources (DDNR). 2004. Green Technology: The Delaware Urban Runoff Management Approach. Dover, DE. 117 pp.
[22] Center for Watershed Protection (CWP). 2000. The Practice of Watershed Protection: Techniques for protecting our nation's streams, lakes, rivers, and estuaries. Ellicott City, MD. 741 pp.
[23] Bay Area Storm Water Management Agencies Association (BASMAA). 1997. Start at the Source: Residential Site Planning and Design Guidance Manual for Storm Water Quality Protection. Palo Alto, CA;
McCuen, R.H. 2003 Smart Growth: hydrologic perspective. Journal of Professional Issues in Engineering Education and Practice. Vol (129), pp.151-154;
Moglen, G.E. and S. Kim. 2007. Impervious imperviousness-are threshold based policies a good idea? Journal of the American Planning Association, Vol 73 No. 2. pp 161-171.
[24] Delaware Department of natural Resources (DDNR). 2004. Green technology: The Delaware urban Runoff Management Approcah. Dover, DE. 117 pp.
[25] Dunne, T and L.B. Leopold. 1978. Water in Environmental Planning. San Francisco W.H. Freeman and Company
[26] Rosgen. D.L. 1996. Applied River Morphology. Pagosa Springs. Wildland Hydrology

Figure 5. A change in any one of these variables sets up a series of mutual adjustments in the companion variables with a resulting direct change in the physical characteristics of the stream channel.

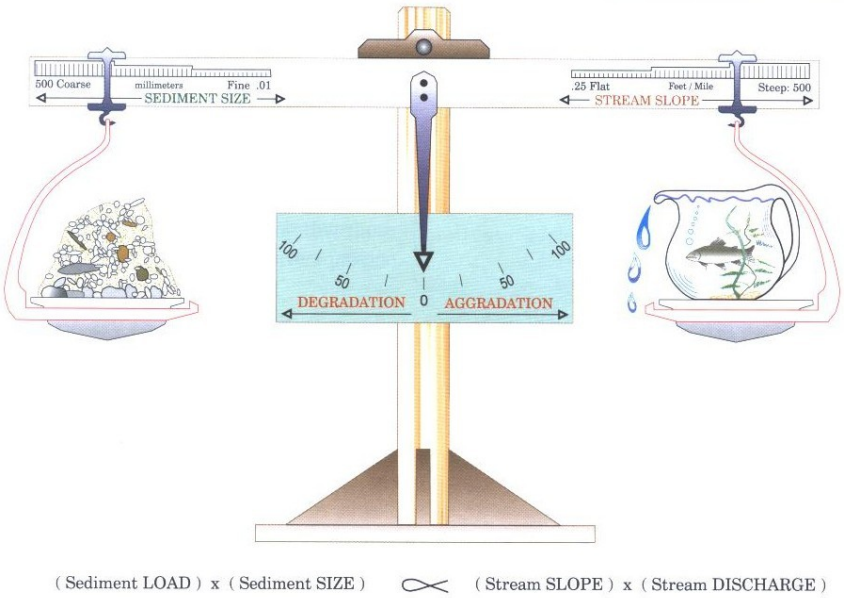


**Figure 5 - Schematic of the Lane Relationship**

**After Lane (1955) as cited in Rosgen (1996)**

Stream slope multiplied by stream discharge (the right side of the scale) is essentially an approximation of stream power, a unifying concept in fluvial geomorphology (Bledsoe 1999). Urbanization generally increases stream power and affects the resisting forces in a channel (sediment load and sediment size represented on the left side of the scale).

During construction, sediment loads can increase from 2 to 40,000 times over pre-construction levels.[27] Most of this sediment is delivered to stream channels during large, episodic rain events.[28] This increased sediment load leads to an initial aggradation phase where stream depths may decrease as sediment fills the channel, leading to a decrease in channel capacity and increase in flooding and overbank deposition. A degradation phase initiates after construction is completed.

Schumm et. al (1984) developed a channel evolution model that describes the series of adjustments from initial downcutting, to widening, to establishing new floodplains at lower elevations (Figure 6).

[27] Goldman S.J., K. Jackson, and T.A. Bursztynsky. 1986. Erosion and Sediment Control Handbook. McGraw Hill. San Francisco.
[28] Wolman 1967 as cited in Paul, M.P. and J.L. Meyer. 2001. Streams in the Urban Landscape. *Annu. Rev.Ecol. Syst.* 32: 333-365.

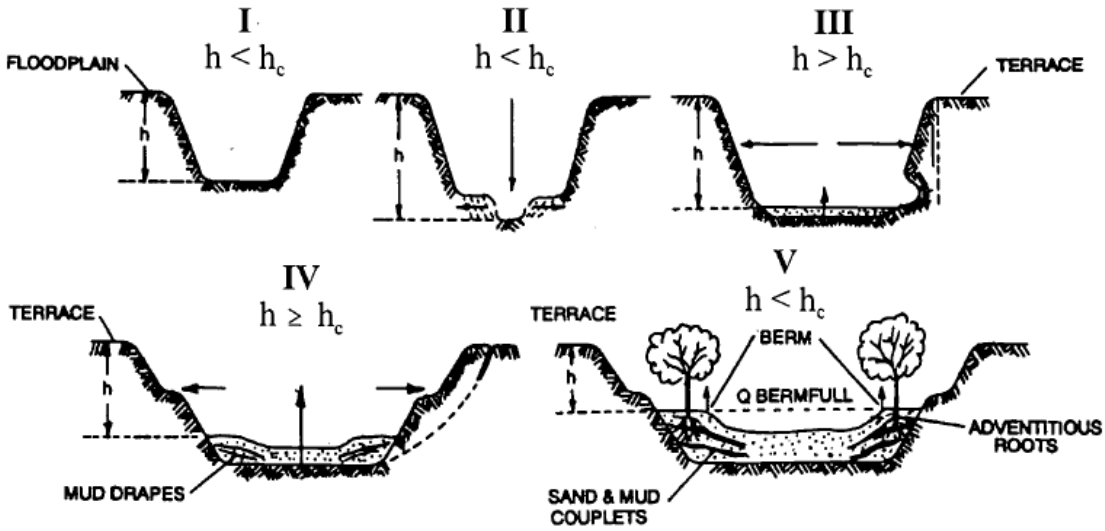


**Figure 6 - Channel Changes Associated with Urbanization**

After Incised Channel Evolution Sequence in Schumm et. al 1984

Channel incision (Stage II) and widening (Stages III and to a lesser degree, Stage IV) are due to a number of fundamental changes on the landscape. Connected impervious area and compaction of pervious surfaces increase the frequency and volume of bankfull discharges.[29] Increased drainage density (miles of stream length per square mile of watershed) also negatively impacts receiving stream channels.[30] Increased drainage density and hydraulic efficiency leads to an increase in the frequency and volume of bankfull discharges because the time of concentration is shortened. Flows from engineered pipes and channels are also often "sediment starved" and seek to replenish their sediment supply from the channel.

Encroachment of stream channels can also lead to an increase in stream slope, which leads to an increase in stream power. In addition, watershed sediment loads and sediment size (with size generally represented as the median bed and bank particle size, or $d_{50}$) decrease during urbanization.[31] This means

[29] Booth, D. B. and C. R. Jackson. 1997. Urbanization of Aquatic Systems: Degradation Thresholds, Storm Water Detection, and the Limits of Mitigation. Journal of the American Water Resources Association Vol. 33, No.5, pp. 1077-1089.

[30] May, C.W. 1998. Cumulative effects of urbanization on small streams in the Puget Sound Lowland ecoregion. Conference proceedings from Puget Sound Research '98 held March 12, 13 1998 in Seattle, WA;
Santa Clara Valley Urban Runoff Pollution Prevention Program. 2002. Hydromodification Management Plan Literature Review. 80 pp.

[31] Finkenbine, J.K., D.S. Atwater, and D.S. Mavinic. 2000. Stream health after urbanization. *J. Am. Water Resour. Assoc.* 36:1149-60;

that even if pre- and post-development stream power are the same, more erosion will occur in the post-development stage because the smaller particles are less resistant (provided they are non-cohesive).

As shown in Stages II and III, the channel deepens and widens to accommodate the increased stream power [32]and decrease in sediment load and sediment size. Channels may actually narrow as entrained sediment from incision is deposited laterally in the channel. After incised channels begin to migrate laterally (Stage III), bank erosion begins, which leads to general channel widening.[33] At this point, a majority of the sediment that leaves a drainage area comes from within the channel, as opposed to the background and construction related hillslope contribution. Stage IV is characterized by more aggradation and localized bank instability. Stage V represents a new quasi-equilibrium channel morphology in balance with the new flow and sediment supply regime. In other words, stream power is in balance with sediment load and sediment size.

The magnitude of the channel morphology changes discussed above varies along a stream network as well as with the age of development, slope, geology (sand-bedded channels may cycle through the evolution sequence in a matter of decades whereas clay-dominated channels may take much longer), watershed sediment load and size, type of urbanization, and land use history. It is also dependent on a channel's stage in the channel evolution sequence when urbanization occurs. Management strategies

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Pizzuto, J.E. W.S. Hession, and M. McBride. 2000. Comparing gravel-bed rivers in paired urban and rural catchments of southeastern Pennsylvania. *Geology* 28:79-82.

[32] Hammer 1973 as cited in Delaware Department of Natural Resources (DDNR). 2004. Green Technology: The Delaware Urban Runoff Management Approach. Dover, DE. 117 pp;
Booth, D.B. 1990. Stream Channel Incision Following Drainage Basin Urbanization. *Water Resour. Bull.* 26:407-417.

[33] Trimble, S.W. 1997. Contribution of Stream Channel Erosion to Sediment Yield from an Urbanizing Watershed. *Science*: Vol. 278 (21), pp. 1442-1444.

must take into account a channel's stage of adjustment and account for future changes in the evolution of channel form (Stein and Zaleski 2005). [34]

Traditional structural water quality BMPs (e.g. detention basins and other devices used to store volumes of runoff) unless they are highly engineered to provide adequate flow duration control, do not adequately protect receiving waters from accelerated channel bed and bank erosion, do not address post-development increases in runoff volume, and do not mitigate the decline in benthic macroinvertebrate communities in the receiving waters[35] suggest that structural BMPs are not as effective in protecting aquatic communities as a continuous riparian buffer of native vegetation. This is supported by the findings of Zucker and White[36], where instream biological metrics were correlated with the extent of forested buffers.

This General Permit requires dischargers to maintain pre-development drainage densities and times of concentration in order to protect channels and encourages dischargers to implement setbacks to reduce channel slope and velocity changes that can lead to aquatic habitat degradation.

There are a number of other approaches for modeling fluvial systems, including statistical and physical models and simpler stream power models.[37] The use of these models in California is described in Stein and Zaleski (2005).[38] Rather than prescribe a specific one-size-fits-all modeling method in this permit, the State Water Board intends to develop a stream power and channel evolution model-based framework to assess channels and develop a hierarchy of suitable analysis methods and management strategies. In time, this framework may become a State Water Board water quality control policy.

Permit Linkage to Overbank and Extreme Flood Protection
Site design BMPs (e.g. rooftop and impervious disconnection, vegetated swales, setbacks and buffers) filter and settle out pollutants and provide for more infiltration than is possible for traditional centralized structural BMPs placed at the lowest point in a site. They provide source control for runoff and lead to a reduction in pollutant loads. When implemented, they also help reduce the magnitude and volume of larger, less frequent storm events (e.g., 10-yr, 24-hour storm and larger), thereby reducing the need for expensive flood control infrastructure. Nonstructural BMPs can also be a landscape amenity, instead of a large isolated structure requiring substantial area for ancillary access, buffering, screening and maintenance facilities.[25] The multiple benefits of using non-structural benefits will be critically important as the state's population increases and imposes strains upon our existing water resources.

Maintaining predevelopment drainage densities and times of concentration will help reduce post-development peak flows and volumes in areas not covered under a municipal permit. The most effective way to preserve drainage areas and maximize time of concentration is to implement landform grading,

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[34] Stein, E.S. and S. Zaleski. 2005.Managing runoff to protect natural stream: the latest developments on investigation and management of hydromodification in California. Southern California Coastal Water Research Project Technical Report 475. 26 pp.
[35] Horner, R.R. 2006. Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices (LID) for the San Diego Region. Available at: http://www.projectcleanwater.org/pdf/permit/case-study_lid.pdf.
[36] Delaware Department of Natural Resources (DDNR). 2004. Green Technology: The Delaware Urban Runoff Management Approach. Dover, DE. 117 pp.
[37] Finlayson, D.P. and D.R. Montgomery. 2003. Modeling large-scale fluvial erosion in geographic information systems. Geomorphology (53), pp. 147-164).
[38] Stein, E.S. and S. Zaleski. 2005.Managing runoff to protect natural stream: the latest developments on investigation and management of hydromodification in California. Southern California Coastal Water Research Project Technical Report 475. 26 pp.

incorporate site design BMPs and implement distributed structural BMPs (e.g., bioretention cells, rain gardens, rain cisterns).

## M. Storm Water Pollution Prevention Plans

USEPA's Construction General Permit requires that qualified personnel conduct inspections. USEPA defines qualified personnel as "a person knowledgeable in the principles and practice of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity."[39] USEPA also suggests that qualified personnel prepare SWPPPs and points to numerous states that require certified professionals to be on construction sites at all times. States that currently have certification programs are Washington, Georgia, Florida, Delaware, Maryland, and New Jersey. The Permit 99-08-DWQ did not require that qualified personnel prepare SWPPPs or conduct inspections. However, to ensure that water quality is being protected, this General Permit requires that all SWPPPs be written, amended, and certified by a Qualified SWPPP Developer. A Qualified SWPPP Developer must possess one of the eight certifications and or registrations specified in this General Permit and effective two years after the adoption date of this General Permit, must have attended a State Water Board-sponsored or approved Qualified SWPPP Developer training course. Table 9 provides an overview of the criteria used in determining qualified certification titles for a QSD and QSP.

39 US Environmental Protection Agency. Stormwater Pollution Prevention Plans for Construction Activities. <http://cfpub.epa.gov/npdes/stormwater/swppp.cfm> and <http://www.epa.gov/npdes/pubs/sw_swppp_guide.pdf>.

Table 9 - Qualified SWPPP Developer/ Qualified SWPPP Practitioner Certification Criteria

| Certification/ Title | Registered By | QSD/QSP | Certification Criteria |
|---|---|---|---|
| Professional Civil Engineer | California | Both | 1. Approval Process<br>2. Code of Ethics<br>3. Accountability<br>4. Pre-requisites |
| Professional Geologist or Engineering Geologist | California | Both | 1. Approval Process<br>2. Code of Ethics<br>3. Accountability<br>4. Pre-requisites |
| Landscape Architect | California | Both | 1. Approval Process<br>2. Code of Ethics<br>3. Accountability<br>4. Pre-requisites |
| Professional Hydrologist | American Institute of Hydrology | Both | 1. Approval Process<br>2. Code of Ethics<br>3. Accountability<br>4. Pre-requisites |
| Certified Professional in Erosion and Sediment Control™ (CPESC) | Enviro Cert International Inc. | Both | 1. Approval Process<br>2. Code of Ethics<br>3. Accountability<br>4. Pre-requisites<br>5. Continuing Education |
| Certified Inspector of Sediment and Erosion Control™ (CISEC) | Certified Inspector of Sediment and Erosion Control, Inc. | QSP | 1. Approval Process<br>2. Code of Ethics<br>3. Accountability<br>4. Pre-requisites<br>5. Continuing Education |
| Certified Erosion, Sediment and Storm Water Inspector™ (CESSWI) | Enviro Cert International Inc. | QSP | 1. Approval Process<br>2. Code of Ethics<br>3. Accountability<br>4. Pre-requisites<br>5. Continuing Education |
| Certified Professional in Storm Water Quality™ (CPSWQ) | Enviro Cert International Inc. | Both | 1. Approval Process<br>2. Code of Ethics<br>3. Accountability<br>4. Pre-requisites<br>5. Continuing Education |

The previous versions of the General Permit required development and implementation of a SWPPP as the primary compliance mechanism. The SWPPP has two major objectives: (1) to help identify the sources of sediment and other pollutants that affect the quality of storm water discharges; and (2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in storm water and non-storm water discharges. The SWPPP must include BMPs that address source control, BMPs that address pollutant control, and BMPs that address treatment control.

This General Permit shifts some of the measures that were covered by this general requirement to specific permit requirements, each individually enforceable as a permit term. This General Permit emphasizes the use of appropriately selected, correctly installed and maintained pollution reduction BMPs. This approach provides the flexibility necessary to establish BMPs that can effectively address source control of pollutants during changing construction activities. These specific requirements also improve both the clarity and the enforceability of the General Permit so that the dischargers understand, and the public can determine whether the discharges are in compliance with, permit requirements.

The SWPPP must be implemented at the appropriate level to protect water quality at all times throughout the life of the project. The SWPPP must remain on the site during construction activities, commencing with the initial mobilization and ending with the termination of coverage under the General Permit. For LUPs the discharger shall make the SWPPP available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio or telephone. Once construction activities are complete, until stabilization is achieved, the SWPPP shall be available from the SWPPP contact listed in the PRDs

A SWPPP must be appropriate for the type and complexity of a project and will be developed and implemented to address project specific conditions. Some projects may have similarities or complexities, yet each project is unique in its progressive state that requires specific description and selection of BMPs needed to address all possible generated pollutants

## N. Regional Water Board Authorities

Because this General Permit will be issued to thousands of construction sites across the State, the Regional Water Boards retain discretionary authority over certain issues that may arise from the discharges in their respective regions. This General Permit does not grant the Regional Water Boards any authority they do not otherwise have; rather, it merely emphasizes that the Regional Water Boards can take specific actions related to this General Permit. For example, the Regional Water Boards will be enforcing this General Permit and may need to adjust some requirements for a discharger based on the discharger's compliance history.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

GENERAL PERMIT FOR
STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES

ORDER
NPDES NO. CAS000001

| | |
|---|---|
| This Order was adopted by the State Water Resources Control Board on: | **April 1, 2014** |
| This Order shall become effective on: | **July 1, 2015** |
| This Order shall expire on: | **June 30, 2020** |

IT IS HEREBY ORDERED that as of July 1, 2015 this Order supersedes Order 97-03-DWQ except for Order 97-03-DWQ's requirement to submit annual reports by July 1, 2015 and except for enforcement purposes. As of July 1, 2015, a Discharger shall comply with the requirements in this Order to meet the provisions contained in Division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act and regulations and guidelines adopted thereunder.

## CERTIFICATION

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order, including its fact sheet, attachments, and appendices is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board, on April 1, 2014.

| | |
|---|---|
| AYE: | Chair Felicia Marcus<br>Vice Chair Frances Spivy-Weber<br>Board Member Tam M. Doduc<br>Board Member Steven Moore |
| NAY: | None |
| ABSENT: | Board Member Dorene D'Adamo |
| ABSTAIN: | None |

Jeanine Townsend
Clerk to the Board

# TABLE OF CONTENTS



## TABLES



## ATTACHMENTS AND APPENDICES

# I. FINDINGS

## A. General Findings

The State Water Resources Control Board (State Water Board) finds that:

1. The Federal Clean Water Act (Clean Water Act) prohibits certain discharges of storm water containing pollutants except in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. (33 U.S.C. §§ 1311, 1342 (also referred to as Clean Water Act §§ 301, 402).) The United States Environmental Protection Agency (U.S. EPA) promulgates federal regulations to implement the Clean Water Act's mandate to control pollutants in storm water discharges. (40 C.F.R. § 122, et seq.) The NPDES permit must require implementation of Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges (NSWDs). The NPDES permit must also include additional requirements necessary to implement applicable water quality objectives or water quality standards (water quality standards, collectively).

2. On November 16, 1990, U.S. EPA promulgated Phase I storm water regulations in compliance with section 402(p) of the Clean Water Act. (55 Fed. Reg. 47990, codified at 40 C.F.R. § 122.26.) These regulations require operators of facilities subject to storm water permitting (Dischargers), that discharge storm water associated with industrial activity (industrial storm water discharges), to obtain an NPDES permit. Section 402(p)(3)(A) of the Clean Water Act also requires that permits for discharges associated with industrial activity include requirements necessary to meet water quality standards.

3. Phase II storm water regulations[1] require permitting for storm water discharges from facilities owned and operated by a municipality with a population of less than 100,000. The previous exemption from the Phase I permitting requirements under section 1068 of the Intermodal Surface Transportation Efficiency Act of 1991 was eliminated.

4. This Order (General Permit) is an NPDES General Permit issued in compliance with section 402 of the Clean Water Act and shall take effect on July 1, 2015, provided that the Regional Administrator of U.S. EPA has no objection. If the U.S. EPA Regional Administrator has an objection, this General Permit will not become effective until the objection is withdrawn.

5. This action to adopt an NPDES General Permit is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000, et seq.) in accordance with section 13389 of the Water Code. (See *County of*

[1] U.S. EPA. Final NPDES Phase II Rule. <http://cfpub.epa.gov/npdes/stormwater/swfinal.cfm>. [as of February 4, 2014]

*Los Angeles v. California State Water Resources Control Bd.* (2006) 143 Cal.App.4th 985.)

6. State Water Board Order 97-03-DWQ is rescinded as of the effective date of this General Permit (July 1, 2015) except for Order 97-03-DWQ's requirement that annual reports be submitted by July1, 2015 and except for enforcement purposes.

7. Effective July 1, 2015, the State Water Board and the Regional Water Quality Control Boards (Regional Water Boards) (Water Boards, collectively) will enforce the provisions herein.

8. This General Permit authorizes discharges of industrial storm water to waters of the United States, so long as those discharges comply with all requirements, provisions, limitations, and prohibitions in this General Permit.

9. Industrial activities covered under this General Permit are described in Attachment A.

10. The Fact Sheet for this Order is incorporated as findings of this General Permit.

11. Acronyms are defined in Attachment B and terms used in this General Permit are defined in Attachment C.

12. This General Permit regulates industrial storm water discharges and authorized NSWDs from specific categories of industrial facilities identified in Attachment A hereto, and industrial storm water discharges and authorized NSWDs from facilities designated by the Regional Water Boards to obtain coverage under this General Permit. This General Permit does not apply to industrial storm water discharges and NSWDs that are regulated by other individual or general NPDES permits

13. This General Permit does not preempt or supersede the authority of municipal agencies to prohibit, restrict, or control industrial storm water discharges and authorized NSWDs that may discharge to storm water conveyance systems or other watercourses within their jurisdictions as allowed by state and federal law.

14. All terms defined in the Clean Water Act, U.S. EPA regulations, and the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000, et seq.) will have the same definition in this General Permit unless otherwise stated.

15. Pursuant to 40 Code of Federal Regulations section 131.12 and State Water Board Resolution 68-16, which incorporates the requirements of 40 Code of Federal Regulations section 131.12 where applicable, the State Water Board finds that discharges in compliance with this General Permit will not result in the lowering of water quality to a level that does not achieve water quality objectives and protect beneficial uses. Any degradation of water quality from existing high quality water to a level that achieves water quality objectives and

protects beneficial uses is appropriate to support economic development. This General Permit's requirements constitute best practicable treatment or control for discharges of industrial storm water and authorized non-storm water discharges, and are therefore consistent with those provisions.

16. Compliance with any specific limits or requirements contained in this General Permit does not constitute compliance with any other applicable permits.

17. This General Permit requires that the Discharger certify and submit all Permit Registration Documents (PRDs) for Notice of Intent (NOI) and No Exposure Certification (NEC) coverage via the State Water Board's Storm Water Multiple Application and Report Tracking System (SMARTS) website. (See Attachment D for an example of the information required to be submitted in the PRDs via SMARTS.) All other documents required by this General Permit to be electronically certified and submitted via SMARTS can be submitted by the Discharger or by a designated Duly Authorized Representative on behalf of the Discharger. Electronic reporting is required to reduce the state's reliance on paper, to improve efficiency, and to make such General Permit documents more easily accessible to the public and the Water Boards.

18. All information provided to the Water Boards shall comply with the Homeland Security Act and all other federal law that concerns security in the United States, as applicable.

## B. Industrial Activities Not Covered Under this General Permit

19. Discharges of storm water from areas on tribal lands are not covered under this General Permit. Storm water discharges from industrial facilities on tribal lands are regulated by a separate NPDES permit issued by U.S. EPA.

20. Discharges of storm water regulated under another individual or general NPDES permit adopted by the State Water Board or Regional Water Board are not covered under this General Permit, including the State Water Board NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities.

21. Storm water discharges to combined sewer systems are not covered under this General Permit. These discharges must be covered by an individual permit. (40 C.F.R. § 122.26(a)(7).)

22. Conveyances that discharge storm water runoff combined with municipal sewage are not covered under this General Permit.

23. Discharges of storm water identified in Clean Water Act section 402(l) (33 U.S.C. § 1342(l)) are not covered under this General Permit.

24. Facilities otherwise subject to this General Permit but for which a valid Notice of Non-Applicability (NONA) has been certified and submitted via SMARTS, by the Entity are not covered under this General Permit. Entities (See Section XX.C.1 of this General Permit) who are claiming "No Discharge"

through the NONA shall meet the eligibility requirements and provide a No Discharge Technical Report in accordance with Section XX.C.

25. This General Permit does not authorize discharges of dredged or fill material regulated by the US Army Corps of Engineers under section 404 of the Clean Water Act and does not constitute a water quality certification under section 401 of the Clean Water Act.

## C. Discharge Prohibitions

26. Pursuant to section 13243 of the Water Code, the State Water Board may specify certain conditions or areas where the discharge of waste, or certain types of waste, is prohibited.

27. With the exception of certain authorized NSWDs as defined in Section IV, this General Permit prohibits NSWDs. The State Water Board recognizes that certain NSWDs should be authorized because they are not generated by industrial activity, are not significant sources of pollutants when managed appropriately, and are generally unavoidable because they are related to safety or would occur regardless of industrial activity. Prohibited NSWDs may be authorized under other individual or general NPDES permits, or waste discharge requirements issued by the Water Boards.

28. Prohibited NSWDs are referred to as unauthorized NSWDs in this General Permit. Unauthorized NSWDs shall be either eliminated or permitted by a separate NPDES permit. Unauthorized NSWDs may contribute significant pollutant loads to receiving waters. Measures to control sources of unauthorized NSWDs such as spills, leakage, and dumping, must be addressed through the implementation of Best Management Practices (BMPs).

29. This General Permit incorporates discharge prohibitions contained in water quality control plans, as implemented by the Water Boards.

30. Direct discharges of waste, including industrial storm water discharges, to Areas of Special Biological Significance (ASBS) are prohibited unless the Discharger has applied for and the State Water Board has granted an exception to the State Water Board's 2009 Water Quality Control Plan for Ocean Waters of California as amended by State Water Board Resolution 2012-0056 (California Ocean Plan)[2] allowing the discharge.

[2] State Water Resources Control Board. Ocean Standards Web Page. <http://www.waterboards.ca.gov/water_issues/programs/ocean/>. [as of February 4, 2014].
State Water Resources Control Board. Water Quality Control Plan for Ocean Waters of California 2009. <http://www.waterboards.ca.gov/water_issues/programs/ocean/docs/2009_cop_adoptedeffective_usepa.pdf>. [as of February 4, 2014].
State Water Resources Control Board. Resolution 2012-0056. <http://www.swrcb.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0056.pdf>. [as of February 4, 2014].

## D. Effluent Limitations

31. Section 301(b) of the Clean Water Act and 40 Code of Federal Regulations section require NPDES permits to include technology-based requirements at a minimum, and any more stringent effluent limitations necessary for receiving waters to meet applicable water quality standards. Clean Water Act section 402(p)(3)(A) requires that discharges of storm water runoff from industrial facilities comply with Clean Water Act section 301.

32. This General Permit requires control of pollutant discharges using BAT and BCT to reduce and prevent discharges of pollutants, and any more stringent effluent limitations necessary for receiving waters to meet applicable water quality standards.

33. It is not feasible for the State Water Board to establish numeric technology based effluent limitations for discharges authorized by this General Permit at this time. The rationale for this determination is discussed in detail in the Fact Sheet of this General Permit. Therefore, this General Permit requires Dischargers to implement minimum BMPs and applicable advanced BMPs as defined in Section X.H (collectively, BMPs) to comply with the requirements of this General Permit. This approach is consistent with U.S. EPA's 2008 Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (2008 MSGP).

34. 40 Code of Federal Regulations section 122.44(d) requires that NPDES permits include Water Quality Based Effluent Limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality standards for receiving waters.

35. Where numeric water quality criteria have not been established, 40 Code of Federal Regulations section 122.44(d)(1)(vi) provides that WQBELs may be established using U.S. EPA criteria guidance under section 304(a) of the Clean Water Act, a proposed state criteria or policy interpreting narrative criteria supplemented with other relevant information, and/or an indicator parameter.

36. This General Permit requires Dischargers to implement BMPs when necessary, in order to support attainment of water quality standards. The use of BMPs to control or abate the discharge of pollutants is authorized by 40 Code of Federal Regulations section 122.44(k)(3) because numeric effluent limitations are infeasible and implementation of BMPs is reasonably necessary to achieve effluent limitations and water quality standards, and to carry out the purposes and intent of the Clean Water Act. (40 C.F.R. § 122.44(k)(4).)

## E. Receiving Water Limitations

37. This General Permit requires compliance with receiving water limitations based on water quality standards. The primary receiving water limitation requires that industrial storm water discharges and authorized NSWDs not

cause or contribute to an exceedance of applicable water quality standards. Water quality standards apply to the quality of the receiving water, not the quality of the industrial storm water discharge. Therefore, compliance with the receiving water limitations generally cannot be determined solely by the effluent water quality characteristics. If any Discharger's storm water discharge causes or contributes to an exceedance of a water quality standard, that Discharger must implement additional BMPs or other control measures in order to attain compliance with the receiving water limitation. Compliance with water quality standards may, in some cases, require Dischargers to implement controls that are more protective than controls implemented solely to comply with the technology-based requirements in this General Permit.

## F. Total Maximum Daily Loads (TMDLs)

38. TMDLs relate to the maximum amount of a pollutant that a water body can receive and still attain water quality standards. A TMDL is defined as the sum of the allowable loads of a single pollutant from all contributing point sources (the waste load allocations) and non-point sources (load allocations), plus the contribution from background sources. (40 C.F.R. § 130.2(i).) Discharges addressed by this General Permit are considered to be point source discharges, and therefore must comply with effluent limitations that are "consistent with the assumptions and requirements of any available waste load allocation for the discharge prepared by the state and approved by U.S. EPA pursuant to 40 Code of Federal Regulations section 130.7. (40 C.F.R. § 122.44 (d)(1)(vii).) In addition, Water Code section 13263, subdivision (a), requires that waste discharge requirements implement any relevant water quality control plans. Many TMDLs contained in water quality control plans include implementation requirements in addition to waste load allocations. Attachment E of this General Permit lists the watersheds with U.S. EPA-approved and U.S. EPA-established TMDLs that include requirements, including waste load allocations, for Dischargers covered by this General Permit.

39. The State Water Board recognizes that it is appropriate to develop TMDL-specific permit requirements derived from each TMDL's waste load allocation and implementation requirements, in order to provide clarity to Dischargers regarding their responsibilities for compliance with applicable TMDLs. The development of TMDL-specific permit requirements is subject to public noticing requirements and a corresponding public comment period. Due to the number and variety of Dischargers subject to a wide range of TMDLs, development of TMDL-specific permit requirements for each TMDL listed in Attachment E will severely delay the reissuance of this General Permit. Because most of the TMDLs were established by the Regional Water Boards, and because some of the waste load allocations and/or implementation requirements may be shared by multiple Dischargers, the development of TMDL-specific permit requirements is best coordinated at the Regional Water Board level.

40. State and Regional Water Board staff will develop proposed TMDL-specific permit requirements (including monitoring and reporting requirements) for each of the TMDLs listed in Attachment E. After conducting a 30-day public comment period, the Regional Water Boards will submit to the State Water Board proposed TMDL-specific permit requirements for adoption by the State Water Board into this General Permit by July 1, 2016. The Regional Water Boards may also include proposed TMDL-specific monitoring requirements for inclusion in this General Permit, or may issue Regional Water Board orders pursuant to Water Code section 13383 requiring TMDL-specific monitoring. The proposed TMDL-specific permit requirements shall have no force or effect until adopted, with or without modification, by the State Water Board. Consistent with the 2008 MSGP, Dischargers are not required to take any additional actions to comply with the TMDLs listed in Attachment E until the State Water Board reopens this General Permit and includes TMDL-specific permit requirements, unless notified otherwise by a Regional Water Board.

41. The Regional Water Boards shall submit to the State Water Board the following information for each of the TMDLs listed in Attachment E:

    a. Proposed TMDL-specific permit, monitoring and reporting requirements applicable to industrial storm water discharges and NSWDs authorized under this General Permit, including compliance schedules and deliverables consistent with the TMDLs. TMDL-specific permit requirements are not limited by the BAT/BCT technology-based standards;

    b. An explanation of how the proposed TMDL-specific permit requirements, compliance schedules, and deliverables are consistent with the assumptions and requirements of any applicable waste load allocation and implement each TMDL; and,

    c. Where a BMP-based approach is proposed, an explanation of how the proposed BMPs will be sufficient to implement applicable waste load allocations.

42. Upon receipt of the information described in Finding 40, and no later than July 1, 2016, the State Water Board will issue a public notice and conduct a public comment period for the reopening of this General Permit to amend Attachment E, the Fact Sheet, and other provisions as necessary for incorporation of TMDL-specific permit requirements into this General Permit. Attachment E may also be subsequently reopened during the term of this General Permit to incorporate additional TMDL-specific permit requirements.

## G. Discharges Subject to the California Ocean Plan

43. On October 16, 2012 the State Water Board amended the California Ocean Plan. The amended California Ocean Plan requires industrial storm water dischargers with outfalls discharging to ocean waters to comply with the

California Ocean Plan's model monitoring provisions. These provisions require Dischargers to: (a) monitor runoff for specific parameters at all outfalls from two storm events per year, and collect at least one representative receiving water sample per year, (b) conduct specified toxicity monitoring at certain types of outfalls at a minimum of once per year, and (c) conduct marine sediment monitoring for toxicity under specific circumstances. The California Ocean Plan provides conditions under which some of the above monitoring provisions may be waived by the Water Boards.

44. This General Permit requires Dischargers with outfalls discharging to ocean waters that are subject to the model monitoring provisions of the California Ocean Plan to develop and implement a monitoring plan in compliance with those provisions and any additional monitoring requirements established pursuant to Water Code section 13383. Dischargers that have not developed and implemented a monitoring program in compliance with the California Ocean Plan's model monitoring provisions by July 1, 2015 (the effective date of this General Permit), or seven (7) days prior to commencing operations, whichever is later, are ineligible to obtain coverage under this General Permit.

45. The California Ocean Plan prohibits the direct discharge of waste to ASBS. ASBS are defined in California Ocean Plan as "those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable."

46. The California Ocean Plan authorizes the State Water Board to grant an exception to Ocean Plan provisions where the board determines that the exception will not compromise protection of ocean waters for beneficial uses and the public interest will be served.

47. On March 20, 2012, the State Water Board adopted Resolution 2012-0012 which contains exceptions to the California Ocean Plan for specific discharges of storm water and non-point sources. This resolution also contains the special protections that are to be implemented for those discharges to ASBS.

48. This General Permit requires Dischargers who have been granted an exception to the Ocean Plan authorizing the discharges to ASBS by the State Water Board to comply with the requirements contained in Section VIII.B of this General Permit.

## H. Training

49. To improve compliance and maintain consistent implementation of this General Permit, Dischargers are required to designate a Qualified Industrial Storm Water Practitioner (QISP) for each facility the Discharger operates that has entered Level 1 status in the Exceedance Response Action (ERA) process as described in Section XII of this General Permit. A QISP may be assigned to more than one facility. In order to qualify as a QISP, a State

Water Board-sponsored or approved training course must be completed. A competency exam may be required by the State Water Board to demonstrate sufficient knowledge of the QISP course material.

50. A QISP must assist the Discharger in completing the Level 1 status and Level 2 status ERA requirements as specified in Section XII of this General Permit. A QISP is also responsible for assisting New Dischargers that will be discharging to an impaired water body with a 303(d) listed impairment, demonstrate eligibility for coverage through preparing the data and/or information required in Section VII.B.

51. A Compliance Group Leader, as defined in Section XIV of this General Order must complete a State Water Board sponsored or approved training program for Compliance Group Leaders.

52. All engineering work subject to the Professional Engineers Act (Bus. & Prof. Code § 6700, et seq.) and required by this General Permit shall be performed by a California licensed professional engineer.

53. California licensed professional civil, industrial, chemical, and mechanical engineers and geologists have licenses that have professional overlap with the topics of this General Permit. The California Department of Consumer Affairs, Board for Professional Engineers, Land Surveyors and Geologists (CBPELSG) provides the licensure and regulation of professional civil, industrial, chemical, and mechanical engineers and professional geologists in California. The State Water Board is developing a specialized self-guided State Water Board-sponsored registration and training program specifically for these CPBELSG licensed engineers and geologists in good standing with CBPELSG.

## I. Storm Water Pollution Prevention Plan (SWPPP) Requirements

54. This General Permit requires the development of a site-specific SWPPP in accordance with Section X of this General Permit. The SWPPP must include the information needed to demonstrate compliance with the requirements of this General Permit. The SWPPP must be submitted electronically via SMARTS, and a copy be kept at the facility. SWPPP revisions shall be completed in accordance with Section X.B of this General Permit

## J. Sampling, Visual Observations, Reporting and Record Keeping

55. This General Permit complies with 40 Code of Federal Regulations section 122.44(i), which establishes monitoring requirements that must be included in storm water permits. Under this General Permit, Dischargers are required to: (a) conduct an Annual Comprehensive Facility Compliance Evaluation (Annual Evaluation) to identify areas of the facility contributing pollutants to industrial storm water discharges, (b) evaluate whether measures to reduce or prevent industrial pollutant loads identified in the Discharger's SWPPP are adequate and properly implemented in accordance with the terms of this

General Permit, and (c) determine whether additional control measures are needed.

56. This General Permit contains monitoring requirements that are necessary to determine whether pollutants are being discharged, and whether response actions are necessary. Data and information resulting from the monitoring will assist in Dischargers' evaluations of BMP effectiveness and compliance with this General Permit. Visual observations are one form of monitoring. This General Permit requires Dischargers to perform a variety of visual observations designed to identify pollutants in industrial storm water discharges and their sources. To comply with this General Permit Dischargers shall: (1) electronically self-report any violations via SMARTS, (2) comply with the Level 1 status and Level 2 status ERA requirements, when applicable, and (3) adequately address and respond to any Regional Water Board comments on the Discharger's compliance reports.

57. Dischargers that meet the requirements of the No Exposure Certification (NEC) Conditional Exclusion set forth in Section XVII of this General Permit are exempt from the SWPPP requirements, sampling requirements, and visual observation requirements in this General Permit.

## K. Facilities Subject to Federal Storm Water Effluent Limitation Guidelines (ELGs)

58. U.S. EPA regulations at 40 Code of Federal Regulations Chapter I Subchapter N (Subchapter N) establish technology-based Effluent Limitation Guidelines and New Source Performance Standards (ELGs) for industrial storm water discharges from facilities in specific industrial categories. For these facilities, compliance with the BAT/BCT and ELG requirements constitutes compliance with technology-based requirements of this General Permit.

59. 40 Code of Federal Regulations section 122.44(i)(3) and (4) require storm water permits to require at least one Annual Evaluation and any monitoring requirements for applicable ELGs in Subchapter N. This General Permit requires Dischargers to comply with all applicable ELG requirements found in Subchapter N.

## L. Sampling and Analysis Reduction

60. This General Permit reduces the number of qualifying sampling events required to be sampled each year when the Discharger demonstrates: (1) consistent compliance with this General Permit,(2) consistent effluent water quality sampling, and (3) analysis results that do not exceed numerical action levels.

## M. Role of Numeric Action Levels (NALs) and Exceedance Response Actions (ERAs)

61. This General Permit incorporates a multiple objective performance measurement system that includes NALs, new comprehensive training requirements, Level 1 ERA Reports, Level 2 ERA Technical Reports, and Level 2 ERA Action Plans. Two objectives of the performance measurement system are to inform Dischargers, the public and the Water Boards on: (1) the overall pollutant control performance at any given facility, and (2) the overall performance of the industrial statewide storm water program. Additionally, the State Water Board expects that this information and assessment process will provide information necessary to determine the feasibility of numeric effluent limitations for industrial dischargers in the next reissuance of this General Permit, consistent with the State Water Board Storm Water Panel of Experts' June 2006 Recommendations.[3]

62. This General Permit contains annual and instantaneous maximum NALs. The annual NALs are established as the 2008 MSGP benchmark values, and are applicable for all parameters listed in Table 2. The instantaneous maximum NALs are calculated from a Water Board dataset, and are only applicable for Total Suspended Solids (TSS), Oil and Grease (O&G), and pH. An NAL exceedance is determined as follows:

    a. For annual NALs, an exceedance occurs when the average of all analytical results from all samples taken at a facility during a reporting year for a given parameter exceeds an annual NAL value listed in Table 2 of this General Permit; or,

    b. For the instantaneous maximum NALs, an exceedance occurs when two or more analytical results from samples taken for any parameter within a reporting year exceed the instantaneous maximum NAL value (for Total Suspended Solids, and Oil and Grease), or are outside of the instantaneous maximum NAL range (for pH) listed in Table 2 of this General Permit. For the purposes of this General Permit, the reporting year is July 1 through June 30.

63. The NALs are not intended to serve as technology-based or water quality-based numeric effluent limitations. The NALs are not derived directly from either BAT/BCT requirements or receiving water objectives. NAL exceedances defined in this General Permit are not, in and of themselves, violations of this General Permit. A Discharger that does not fully comply with the Level 1 status and/or Level 2 status ERA requirements, when required by the terms of this General Permit, is in violation of this General Permit.

64. ERAs are designed to assist Dischargers in complying with this General Permit. Dischargers subject to ERAs must evaluate the effectiveness of their

[3] State Water Board Storm Water Panel of Experts, The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 19, 2006) <http://www.swrcb.ca.gov/water_issues/programs/stormwater/docs/numeric/swpanel_final_report.pdf> [as of February 4, 2014].

BMPs being implemented to ensure they are adequate to achieve compliance with this General Permit.

65. U.S. EPA regulations at Subchapter N establish ELGs for storm water discharges from facilities in 11 industrial categories. Dischargers subject to these ELGs are required to comply with the applicable requirements.

66. Exceedances of the NALs that are attributable solely to pollutants originating from non-industrial pollutant sources (such as run-on from adjacent facilities, non-industrial portions of the Discharger's property, or aerial deposition) are not a violation of this General Permit because the NALs are designed to provide feedback on industrial sources of pollutants. Dischargers may submit a Non-Industrial Source Pollutant Demonstration as part of their Level 2 ERA Technical Report to demonstrate that the presence of a pollutant causing an NAL exceedance is attributable solely to pollutants originating from non-industrial pollutant sources.

67. A Discharger who has designed, installed, and implemented BMPs to reduce or prevent pollutants in industrial storm water discharges in compliance with this General Permit may submit an Industrial Activity BMPs Demonstration, as part of their Level 2 ERA Technical Report.

68. This General Permit establishes design storm standards for all treatment control BMPs. These design standards are directly based on the standards in State Water Board Order 2000-0011 regarding Standard Urban Storm Water Mitigation Plans (SUSMPs). These design standards are generally expected to be consistent with BAT/BCT, to be protective of water quality, and to be effective for most pollutants. The standards are intended to eliminate the need for most Dischargers to further treat/control industrial storm water discharges that are unlikely to contain pollutant loadings that exceed the NALs set forth in this General Permit.

## N. Compliance Groups

69. Compliance Groups are groups of Dischargers (Compliance Group Participants) that share common types of pollutant sources and industrial activity characteristics. Compliance Groups provide an opportunity for the Compliance Group Participants to combine resources and develop consolidated Level 1 ERA Reports for Level 1 NAL exceedances and appropriate BMPs for implementation in response to Level 2 status ERA requirements that are representative of the entire Compliance Group. Compliance Groups also provide the Water Boards and the public with valuable information as to how industrial storm water discharges are affected by non-industrial background pollutant sources (including natural background) and geographic locations. When developing the next reissuance of this General Permit, the State Water Board expects to have a better understanding of the feasibility and benefits of sector-specific and watershed-based permitting alternatives, which may include technology- or water quality-based numeric effluent limitations. The effluent data, BMP performance data

and other information provided from Compliance Groups' consolidated reporting will further assist the State Water Board in addressing sector-specific and watershed-based permitting alternatives.

## O. Conditional Exclusion – No Exposure Certification (NEC)

70. Pursuant to U.S. EPA Phase II regulations, all Dischargers subject to this General Permit may qualify for a conditional exclusion from specific requirements if they submit a NEC demonstrating that their facilities have no exposure of industrial activities and materials to storm water discharges.

71. This General Permit requires Dischargers who seek the NEC conditional exclusion to obtain coverage in accordance with Section XVII of this General Permit. Dischargers that meet the requirements of the NEC are exempt from the SWPPP, sampling requirements, and monitoring requirements in this General Permit.

72. Dischargers seeking NEC coverage are required to certify and submit the applicable permit registration documents. Annual inspections, re-certifications, and fees are required in subsequent years. Light industry facility Dischargers excluded from coverage under the previous permit (Order 97-03-DWQ) must obtain the appropriate coverage under this General Permit. Failure to comply with the Conditional Exclusion conditions listed in this General Permit may lead to enforcement for discharging without a permit pursuant to sections 13385 or 13399.25, et seq., of the Water Code. A Discharger with NEC coverage that anticipates a change (or changes) in circumstances that would lead to exposure should register for permit coverage prior to the anticipated changes.

## P. Special Requirements for Facilities Handling Plastic Materials

73. Section 13367 of the Water Code requires facilities handling preproduction plastic to implement specific BMPs aimed at minimizing discharges of such materials. The definition of Plastic Materials for the purposes of this General Permit includes the following types of sources of Plastic Materials: virgin and recycled plastic resin pellets, powders, flakes, powdered additives, regrind, dust, and other types of preproduction plastics with the potential to discharge or migrate off-site.

## Q. Regional Water Board Authorities

74. Regional Water Boards are primarily responsible for enforcement of this General Permit. This General Permit recognizes that Regional Water Boards have the authority to protect the beneficial uses of receiving waters and prevent degradation of water quality in their region. As such, Regional Water Boards may modify monitoring requirements and review, comment, approve or disapprove certain Discharger submittals required under this General Permit.

**IT IS HEREBY ORDERED** that all Dischargers subject to this General Permit shall comply with the following conditions and requirements.

## II. RECEIVING GENERAL PERMIT COVERAGE

### A. Certification

1. For Storm Water Multiple Application and Report Tracking System (SMARTS) electronic account management and security reasons, as well as enforceability of this General Permit, the Discharger's Legally Responsible Person (LRP) of an industrial facility seeking coverage under this General Permit shall certify and submit all Permit Registration Documents (PRDs) for Notice of Intent (NOI) or No Exposure Certification (NEC) coverage. All other documents shall be certified and submitted via SMARTS by the Discharger's (LRP) or by their Duly Authorized Representative in accordance with the Electronic Signature and Certification Requirements in Section XXI.K. All documents required by this General Permit that are certified and submitted via SMARTS shall be in accordance with Section XXI.K.

2. Hereinafter references to certifications and submittals by the Discharger refer to the Discharger's LRP and their Duly Authorized Representative.

### B. Coverages

This General Permit includes requirements for two (2) types of permit coverage, NOI coverage and NEC coverage. State Water Board Order 97-03-DWQ (previous permit) remains in effect until July 1, 2015. When PRDs are certified and submitted and the annual fee is received, the State Water Board will assign the Discharger a Waste Discharger Identification (WDID) number.

1. General Permit Coverage (NOI Coverage)

   a. Dischargers that discharge storm water associated with industrial activity to waters of the United States are required to meet all applicable requirements of this General Permit.

   b. The Discharger shall register for coverage under this General Permit by certifying and submitting PRDs via SMARTS (http://smarts.waterboards.ca.gov), which consist of:

      i. A completed NOI and signed certification statement;

      ii. A copy of a current Site Map from the Storm Water Pollution Prevention Plan (SWPPP) in Section X.E;

      iii. A SWPPP (see Section X); and,

c. The Discharger shall pay the appropriate Annual Fee in accordance with California Code of Regulations, title 23, section 2200 et seq.[4]

2. General Permit Coverage (NEC Coverage)

a. Dischargers that certify their facility has no exposure of industrial activities or materials to storm water in accordance with Section XVII qualify for NEC coverage and are not required to comply with the SWPPP or monitoring requirements of this General Permit.

b. Dischargers who qualify for NEC coverage shall conduct one Annual Facility Comprehensive Compliance Evaluation (Annual Evaluation) as described in Section XV, pay an annual fee, and certify annually that their facilities continue to meet the NEC requirements.

c. The Discharger shall submit the following PRDs on or before October 1, 2015 for NEC coverage via SMARTS:

i. A completed NEC Form (Section XVII.F.1) and signed certification statement (Section XVII.H);

ii. A completed NEC Checklist (Section XVII.F.2); and

iii. A current Site Map consistent with requirements in Section X.E.;

d. The Discharger shall pay the appropriate annual fee in accordance with California Code of Regulations, title 23, section 2200 et seq.[5]

3. General PRD Requirements

a. Site Maps

Dischargers registering for NOI or NEC coverage shall prepare a site map(s) as part of their PRDs in accordance with Section X.E. A separate copy of the site map(s) is required to be in the SWPPP. If there is a significant change in the facility layout (e.g., new building, change in storage locations, boundary change, etc.) a revision to the site map is required and shall be certified and submitted via SMARTS.

b. A Discharger shall submit a single set of PRDs for coverage under this General Permit for multiple industrial activities occurring at the same facility.

c. Any information provided to the Water Boards by the Discharger shall comply with the Homeland Security Act and other federal law that

[4] Annual fees must be mailed or sent electronically using the State Water Boards' Electronic Funds Transfer (EFT) system in SMARTS.
[5] See footnote 4.

addresses security in the United States; any information that does not comply should not be submitted in the PRDs. The Discharger must provide justification to the Regional Water Board regarding redacted information within any submittal.

d. Dischargers may redact trade secrets from information that is submitted via SMARTS. Dischargers who certify and submit redacted information via SMARTS must include a general description of the redacted information and the basis for the redaction in the version that is submitted via SMARTS. Dischargers must submit complete and un-redacted versions of the information that are clearly labeled "CONFIDENTIAL" to the Regional Water Board within 30 days of the submittal of the redacted information. All information labeled "CONFIDENTIAL" will be maintained by the Water Boards in a separate, confidential file.

4. Schedule for Submitting PRDs - Existing Dischargers Under the Previous Permit.

a. Existing Dischargers[6] with coverage under the previous permit shall continue coverage under the previous permit until July 1, 2015. All waste discharge requirements and conditions of the previous permit are in effect until July 1, 2015.

b. Existing Dischargers with coverage under the previous permit shall register for NOI coverage by July 1, 2015 or for NEC coverage by October 1, 2015. Existing Dischargers previously listed in Category 10 (Light Industry) of the previous permit, and continue to have no exposure to industrial activities and materials, have until October 1, 2015 to register for NEC coverage.

c. Existing Dischargers with coverage under the previous permit, that do not register for NOI coverage by July 1, 2015, may have their permit coverage administratively terminated as soon as July 1, 2015.

d. Existing Dischargers with coverage under the previous permit that are eligible for NEC coverage but do not register for NEC coverage by October 1, 2015 may have their permit coverage administratively terminated as soon as October 1, 2015.

e. Existing Dischargers shall continue to comply with the SWPPP requirements in State Water Board Order 97-03-DWQ up to, but no later than, June 30, 2015.

[6] Existing Dischargers are Dischargers with an active Notice of Intent (permit coverage) under the previous permit (97-03-DWQ) prior to the effective date of this General Permit.

f. Existing Dischargers shall implement an updated SWPPP in accordance with Section X by July 1, 2015.

g. Existing Dischargers that submit a Notice of Termination (NOT) under the previous permit prior to July 1, 2015 and that receive NOT approval from the Regional Water Board are not subject to this General Permit unless they subsequently submitted new PRDs.

5. Schedule for Submitting PRDs - New Dischargers Obtaining Coverage On or After July 1, 2015

   New Dischargers registering for NOI coverage on or after July 1, 2015 shall certify and submit PRDs via SMARTS at least seven (7) days prior to commencement of industrial activities or on July 1, 2015, whichever comes later.

   a. New Dischargers registering for NEC coverage shall electronically certify and submit PRDs via SMARTS by October 1, 2015, or at least seven (7) days prior to commencement of industrial activities, whichever is later.

## C. Termination and Changes to General Permit Coverage

1. Dischargers with NOI or NEC coverage shall request termination of coverage under this General Permit when either (a) operation of the facility has been transferred to another entity, (b) the facility has ceased operations, completed closure activities, and removed all industrial related pollutants, or (c) the facility's operations have changed and are no longer subject to the General Permit. Dischargers shall certify and submit a Notice of Termination via SMARTS. Until a valid NOT is received, the Discharger remains responsible for compliance with this General Permit and payment of accrued annual fees.

2. Whenever there is a change to the facility location, the Discharger shall certify and submit new PRDs via SMARTS. When ownership changes, the prior Discharger (seller) must inform the new Discharger (buyer) of the General Permit applications and regulatory coverage requirements. The new Discharger must certify and submit new PRDs via SMARTS to obtain coverage under this General Permit.

3. Dischargers with NOI coverage where the facility qualifies for NEC coverage in accordance with Section XVII of this General Permit, may register for NEC coverage via SMARTS. Such Dischargers are not required to submit an NOT to cancel NOI coverage.

4. Dischargers with NEC coverage, where changes in the facility and/or facility operations occur, which result in NOI coverage instead of NEC coverage, shall register for NOI coverage via SMARTS. Such Dischargers are not required to submit an NOT to cancel NEC coverage.

5. Dischargers shall provide additional information supporting an NOT, or revise their PRDs via SMARTS, upon request by the Regional Water Board.

6. Dischargers that are denied approval of a submitted NOT or registration for NEC coverage by the Regional Water Board, shall continue compliance with this General Permit under their existing NOI coverage.

7. New Dischargers (Dischargers with no previous NOI or NEC coverage) shall register for NOI coverage if the Regional Water Board denies NEC coverage.

**D. Preparation Requirements**

1. The following documents shall be certified and submitted by the Discharger via SMARTS:

   a. Annual Reports (Section XVI) and SWPPPs (Section X);

   b. NOTs;

   c. Sampling Frequency Reduction Certification (Section XI.C.7);

   d. Level 1 ERA Reports (Section XII.C) prepared by a QISP;

   e. Level 2 ERA Technical Reports and Level 2 ERA Action Plans (Sections XII.D.1-2) prepared by a QISP; and,

   f. SWPPPs for inactive mining operations as described in Section XIII, signed (wet signature and license number) by a California licensed professional engineer.

2. The following documents shall be signed (wet signature and license number) by a California licensed professional engineer:

   a. Calculations for Dischargers subject to Subchapter N in accordance with Section XI.D;

   b. Notice of Non-Applicability (NONA) Technical Reports described in Section XX.C for facilities that are engineered and constructed to have contained the maximum historic precipitation event (or series of events) using the precipitation data collected from the National Oceanic and Atmospheric Agency's website;

   c. NONA Technical Reports described in Section XX.C for facilities located in basins or other physical locations that are not tributaries or hydrologically connected to waters of the United States; and,

   d. SWPPPs for inactive mines described in Section XIII.

## III. DISCHARGE PROHIBITIONS

**A.** All discharges of storm water to waters of the United States are prohibited except as specifically authorized by this General Permit or another NPDES permit.

**B.** Except for non-storm water discharges (NSWDs) authorized in Section IV, discharges of liquids or materials other than storm water, either directly or indirectly to waters of the United States, are prohibited unless authorized by another NPDES permit. Unauthorized NSWDs must be either eliminated or authorized by a separate NPDES permit.

**C.** Industrial storm water discharges and authorized NSWDs that contain pollutants that cause or threaten to cause pollution, contamination, or nuisance as defined in section 13050 of the Water Code, are prohibited.

**D.** Discharges that violate any discharge prohibitions contained in applicable Regional Water Board Water Quality Control Plans (Basin Plans), or statewide water quality control plans and policies are prohibited.

**E.** Discharges to ASBS are prohibited in accordance with the California Ocean Plan, unless granted an exception by the State Water Board and in compliance with the Special Protections contained in Resolution 2012-0012.

**F.** Industrial storm water discharges and NSWDs authorized by this General Permit that contain hazardous substances equal to or in excess of a reportable quantity listed in 40 Code of Federal Regulations sections 110.6, 117.21, or 302.6 are prohibited.

## IV. AUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

**A.** The following NSWDs are authorized provided they meet the conditions of Section IV.B:

1. Fire-hydrant and fire prevention or response system flushing;

2. Potable water sources including potable water related to the operation, maintenance, or testing of potable water systems;

3. Drinking fountain water and atmospheric condensate including refrigeration, air conditioning, and compressor condensate;

4. Irrigation drainage and landscape watering provided all pesticides, herbicides and fertilizers have been applied in accordance with the manufacturer's label;

5. Uncontaminated natural springs, groundwater, foundation drainage, footing drainage;

6. Seawater infiltration where the seawater is discharged back into the source: and,

7. Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of your facility, but not intentional discharges from the cooling tower (e.g., “piped” cooling tower blowdown or drains).

**B.** The NSWDs identified in Section IV.A are authorized by this General Permit if the following conditions are met:

1. The authorized NSWDs are not in violation of any Regional Water Board Water Quality Control Plans (Basin Plans) or other requirements, or statewide water quality control plans or policies requirement;

2. The authorized NSWDs are not in violation of any municipal agency ordinance or requirements;

3. BMPs are included in the SWPPP and implemented to:

   a. Reduce or prevent the contact of authorized NSWDs with materials or equipment that are potential sources of pollutants;

   b. Reduce, to the extent practicable, the flow or volume of authorized NSWDs;

   c. Ensure that authorized NSWDs do not contain quantities of pollutants that cause or contribute to an exceedance of a water quality standards; and,

   d. Reduce or prevent discharges of pollutants in authorized NSWDs in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.

4. The Discharger conducts monthly visual observations (Section XI.A.1) of NSWDs and sources to ensure adequate BMP implementation and effectiveness; and,

5. The Discharger reports and describes all authorized NSWDs in the Annual Report.

**C.** Firefighting related discharges are not subject to this General Permit and are not subject to the conditions of Section IV.B. These discharges, however, may be subject to Regional Water Board enforcement actions under other sections of the Water Code. Firefighting related discharges that are contained and are later discharged may be subject to municipal agency ordinances and/or Regional Water Board requirements.

## V. EFFLUENT LIMITATIONS

**A.** Dischargers shall implement BMPs that comply with the BAT/BCT requirements of this General Permit to reduce or prevent discharges of pollutants in their storm water discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.

**B.** Industrial storm water discharges from facilities subject to storm water ELGs in Subchapter N shall not exceed those storm water ELGs. The ELGs for industrial storm water discharges subject to Subchapter N are in Attachment F of this General Permit.

**C.** Dischargers located within a watershed for which a Total Maximum Daily Load (TMDL) has been approved by U.S. EPA, shall comply with any applicable TMDL-specific permit requirements that have been incorporated into this General Permit in accordance with Section VII.A. Attachment E contains a reference list of potential TMDLs that may apply to Dischargers subject to this General Permit.

## VI. RECEIVING WATER LIMITATIONS

**A.** Dischargers shall ensure that industrial storm water discharges and authorized NSWDs do not cause or contribute to an exceedance of any applicable water quality standards in any affected receiving water.

**B.** Dischargers shall ensure that industrial storm water discharges and authorized NSWDs do not adversely affect human health or the environment.

**C.** Dischargers shall ensure that industrial storm water discharges and authorized NSWDs do not contain pollutants in quantities that threaten to cause pollution or a public nuisance.

## VII. TOTAL MAXIMUM DAILY LOADS (TMDLs)

### A. Implementation

1. The State Water Board shall reopen and amend this General Permit, including Attachment E, the Fact Sheet and other applicable Permit provisions as necessary, in order to incorporate TMDL-specific permit requirements, as described in Findings 38 through 42. Once this General Permit is amended, Dischargers shall comply with the incorporated TMDL-specific permit requirements in accordance with any specified compliance schedule(s). TMDL-specific compliance dates that exceed the term of this General Permit may be included for reference, and are enforceable in the event that this General Permit is administratively extended or reissued.

2. The State Water Board may, at its discretion, reopen this General Permit to add TMDL-specific permit requirements to Attachment E, or to incorporate new TMDLs adopted during the term of this General Permit that include requirements applicable to Dischargers covered by this General Permit.

**B.** New Dischargers applying for NOI coverage under this General Permit that will be discharging to a water body with a 303(d) listed impairment are ineligible for coverage unless the Discharger submits data and/or information, prepared by a QISP, demonstrating that:

1. The Discharger has eliminated all exposure to storm water of the pollutant(s) for which the water body is impaired, has documented the procedures taken to prevent exposure onsite, and has retained such documentation with the SWPPP at the facility;

2. The pollutant for which the water body is impaired is not present at the Discharger's facility, and the Discharger has retained documentation of this finding with the SWPPP at the facility; or,

3. The discharge of any listed pollutant will not cause or contribute to an exceedance of a water quality standard. This is demonstrated if: (1) the discharge complies with water quality standard at the point of discharge, or (2) if there are sufficient remaining waste load allocations in an approved TMDL and the discharge is controlled at least as stringently as similar discharges subject to that TMDL.

## VIII. DISCHARGES SUBJECT TO THE CALIFORNIA OCEAN PLAN

### A. Discharges to Ocean Waters

1. Dischargers with outfalls discharging to ocean waters that are subject to the model monitoring provisions of the California Ocean Plan shall develop and implement a monitoring plan in compliance with those provisions and any additional monitoring requirements established pursuant to Water Code section 13383. Dischargers who have not developed and implemented a monitoring program in compliance with the California Ocean Plan's model monitoring provisions by July 1, 2015, or seven (7) days prior to commencing of operations, whichever is later, are ineligible to obtain coverage under this General Permit.

2. Dischargers are ineligible for the methods and exceptions provided in Section XI.C of this General permit for any of the outfalls discharging to ocean waters subject to the model monitoring provisions of the California Ocean Plan.

### B. Discharge Granted an Exceptions for Areas of Special Biological Significance (ASBS)

Dischargers who were granted an exception to the California Ocean Plan prohibition against direct discharges of waste to an ASBS pursuant to Resolution 2012-0012[7] amended by Resolution 2012-0031[8] shall comply with the conditions and requirements set forth in Attachment G of this General Permit. Any Discharger that applies for and is granted an exception to the California Ocean Plan prohibition after July 1, 2013 shall comply with the conditions and requirements set forth in the granted exception.

## IX. TRAINING QUALIFICATIONS

### A. General

1. A Qualified Industrial Storm Water Practitioner (QISP) is a person (either the Discharger or a person designated by the Discharger) who has completed a State Water Board-sponsored or approved QISP training course[9], and has registered as a QISP via SMARTS. Upon completed registration the State Water Board will issue a QISP identification number.

2. The Executive Director of the State Water Board or an Executive Officer of a Regional Water Board may rescind any QISP's registration if it is found that the QISP has repeatedly demonstrated an inadequate level of performance in completing the QISP requirements in this General Permit. An individual whose QISP registration has been rescinded may request that the State Water Board review the rescission. Any request for review must be received by the State Water Board no later than 30 days of the date that the individual received written notice of the rescission.

3. Dischargers with Level 1 status shall:

   a. Designate a person to be the facility's QISP and ensure that this person has attended and satisfactorily completed the State Water Board-sponsored or approved QISP training course.

   b. Ensure that the facility's designated QISP provides sufficient training to the appropriate team members assigned to perform activities required by this General Permit.

[7] State Water Resources Control Board. Resolution 2012-0012. <http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0012.pdf>. [as of February 4, 2014].
[8] State Water Resources Control Board. Resolution 2012-0031. <http://www.swrcb.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0031.pdf>. [as of February 4, 2014].
[9] A specialized self-guided State Water Board-sponsored registration and training program will be available as an option for CPBELSG licensed professional civil, mechanical, industrial, and chemical engineers and professional geologists by the effective date of this General Permit.

# X. Storm Water Pollution Prevention Plan (SWPPP)

## A. SWPPP Elements

Dischargers shall develop and implement a site-specific SWPPP for each industrial facility covered by this General Permit that shall contain the following elements, as described further in this Section[10]:

1. Facility Name and Contact Information;
2. Site Map;
3. List of Industrial Materials;
4. Description of Potential Pollution Sources;
5. Assessment of Potential Pollutant Sources;
6. Minimum BMPs;
7. Advanced BMPs, if applicable;
8. Monitoring Implementation Plan;
9. Annual Comprehensive Facility Compliance Evaluation (Annual Evaluation); and,
10. Date that SWPPP was Initially Prepared and the Date of Each SWPPP Amendment, if Applicable.

## B. SWPPP Implementation and Revisions

All Dischargers are required to implement their SWPPP by July 1, 2015 or upon commencement of industrial activity. The Discharger shall:

1. Revise their on-site SWPPP whenever necessary;
2. Certify and submit via SMARTS their SWPPP within 30 days whenever the SWPPP contains significant revision(s); and,
3. With the exception of significant revisions, the Discharger is not required to certify and submit via SMARTS their SWPPP revisions more than once every three (3) months in the reporting year.

[10] Appendix 1 (SWPPP Checklist) of this General Permit is provided to assist the Discharger in including information required in the SWPPP. This checklist is not required to be used.

## C. SWPPP Performance Standards

1. The Discharger shall ensure a SWPPP is prepared to:

   a. Identify and evaluate all sources of pollutants that may affect the quality of industrial storm water discharges and authorized NSWDs;

   b. Identify and describe the minimum BMPs (Section X.H.1) and any advanced BMPs (Section X.H.2) implemented to reduce or prevent pollutants in industrial storm water discharges and authorized NSWDs. BMPs shall be selected to achieve compliance with this General Permit; and,

   c. Identify and describe conditions or circumstances which may require future revisions to be made to the SWPPP.

2. The Discharger shall prepare a SWPPP in accordance with all applicable SWPPP requirements of this Section. A copy of the SWPPP shall be maintained at the facility.

## D. Planning and Organization

1. Pollution Prevention Team

   Each facility must have a Pollution Prevention Team established and responsible for assisting with the implementation of the requirements in this General Permit. The Discharger shall include in the SWPPP detailed information about its Pollution Prevention Team including:

   a. The positions within the facility organization (collectively, team members) who assist in implementing the SWPPP and conducting all monitoring requirements in this General Permit;

   b. The responsibilities, duties, and activities of each of the team members; and,

   c. The procedures to identify alternate team members to implement the SWPPP and conduct required monitoring when the regularly assigned team members are temporarily unavailable (due to vacation, illness, out of town business, or other absences).

2. Other Requirements and Existing Facility Plans

   a. The Discharger shall ensure its SWPPP is developed, implemented, and revised as necessary to be consistent with any applicable municipal, state, and federal requirements that pertain to the requirements in this General Permit.

   b. The Discharger may include in their SWPPP the specific elements of existing plans, procedures, or regulatory compliance documents that

contain storm water-related BMPs or otherwise relate to the requirements of this General Permit.

c. The Discharger shall properly reference the original sources for any elements of existing plans, procedures, or regulatory compliance documents included as part of their SWPPP and shall maintain a copy of the documents at the facility as part of the SWPPP.

d. The Discharger shall document in their SWPPP the facility's scheduled operating hours as defined in Attachment C. Scheduled facility operating hours that would be considered irregular (temporary, intermittent, seasonal, weather dependent, etc.) shall also be documented in the SWPPP.

## E. Site Map

1. The Discharger shall prepare a site map that includes notes, legends, a north arrow, and other data as appropriate to ensure the map is clear, legible and understandable.

2. The Discharger may provide the required information on multiple site maps.

3. The Discharger shall include the following information on the site map:

   a. The facility boundary, storm water drainage areas within the facility boundary, and portions of any drainage area impacted by discharges from surrounding areas. Include the flow direction of each drainage area, on-facility surface water bodies, areas of soil erosion, and location(s) of nearby water bodies (such as rivers, lakes, wetlands, etc.) or municipal storm drain inlets that may receive the facility's industrial storm water discharges and authorized NSWDs;

   b. Locations of storm water collection and conveyance systems, associated discharge locations, and direction of flow. Include any sample locations if different than the identified discharge locations;

   c. Locations and descriptions of structural control measures[11] that affect industrial storm water discharges, authorized NSWDs, and/or run-on;

   d. Identification of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures;

[11] Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

e. Locations where materials are directly exposed to precipitation and the locations where identified significant spills or leaks (Section X.G.1.d) have occurred; and

f. Areas of industrial activity subject to this General Permit. Identify all industrial storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and material reuse areas, and other areas of industrial activity that may have potential pollutant sources.

## F. List of Industrial Materials

The Discharger shall ensure the SWPPP includes a list of industrial materials handled at the facility, and the locations where each material is stored, received, shipped, and handled, as well as the typical quantities and handling frequency.

## G. Potential Pollutant Sources

1. Description of Potential Pollutant Sources

   a. Industrial Processes

      The Discharger shall ensure the SWPPP describes each industrial process including: manufacturing, cleaning, maintenance, recycling, disposal, and any other activities related to the process. The type, characteristics, and approximate quantity of industrial materials used in or resulting from the process shall be included. Areas protected by containment structures and the corresponding containment capacity shall be identified and described.

   b. Material Handling and Storage Areas

      The Discharger shall ensure the SWPPP describes each material handling and storage area, including: the type, characteristics, and quantity of industrial materials handled or stored; the shipping, receiving, and loading procedures; the spill or leak prevention and response procedures; and the areas protected by containment structures and the corresponding containment capacity.

   c. Dust and Particulate Generating Activities

      The Discharger shall ensure the SWPPP describes all industrial activities that generate a significant amount of dust or particulate that may be deposited within the facility boundaries. The SWPPP shall describe such industrial activities, including the discharge locations, the source type, and the characteristics of the dust or particulate pollutant.

d. Significant Spills and Leaks

The Discharger shall:

i. Evaluate the facility for areas where spills and leaks can likely occur;

ii. Ensure the SWPPP includes:

a) A list of any industrial materials that have spilled or leaked in significant quantities and have discharged from the facility's storm water conveyance system within the previous five-year period;

b) A list of any toxic chemicals identified in 40 Code of Federal Regulations section 302 that have been discharged from the facilities' storm water conveyance system as reported on U.S. EPA Form R, as well as oil and hazardous substances in excess of reportable quantities (40 C.F.R. §§ 110, 117, and 302) that have discharged from the facility's storm water conveyance system within the previous five-year period;

c) A list of any industrial materials that have spilled or leaked in significant quantities and had the potential to be discharged from the facility's storm water conveyance system within the previous five-year period; and,

iii. Ensure that for each discharge or potential discharge listed above the SWPPP includes the location, characteristics, and approximate quantity of the materials spilled or leaked; approximate quantity of the materials discharged from the facility's storm water conveyance system; the cleanup or remedial actions that have occurred or are planned; the approximate remaining quantity of materials that have the potential to be discharged; and the preventive measures taken to ensure spills or leaks of the material do not reoccur.

e. NSWDs

The Discharger shall:

i. Ensure the SWPPP includes an evaluation of the facility that identifies all NSWDs, sources, and drainage areas;

ii. Ensure the SWPPP includes an evaluation of all drains (inlets and outlets) that identifies connections to the storm water conveyance system;

iii. Ensure the SWPPP includes a description of how all unauthorized NSWDs have been eliminated; and,

iv. Ensure all NSWDs are described in the SWPPP. This description shall include the source, quantity, frequency, and characteristics of the NSWDs, associated drainage area, and whether it is an authorized or unauthorized NSWD in accordance with Section IV.

f. Erodible Surfaces

The Discharger shall ensure the SWPPP includes a description of the facility locations where soil erosion may be caused by industrial activity, contact with storm water, authorized and unauthorized NSWDs, or run-on from areas surrounding the facility.

2. Assessment of Potential Pollutant Sources

a. The Discharger shall ensure that the SWPPP includes a narrative assessment of all areas of industrial activity with potential industrial pollutant sources. At a minimum, the assessment shall include:

i. The areas of the facility with likely sources of pollutants in industrial storm water discharges and authorized NSWDs;

ii. The pollutants likely to be present in industrial storm water discharges and authorized NSWDs;

iii. The approximate quantity, physical characteristics (e.g., liquid, powder, solid, etc.), and locations of each industrial material handled, produced, stored, recycled, or disposed;

iv. The degree to which the pollutants associated with those materials may be exposed to, and mobilized by contact with, storm water;

v. The direct and indirect pathways by which pollutants may be exposed to storm water or authorized NSWDs;

vi. All sampling, visual observation, and inspection records;

vii. The effectiveness of existing BMPs to reduce or prevent pollutants in industrial storm water discharges and authorized NSWDs;

viii. The estimated effectiveness of implementing, to the extent feasible, minimum BMPs to reduce or prevent pollutants in industrial storm water discharges and authorized NSWDs; and,

ix. The identification of the industrial pollutants related to the receiving waters with 303(d) listed impairments identified in Appendix 3 or approved TMDLs that may be causing or contributing to an exceedance of a water quality standard in the receiving waters.

b. Based upon the assessment above, Dischargers shall identify in the SWPPP any areas of the facility where the minimum BMPs described in

subsection H.1 below will not adequately reduce or prevent pollutants in storm water discharges in compliance with Section V.A. Dischargers shall identify any advanced BMPs, as described in subsection H.2 below, for those areas.

c. Based upon the assessment above, Dischargers shall identify any drainage areas with no exposure to industrial activities and materials in accordance with the definitions in Section XVII.

d. Based upon the assessment above, Dischargers shall identify any additional parameters, beyond the required parameters in Section XI.B.6 that indicate the presence of pollutants in industrial storm water discharges.

## H. Best Management Practices (BMPs)

1. Minimum BMPs

The Discharger shall, to the extent feasible, implement and maintain all of the following minimum BMPs to reduce or prevent pollutants in industrial storm water discharges.[12]

a. Good Housekeeping

The Discharger shall:

i. Observe all outdoor areas associated with industrial activity; including storm water discharge locations, drainage areas, conveyance systems, waste handling/disposal areas, and perimeter areas impacted by off-facility materials or storm water run-on to determine housekeeping needs. Any identified debris, waste, spills, tracked materials, or leaked materials shall be cleaned and disposed of properly;

ii. Minimize or prevent material tracking;

iii. Minimize dust generated from industrial materials or activities;

iv. Ensure that all facility areas impacted by rinse/wash waters are cleaned as soon as possible;

v. Cover all stored industrial materials that can be readily mobilized by contact with storm water;

[12] For the purposes of this General Permit, the requirement to implement BMPs "to the extent feasible" requires Dischargers to select, design, install and implement BMPs that reduce or prevent discharges of pollutants in their storm water discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.

vi. Contain all stored non-solid industrial materials or wastes (e.g., particulates, powders, shredded paper, etc.) that can be transported or dispersed by the wind or contact with storm water;

vii. Prevent disposal of any rinse/wash waters or industrial materials into the storm water conveyance system;

viii. Minimize storm water discharges from non-industrial areas (e.g., storm water flows from employee parking area) that contact industrial areas of the facility; and,

ix. Minimize authorized NSWDs from non-industrial areas (e.g., potable water, fire hydrant testing, etc.) that contact industrial areas of the facility.

b. Preventive Maintenance

The Discharger shall:

i. Identify all equipment and systems used outdoors that may spill or leak pollutants;

ii. Observe the identified equipment and systems to detect leaks, or identify conditions that may result in the development of leaks;

iii. Establish an appropriate schedule for maintenance of identified equipment and systems; and,

iv. Establish procedures for prompt maintenance and repair of equipment, and maintenance of systems when conditions exist that may result in the development of spills or leaks.

c. Spill and Leak Prevention and Response

The Discharger shall:

i. Establish procedures and/or controls to minimize spills and leaks;

ii. Develop and implement spill and leak response procedures to prevent industrial materials from discharging through the storm water conveyance system. Spilled or leaked industrial materials shall be cleaned promptly and disposed of properly;

iii. Identify and describe all necessary and appropriate spill and leak response equipment, location(s) of spill and leak response equipment, and spill or leak response equipment maintenance procedures; and,

iv. Identify and train appropriate spill and leak response personnel.

d. Material Handling and Waste Management

The Discharger shall:

i. Prevent or minimize handling of industrial materials or wastes that can be readily mobilized by contact with storm water during a storm event;

ii. Contain all stored non-solid industrial materials or wastes (e.g., particulates, powders, shredded paper, etc.) that can be transported or dispersed by the wind or contact with storm water;

iii. Cover industrial waste disposal containers and industrial material storage containers that contain industrial materials when not in use;

iv. Divert run-on and storm water generated from within the facility away from all stockpiled materials;

v. Clean all spills of industrial materials or wastes that occur during handling in accordance with the spill response procedures (Section X.H.1.c); and,

vi. Observe and clean as appropriate, any outdoor material or waste handling equipment or containers that can be contaminated by contact with industrial materials or wastes.

e. Erosion and Sediment Controls

For each erodible surface facility location identified in the SWPPP (Section X.G.1.f), the Discharger shall:

i. Implement effective wind erosion controls;

ii. Provide effective stabilization for inactive areas, finished slopes, and other erodible areas prior to a forecasted storm event;

iii. Maintain effective perimeter controls and stabilize all site entrances and exits to sufficiently control discharges of erodible materials from discharging or being tracked off the site;

iv. Divert run-on and storm water generated from within the facility away from all erodible materials; and,

v. If sediment basins are implemented, ensure compliance with the design storm standards in Section X.H.6.

f. Employee Training Program

The Discharger shall:

i. Ensure that all team members implementing the various compliance activities of this General Permit are properly trained to implement the requirements of this General Permit, including but not limited to: BMP implementation, BMP effectiveness evaluations, visual observations,

and monitoring activities. If a Discharger enters Level 1 status, appropriate team members shall be trained by a QISP;

ii. Prepare or acquire appropriate training manuals or training materials;

iii. Identify which personnel need to be trained, their responsibilities, and the type of training they shall receive;

iv. Provide a training schedule; and,

v. Maintain documentation of all completed training classes and the personnel that received training in the SWPPP.

g. Quality Assurance and Record Keeping

The Discharger shall:

i. Develop and implement management procedures to ensure that appropriate staff implements all elements of the SWPPP, including the Monitoring Implementation Plan;

ii. Develop a method of tracking and recording the implementation of BMPs identified in the SWPPP; and

iii. Maintain the BMP implementation records, training records, and records related to any spills and clean-up related response activities for a minimum of five (5) years (Section XXI.J.4).

2. Advanced BMPs

a. In addition to the minimum BMPs described in Section X.H.1, the Discharger shall, to the extent feasible, implement and maintain any advanced BMPs identified in Section X.G.2.b, necessary to reduce or prevent discharges of pollutants in its storm water discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.

b. Advanced BMPs may include one or more of the following BMPs:

i. Exposure Minimization BMPs

These include storm resistant shelters (either permanent or temporary) that prevent the contact of storm water with the identified industrial materials or area(s) of industrial activity.

ii. Storm Water Containment and Discharge Reduction BMPs

These include BMPs that divert, infiltrate, reuse, contain, retain, or reduce the volume of storm water runoff. Dischargers are

encouraged to utilize BMPs that infiltrate or reuse storm water where feasible.

iii. Treatment Control BMPs

This is the implementation of one or more mechanical, chemical, biologic, or any other treatment technology that will meet the treatment design standard.

iv. Other Advanced BMPs

Any additional BMPs not described in subsections b.i through iii above that are necessary to meet the effluent limitations of this General Permit.

3. Temporary Suspension of Industrial Activities

For facilities that plan to temporarily suspend industrial activities for ten (10) or more consecutive calendar days during a reporting year, the Discharger may also suspend monitoring if it is infeasible to conduct monitoring while industrial activities are suspended (e.g., the facility is not staffed, or the facility is remote or inaccessible) and the facility has been stabilized. The Discharger shall include in the SWPPP the BMPs necessary to achieve compliance with this General Permit during the temporary suspension of the industrial activity. Once all necessary BMPs have been implemented to stabilize the facility, the Discharger is not required to:

a. Perform monthly visual observations (Section XI.A.1.a.); or,

b. Perform sampling and analysis (Section XI.B.) if it is infeasible to do so (e.g. facility is remotely located).

The Discharger shall upload via SMARTS (7) seven calendar days prior to the planned temporary suspension of industrial activities:

a. SWPPP revisions specifically addressing the facility stabilization BMPs;

b. The justification for why monitoring is infeasible at the facility during the period of temporary suspension of industrial activities;

c. The date the facility is fully stabilized for temporary suspension of industrial activities; and,

d. The projected date that industrial activities will resume at the facility.

Upon resumption of industrial activities at the facility, the Discharger shall, via SMARTS, confirm and/or update the date the facility's industrial activities have resumed. At this time, the Discharger is required to resume all compliance activities under this General Permit.

The Regional Water Boards may review the submitted information pertaining to the temporary suspension of industrial activities. Upon review, the Regional Water Board may request revisions or reject the Discharger's request to temporarily suspend monitoring.

4. BMP Descriptions

   a. The Discharger shall ensure that the SWPPP identifies each BMP being implemented at the facility, including:

      i. The pollutant(s) that the BMP is designed to reduce or prevent in industrial storm water discharges;

      ii. The frequency, time(s) of day, or conditions when the BMP is scheduled for implementation;

      iii. The locations within each area of industrial activity or industrial pollutant source where the BMP shall be implemented;

      iv. The individual and/or position responsible for implementing the BMP;

      v. The procedures, including maintenance procedures, and/or instructions to implement the BMP effectively;

      vi. The equipment and tools necessary to implement the BMP effectively; and,

      vii. The BMPs that may require more frequent visual observations beyond the monthly visual observations as described in Section XI.A.1.

   b. The Discharger shall ensure that the SWPPP identifies and justifies each minimum BMP or applicable advanced BMP not being implemented at the facility because they do not reflect best industry practice considering technological availability and economic practicability and achievability.

   c. The Discharger shall identify any BMPs described in subsection a above that are implemented in lieu of any of the minimum or applicable advanced BMPs.

5. BMP Summary Table

   The Discharger shall prepare a table summarizing each identified area of industrial activity, the associated industrial pollutant sources, the industrial pollutants, and the BMPs being implemented.

6. Design Storm Standards for Treatment Control BMPs

All new treatment control BMPs employed by the Discharger to comply with Section X.H.2 Advanced BMPs and new sediment basins installed after the effective date of this order shall be designed to comply with design storm standards in this Section, except as provided in an Industrial Activity BMP Demonstration (Section XII.D.2.a). A Factor of Safety shall be incorporated into the design of all treatment control BMPs to ensure that storm water is sufficiently treated throughout the life of the treatment control BMPs. The design storm standards for treatment control BMPs are as follows:

a. Volume-based BMPs: The Discharger, at a minimum, shall calculate[13] the volume to be treated using one of the following methods:

   i. The volume of runoff produced from an 85$^{th}$ percentile 24-hour storm event, as determined from local, historical rainfall records;

   ii. The volume of runoff produced by the 85$^{th}$ percentile 24-hour storm event, determined as the maximized capture runoff volume for the facility, from the formula recommended in the Water Environment Federation's Manual of Practice;[14] or,

   iii. The volume of annual runoff required to achieve 80% or more treatment, determined in accordance with the methodology set forth in the latest edition of California Stormwater Best Management Practices Handbook[15], using local, historical rainfall records.

b. Flow-based BMPs: The Discharger shall calculate the flow needed to be treated using one of the following methods:

   i. The maximum flow rate of runoff produced from a rainfall intensity of at least 0.2 inches per hour for each hour of a storm event;

   ii. The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from local historical rainfall records, multiplied by a factor of two; or,

   iii. The maximum flow rate of runoff, as determined using local historical rainfall records, that achieves approximately the same reduction in total pollutant loads as would be achieved by treatment of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

[13] All hydrologic calculations shall be certified by a California licensed professional engineer in accordance with the Professional Engineers Act (Bus. & Prof. Code § 6700, et seq).

[14] Water Environment Federation (WEF). Manual of Practice No. 23/ ASCE Manual of Practice No. 87, cited in chapter 5 (1998 Edition) and Cited in Chapter 3 (2012 Edition) .

[15] California Stormwater Quality Association. Stormwater Best Management Practice New Development and Redevelopment Handbook. < http://www.casqa.org/ >. [as of July 3, 2013].

## I. MONITORING IMPLEMENTATION PLAN

The Discharger shall prepare a Monitoring Implementation Plan in accordance with the requirements of this General Permit. The Monitoring Implementation Plan shall be included in the SWPPP and shall include the following items:

1. An identification of team members assigned to conduct the monitoring requirements;

2. A description of the following in accordance with Attachment H:

   a. Discharge locations;

   b. Visual observation procedures; and,

   c. Visual observation response procedures related to monthly visual observations and sampling event visual observations.

3. Justifications for any of the following that are applicable to the facility:

   a. Alternative discharge locations in accordance with Section XI.C.3;

   b. Representative Sampling Reduction in accordance with Section XI.C.4; or,

   c. Qualified Combined Samples in accordance with Section XI.C.5.

4. Procedures for field instrument calibration instructions, including calibration intervals specified by the manufacturer; and,

5. An example Chain of Custody form used when handling and shipping water quality samples to the lab.

## XI. MONITORING

### A. Visual Observations

1. Monthly Visual Observations

   a. At least once per calendar month, the Discharger shall visually observe each drainage area for the following:

      i. The presence or indications of prior, current, or potential unauthorized NSWDs and their sources;

      ii. Authorized NSWDs, sources, and associated BMPs to ensure compliance with Section IV.B.3; and,

iii. Outdoor industrial equipment and storage areas, outdoor industrial activities areas, BMPs, and all other potential source of industrial pollutants.

b. The monthly visual observations shall be conducted during daylight hours of scheduled facility operating hours and on days without precipitation.

c. The Discharger shall provide an explanation in the Annual Report for uncompleted monthly visual observations.

2. Sampling Event Visual Observations

Sampling event visual observations shall be conducted at the same time sampling occurs at a discharge location. At each discharge location where a sample is obtained, the Discharger shall observe the discharge of storm water associated with industrial activity.

a. The Discharger shall ensure that visual observations of storm water discharged from containment sources (e.g. secondary containment or storage ponds) are conducted at the time that the discharge is sampled.

b. Any Discharger employing volume-based or flow-based treatment BMPs shall sample any bypass that occurs while the visual observations and sampling of storm water discharges are conducted.

c. The Discharger shall visually observe and record the presence or absence of floating and suspended materials, oil and grease, discolorations, turbidity, odors, trash/debris, and source(s) of any discharged pollutants.

d. In the event that a discharge location is not visually observed during the sampling event, the Discharger shall record which discharge locations were not observed during sampling or that there was no discharge from the discharge location.

e. The Discharger shall provide an explanation in the Annual Report for uncompleted sampling event visual observations.

3. Visual Observation Records

The Discharger shall maintain records of all visual observations. Records shall include the date, approximate time, locations observed, presence and probable source of any observed pollutants, name of person(s) that conducted the observations, and any response actions and/or additional SWPPP revisions necessary in response to the visual observations.

4. The Discharger shall revise BMPs as necessary when the visual observations indicate pollutant sources have not been adequately addressed in the SWPPP.

## B. Sampling and Analysis

1. A Qualifying Storm Event (QSE) is a precipitation event that:

   a. Produces a discharge for at least one drainage area; and,

   b. Is preceded by 48 hours with no discharge from any drainage area.

2. The Discharger shall collect and analyze storm water samples from two (2) QSEs within the first half of each reporting year (July 1 to December 31), and two (2) QSEs within the second half of each reporting year (January 1 to June 30).

3. Compliance Group Participants are only required to collect and analyze storm water samples from one (1) QSE within the first half of each reporting year (July 1 to December 31) and one (1) QSE within the second half of the reporting year (January 1 to June 30).

4. Except as provided in Section XI.C.4 (Representative Sampling Reduction), samples shall be collected from each drainage area at all discharge locations. The samples must be:

   a. Representative of storm water associated with industrial activities and any commingled authorized NSWDs; or,

   b. Associated with the discharge of contained storm water.

5. Samples from each discharge location shall be collected within four (4) hours of:

   a. The start of the discharge; or,

   b. The start of facility operations if the QSE occurs within the previous 12-hour period (e.g., for storms with discharges that begin during the night for facilities with day-time operating hours). Sample collection is required during scheduled facility operating hours and when sampling conditions are safe in accordance with Section XI.C.6.a.ii.

6. The Discharger shall analyze all collected samples for the following parameters:

   a. Total suspended solids (TSS) and oil and grease (O&G);

   b. pH (see Section XI.C.2);

c. Additional parameters identified by the Discharger on a facility-specific basis that serve as indicators of the presence of all industrial pollutants identified in the pollutant source assessment (Section X.G.2). These additional parameters may be modified (added or removed) in accordance with any updated SWPPP pollutant source assessment;

d. Additional applicable parameters listed in Table 1 below. These parameters are dependent on the facility Standard Industrial Classification (SIC) code(s);

e. Additional applicable industrial parameters related to receiving waters with 303(d) listed impairments or approved TMDLs based on the assessment in Section X.G.2.a.ix. Test methods with lower detection limits may be necessary when discharging to receiving waters with 303(d) listed impairments or TMDLs;

f. Additional parameters required by the Regional Water Board. The Discharger shall contact its Regional Water Board to determine appropriate analytical test methods for parameters not listed in Table 2 below. These analytical test methods will be added to SMARTS; and

g. For discharges subject to Subchapter N, additional parameters specifically required by Subchapter N. If the discharge is subject to ELGs, the Dischargers shall contact the Regional Water Board to determine appropriate analytical methods for parameters not listed in Table 2 below.

7. The Discharger shall select corresponding NALs, analytical test methods,, and reporting units from the list provided in Table 2 below. SMARTS will be updated over time to add additional acceptable analytical test methods. Dischargers may propose an analytical test method for any parameter or pollutant that does not have an analytical test method specified in Table 2 or in SMARTS. Dischargers may also propose analytical test methods with substantially similar or more stringent method detection limits than existing approved analytical test methods. Upon approval, the analytical test method will be added to SMARTS.

8. The Discharger shall ensure that the collection, preservation and handling of all storm water samples are in accordance with Attachment H, Storm Water Sample Collection and Handling Instructions.

9. Samples from different discharge locations shall not be combined or composited except as allowed in Section XI.C.5 (Qualified Combined Samples).

10. The Discharger shall ensure that all laboratory analyses are conducted according to test procedures under 40 Code of Federal Regulations part 136, including the observation of holding times, unless other test procedures have been specified in this General Permit or by the Regional Water Board.

11. Sampling Analysis Reporting

a. The Discharger shall submit all sampling and analytical results for all individual or Qualified Combined Samples via SMARTS within 30 days of obtaining all results for each sampling event.

b. The Discharger shall provide the method detection limit when an analytical result from samples taken is reported by the laboratory as a "non-detect" or less than the method detection limit. A value of zero shall not be reported.

c. The Discharger shall provide the analytical result from samples taken that is reported by the laboratory as below the minimum level (often referred to as the reporting limit) but above the method detection limit.

Reported analytical results will be averaged automatically by SMARTS. For any calculations required by this General Permit, SMARTS will assign a value of zero (0) for all results less than the minimum level as reported by the laboratory.

**TABLE 1:** Additional Analytical Parameters

| SIC code | SIC code Description | Parameters* |
|---|---|---|
| 102X | Copper Ores | COD; N+N |
| 12XX | Coal Mines | Al; Fe |
| 144X | Sand and Gravel | N+N |
| 207X | Fats and Oils | BOD; COD; N+N |
| 2421 | Sawmills & Planning Mills | COD; Zn |
| 2426 | Hardwood Dimension | COD |
| 2429 | Special Product Sawmills | COD |
| 243X | Millwork, Veneer, Plywood | COD |
| 244X | Wood Containers | COD |
| 245X | Wood Buildings & Mobile Homes | COD |
| 2491 | Wood Preserving | As; Cu |
| 2493 | Reconstituted Wood Products | COD |
| 263X | Paperboard Mills | COD |
| 281X | Industrial Inorganic Chemicals | Al; Fe; N+N |
| 282X | Plastic Materials, Synthetics | Zn |
| 284X | Soaps, Detergents, Cosmetics | N+N; Zn |
| 287X | Fertilizers, Pesticides, etc. | Fe; N+N; Pb; Zn; P |
| 301X | Tires, Inner Tubes | Zn |
| 302X | Rubber and Plastic Footwear | Zn |
| 305X | Rubber & Plastic Sealers & Hoses | Zn |
| 306X | Misc. Fabricated Rubber Products | Zn |
| 325X | Structural Clay Products | Al |
| 326X | Pottery & Related Products | Al |
| 3297 | Non-Clay Refractories | Al |
| 327X | Concrete, Gypsum, Plaster Products (Except 3274) | Fe |
| 3295 | Minerals & Earths | Fe |
| 331X | Steel Works, Blast Furnaces, Rolling and Finishing Mills | Al; Zn |
| 332X | Iron and Steel Foundries | Al; Cu; Fe; Zn |
| 335X | Metal Rolling, Drawing, Extruding | Cu; Zn |

| | | |
|---|---|---|
| 336X | Nonferrous Foundries (Castings) | Cu; Zn |
| 34XX | Fabricated Metal Products (Except 3479) | Zn; N+N; Fe; Al |
| 3479 | Coating and Engraving | Zn; N+N |
| 4953 | Hazardous Waste Facilities | NH3; Mg; COD; As; Cn; Pb; HG; Se; Ag |
| 44XX | Water Transportation | Al; Fe; Pb; Zn |
| 45XX | Air Transportation Facilities[16] | BOD; COD; NH3 |
| 4911 | Steam Electric Power Generating Facilities | Fe |
| 4953 | Landfills and Land Application Facilities | Fe |
| 5015 | Dismantling or Wrecking Yards | Fe; Pb; Al |
| 5093 | Scrap and Waste Materials (not including source-separated recycling) | Fe; Pb; Al; Zn; COD |

| ***Table 1 Parameter Reference** | |
|---|---|
| **Ag** – Silver | **Mg** – Magnesium |
| **Al** – Aluminum | **N+N** - Nitrate & Nitrite Nitrogen |
| **As** – Arsenic | **NH** – Ammonia |
| **BOD** – Biochemical Oxygen Demand | **Ni** – Nickel |
| **Cd** - Cadmium | **P** – Phosphorus |
| **Cn** – Cyanide | **Se** – Selenium |
| **COD** – Chemical Oxygen Demand | **TSS** – Total Suspended Solids |
| **Cu** – Copper | **Zn** – Zinc |
| **Fe** – Iron | **Pb** – Lead |
| **Hg** – Mercury | |

[16] Only airports (SIC 4512-4581) where a single Discharger, or a combination of permitted facilities use more than 100,000 gallons of glycol-based deicing chemicals and/or 100 tons or more of urea on an average annual basis, are required to monitor these parameters for those outfalls that collect runoff from areas where deicing activities occur.

**TABLE 2:** Parameter NAL Values, Test Methods, and Reporting Units

| PARAMETER | TEST METHOD | REPORTING UNITS | ANNUAL NAL | INSTANTANEOUS MAXIMUM NAL |
|---|---|---|---|---|
| pH* | See Section XI.C.2 | pH units | N/A | Less than 6.0 Greater than 9.0 |
| Suspended Solids (TSS)*, Total | SM 2540-D | mg/L | 100 | 400 |
| Oil & Grease (O&G)*, Total | EPA 1664A | mg/L | 15 | 25 |
| Zinc, Total (H) | EPA 200.8 | mg/L | 0.26** | |
| Copper, Total (H) | EPA 200.8 | mg/L | 0.0332** | |
| Cyanide, Total | SM 4500–CN C, D, or E | mg/L | 0.022 | |
| Lead, Total (H) | EPA 200.8 | mg/L | 0.262** | |
| Chemical Oxygen Demand (COD) | SM 5220C | mg/L | 120 | |
| Aluminum, Total | EPA 200.8 | mg/L | 0.75 | |
| Iron, Total | EPA 200.7 | mg/L | 1.0 | |
| Nitrate + Nitrite Nitrogen | SM 4500-NO3- E | mg/L as N | 0.68 | |
| Total Phosphorus | SM 4500-P B+E | mg/L as P | 2.0 | |
| Ammonia (as N) | SM 4500-NH3 B+ C or E | mg/L | 2.14 | |
| Magnesium, total | EPA 200.7 | mg/L | 0.064 | |
| Arsenic, Total (c) | EPA 200.8 | mg/L | 0.15 | |
| Cadmium, Total (H) | EPA 200.8 | mg/L | 0.0053** | |
| Nickel, Total (H) | EPA 200.8 | mg/l | 1.02** | |
| Mercury, Total | EPA 245.1 | mg/L | 0.0014 | |
| Selenium, Total | EPA 200.8 | mg/L | 0.005 | |
| Silver, Total (H) | EPA 200.8 | mg/L | 0.0183** | |
| Biochemical Oxygen Demand (BOD) | SM 5210B | mg/L | 30 | |

SM – Standard Methods for the Examination of Water and Wastewater, 18th edition
EPA – U.S. EPA test methods
(H) – Hardness dependent
* Minimum parameters required by this General Permit
**The NAL is the highest value used by U.S. EPA based on their hardness table in the 2008 MSGP.

## C. Methods and Exceptions

1. The Discharger shall comply with the monitoring methods in this General Permit and Attachment H.

2. pH Methods

   a. Dischargers that are not subject to Subchapter N ELGs mandating pH analysis related to acidic or alkaline sources and have never entered Level 1 status for pH, are eligible to screen for pH using wide range litmus pH paper or other equivalent pH test kits. The pH screen shall be performed as soon as practicable, but no later than 15 minutes after the sample is collected.

   b. Dischargers subject to Subchapter N ELGs shall either analyze samples for pH using methods in accordance with 40 Code of Federal Regulations 136 for testing storm water or use a calibrated portable instrument for pH.

   c. Dischargers that enter Level 1 status (see Section XII.C) for pH shall, in the subsequent reporting years, analyze for pH using methods in accordance with 40 Code of Federal Regulations 136 or use a calibrated portable instrument for pH.

   d. Dischargers using a calibrated portable instrument for pH shall ensure that all field measurements are conducted in accordance with the accompanying manufacturer's instructions.

3. Alternative Discharge Locations

   a. The Discharger is required to identify, when practicable, alternative discharge locations for any discharge locations identified in accordance with Section XI.B.4 if the facility's discharge locations are:

      i. Affected by storm water run-on from surrounding areas that cannot be controlled; and/or,

      ii. Difficult to observe or sample (e.g. submerged discharge outlets, dangerous discharge location accessibility).

   b. The Discharger shall submit and certify via SMARTS any alternative discharge location or revisions to the alternative discharge locations in the Monitoring Implementation Plan.

4. Representative Sampling Reduction

   a. The Discharger may reduce the number of locations to be sampled in each drainage area (e.g., roofs with multiple downspouts, loading/unloading areas with multiple storm drains) if the industrial

activities, BMPs, and physical characteristics (grade, surface materials, etc.) of the drainage area for each location to be sampled are substantially similar to one another. To qualify for the Representative Sampling Reduction, the Discharger shall provide a Representative Sampling Reduction justification in the Monitoring Implementation Plan section of the SWPPP.

b. The Representative Sampling Reduction justification shall include:

   i. Identification and description of each drainage area and corresponding discharge location(s);

   ii. A description of the industrial activities that occur throughout the drainage area;

   iii. A description of the BMPs implemented in the drainage area;

   iv. A description of the physical characteristics of the drainage area;

   v. A rationale that demonstrates that the industrial activities and physical characteristics of the drainage area(s) are substantially similar; and,

   vi. An identification of the discharge location(s) selected for representative sampling, and rationale demonstrating that the selected location(s) to be sampled are representative of the discharge from the entire drainage area.

c. A Discharger that satisfies the conditions of subsection 4.b.i through v above shall submit and certify via SMARTS the revisions to the Monitoring Implementation Plan that includes the Representative Sampling Reduction justification.

d. Upon submittal of the Representative Sampling Reduction justification, the Discharger may reduce the number of locations to be sampled in accordance with the Representative Sampling Reduction justification. The Regional Water Board may reject the Representative Sampling Reduction justification and/or request additional supporting documentation. In such instances, the Discharger is ineligible for the Representative Sampling Reduction until the Regional Water Board approves the Representative Sampling Reduction justification.

5. Qualified Combined Samples

   a. The Discharger may authorize an analytical laboratory to combine samples of equal volume from as many as four (4) discharge locations if the industrial activities, BMPs, and physical characteristics (grade, surface materials, etc.) within each of the drainage areas are substantially similar to one another.

b. The Qualified Combined Samples justification shall include:

i. Identification and description of each drainage area and corresponding discharge locations;

ii. A description of the BMPs implemented in the drainage area;

iii. A description of the industrial activities that occur throughout the drainage area;

iv. A description of the physical characteristics of the drainage area; and,

v. A rationale that demonstrates that the industrial activities and physical characteristics of the drainage area(s) are substantially similar.

c. A Discharger that satisfies the conditions of subsection 5.b.i through iv above shall submit and certify via SMARTS the revisions to the Monitoring Implementation Plan that includes the Qualified Combined Samples justification.

d. Upon submittal of the Qualified Combined Samples justification revisions in the Monitoring Implementation Plan, the Discharger may authorize the lab to combine samples of equal volume from as many as four (4) drainage areas. The Regional Water Board may reject the Qualified Combined Samples justification and/or request additional supporting documentation. In such instances, the Discharger is ineligible for the Qualified Combined Samples justification until the Regional Water Board approves the Qualified Combined Samples justification.

e. Regional Water Board approval is necessary to combine samples from more than four (4) discharge locations.

6. Sample Collection and Visual Observation Exceptions

a. Sample collection and visual observations are not required under the following conditions:

i. During dangerous weather conditions such as flooding or electrical storms; or,

ii. Outside of scheduled facility operating hours. The Discharger is not precluded from collecting samples or conducting visual observations outside of scheduled facility operating hours.

b. In the event that samples are not collected, or visual observations are not conducted in accordance with Section XI.B.5 due to these exceptions, an explanation shall be included in the Annual Report.

c. Sample collection is not required for drainage areas with no exposure to industrial activities and materials in accordance with the definitions in Section XVII.

7. Sampling Frequency Reduction Certification
   a. Dischargers are eligible to reduce the number of QSEs sampled each reporting year in accordance with the following requirements:

      i. Results from four (4) consecutive QSEs that were sampled (QSEs may be from different reporting years) did not exceed any NALs as defined in Section XII.A; and

      ii. The Discharger is in full compliance with the requirements of this General Permit and has updated, certified and submitted via SMARTS all documents, data, and reports required by this General Permit during the time period in which samples were collected.

   b. The Regional Water Board may notify a Discharger that it may not reduce the number of QSEs sampled each reporting year if the Discharger is subject to an enforcement action.

   c. An eligible Discharger shall certify via SMARTS that it meets the conditions in subsection 7.a above.

   d. Upon Sampling Frequency Reduction certification, the Discharger shall collect and analyze samples from one (1) QSE within the first half of each reporting year (July 1 to December 31), and one (1) QSE within the second half of each reporting year (January 1 to June 30). All other monitoring, sampling, and reporting requirements remain in effect.

   e. Dischargers who participate in a Compliance Group and certify a Sampling Frequency Reduction are only required to collect and analyze storm water samples from one (1) QSE within each reporting year.

   f. A Discharger may reduce sampling per the Sampling Frequency Reduction certification unless notified by the Regional Water Board that: (1) the Sampling Frequency Reduction certification has been rejected or (2) additional supporting documentation must be submitted. In such instances, a Discharger is ineligible for the Sampling Frequency Reduction until the Regional Water Board provides Sampling Frequency Reduction certification approval. Revised Sampling Frequency Reduction certifications shall be certified and submitted via SMARTS by the Discharger.

   g. A Discharger loses its Sampling Frequency Reduction certification if an NAL exceedance occurs (Section XII.A).

### D. Facilities Subject to Federal Storm Water Effluent Limitation Guidelines (ELGs)

1. In addition to the other requirements in this General Permit, Dischargers with facilities subject to storm water ELGs in Subchapter N shall:

   a. Collect and analyze samples from QSEs for each regulated pollutant specified in the appropriate category in Subchapter N as specified in Section XI.B;

   b. For Dischargers with facilities subject to 40 Code of Federal Regulations parts 419[17] and 443[18], estimate or calculate the volume of industrial storm water discharges from each drainage area subject to the ELGs and the mass of each regulated pollutant as defined in parts 419 and 443; and,

   c. Ensure that the volume/mass estimates or calculations required in subsection b are completed by a California licensed professional engineer.

2. Dischargers subject to Subchapter N shall submit the information in Section XI.D.1.a through c in their Annual Report.

3. Dischargers with facilities subject to storm water ELGs in Subchapter N are ineligible for the Representative Sampling Reduction in Section XI.C.4.

## XII. EXCEEDANCE RESPONSE ACTIONS (ERAs)

### A. NALs and NAL Exceedances

The Discharger shall perform sampling, analysis and reporting in accordance with the requirements of this General Permit and shall compare the results to the two types of NAL values in Table 2 to determine whether either type of NAL has been exceeded for each applicable parameter. The two types of potential NAL exceedances are as follows:

1. Annual NAL exceedance: The Discharger shall determine the average concentration for each parameter using the results of all the sampling and analytical results for the entire facility for the reporting year (i.e., all "effluent" data). The Discharger shall compare the average concentration for each parameter to the corresponding annual NAL values in Table 2. For Dischargers using composite sampling or flow-weighted measurements in accordance with standard practices, the average concentrations shall be calculated in accordance with the U.S. EPA's NPDES Storm Water

[17] Part 419 - Petroleum refining point source category
[18] Part 443 - Effluent limitations guidelines for existing sources and standards of performance and pretreatment standards for new sources for the paving and roofing materials (tars and asphalt) point source category

Sampling Guidance Document.[19] An annual NAL exceedance occurs when the average of all the analytical results for a parameter from samples taken within a reporting year exceeds the annual NAL value for that parameter listed in Table 2; and,

2. Instantaneous maximum NAL exceedance: The Discharger shall compare all sampling and analytical results from each distinct sample (individual or combined as authorized by XI.C.5) to the corresponding instantaneous maximum NAL values in Table 2. An instantaneous maximum NAL exceedance occurs when two (2) or more analytical results from samples taken for any single parameter within a reporting year exceed the instantaneous maximum NAL value (for TSS and O&G) or are outside of the instantaneous maximum NAL range for pH.

## B. Baseline Status

At the beginning of a Discharger's NOI Coverage, all Dischargers have Baseline status for all parameters.

## C. Level 1 Status

A Discharger's Baseline status for any given parameter shall change to Level 1 status if sampling results indicate an NAL exceedance for that same parameter. Level 1 status will commence on July 1 following the reporting year during which the exceedance(s) occurred.[20]

1. Level 1 ERA Evaluation

   a. By October 1 following commencement of Level 1 status for any parameter with sampling results indicating an NAL exceedance, the Discharger shall:

   b. Complete an evaluation, with the assistance of a QISP, of the industrial pollutant sources at the facility that are or may be related to the NAL exceedance(s); and,

   c. Identify in the evaluation the corresponding BMPs in the SWPPP and any additional BMPs and SWPPP revisions necessary to prevent future NAL exceedances and to comply with the requirements of this General Permit. Although the evaluation may focus on the drainage areas where the NAL exceedance(s) occurred, all drainage areas shall be evaluated.

2. Level 1 ERA Report

[19] U.S. EPA. NPDES Storm Water Sampling Guidance Document. <http://www.epa.gov/npdes/pubs/owm0093.pdf >. [as of February 4, 2014]

[20] For all sampling results reported before June 30th of the preceding reporting year. If sample results indicating an NAL exceedance are submitted after June 30th, the Discharger will change status once those results have been reported.

a. Based upon the above evaluation, the Discharger shall, as soon as practicable but no later than January 1 following commencement of Level 1 status :

i. Revise the SWPPP as necessary and implement any additional BMPs identified in the evaluation;

ii. Certify and submit via SMARTS a Level 1 ERA Report prepared by a QISP that includes the following:

1) A summary of the Level 1 ERA Evaluation required in subsection C.1 above; and,

2) A detailed description of the SWPPP revisions and any additional BMPs for each parameter that exceeded an NAL.

iii. Certify and submit via SMARTS the QISP's identification number, name, and contact information (telephone number, e-mail address).

b. A Discharger's Level 1 status for a parameter will return to Baseline status once a Level 1 ERA report has been completed, all identified additional BMPs have been implemented, and results from four (4) consecutive QSEs that were sampled subsequent to BMP implementation indicate no additional NAL exceedances for that parameter.

3. NAL Exceedances Prior to Implementation of Level 1 Status BMPs.

Prior to the implementation of an additional BMP identified in the Level 1 ERA Evaluation or October 1, whichever comes first, sampling results for any parameter(s) being addressed by that additional BMP will not be included in the calculations of annual average or instantaneous NAL exceedances in SMARTS.

## D. Level 2 Status

A Discharger's Level 1 status for any given parameter shall change to Level 2 status if sampling results indicate an NAL exceedance for that same parameter while the Discharger is in Level 1. Level 2 status will commence on July 1 following the reporting year during which the NAL exceedance(s) occurred.[21]

1. Level 2 ERA Action Plan

[21] For all sampling results reported before June 30th of the preceding reporting year. If sample results indicating an NAL exceedance are submitted after June 30th, the Discharger will change status upon the date those results have been reported into SMARTS.

a. Dischargers with Level 2 status shall certify and submit via SMARTS a Level 2 ERA Action Plan prepared by a QISP that addresses each new Level 2 NAL exceedance by January 1 following the reporting year during which the NAL exceedance(s) occurred. For each new Level 2 NAL exceedance, the Level 2 Action Plan will identify which of the demonstrations in subsection D.2.a through c the Discharger has selected to perform. A new Level 2 NAL exceedance is any Level 2 NAL exceedance for 1) a new parameter in any drainage area, or 2) the same parameter that is being addressed in an existing Level 2 ERA Action Plan in a different drainage area.

b. The Discharger shall certify and submit via SMARTS the QISP's identification number, name, and contact information (telephone number, e-mail address) if this information has changed since previous certifications.

c. The Level 2 ERA Action Plan shall at a minimum address the drainage areas with corresponding Level 2 NAL exceedances.

d. All elements of the Level 2 ERA Action Plan shall be implemented as soon as practicable and completed no later than 1 year after submitting the Level 2 ERA Action Plan.

e. The Level 2 ERA Action Plan shall include a schedule and a detailed description of the tasks required to complete the Discharger's selected demonstration(s) as described below in Section D.2.a through c.

2. Level 2 ERA Technical Report

On January 1 of the reporting year following the submittal of the Level 2 ERA Action Plan, a Discharger with Level 2 status shall certify and submit a Level 2 ERA Technical Report prepared by a QISP that includes one or more of the following demonstrations:

a. Industrial Activity BMPs Demonstration

This shall include the following requirements, as applicable:

i. Shall include a description of the industrial pollutant sources and corresponding industrial pollutants that are or may be related to the NAL exceedance(s);

ii. Shall include an evaluation of all pollutant sources associated with industrial activity that are or may be related to the NAL exceedance(s);

iii. Where all of the Discharger's implemented BMPs, including additional BMPs identified in the Level 2 ERA Action Plan, achieve

compliance with the effluent limitations of this General Permit and are expected to eliminate future NAL exceedance(s), the Discharger shall provide a description and analysis of all implemented BMPs;

iv. In cases where all of the Discharger's implemented BMPs, including additional BMPs identified in the Level 2 ERA Action Plan, achieve compliance with the effluent limitations of this General Permit but are not expected to eliminate future NAL exceedance(s), the Discharger shall provide, in addition to a description and analysis of all implemented BMPs:

1) An evaluation of any additional BMPs that would reduce or prevent NAL exceedances;

2) Estimated costs of the additional BMPs evaluated; and,

3) An analysis describing the basis for the selection of BMPs implemented in lieu of the additional BMPs evaluated but not implemented.

v. The description and analysis of BMPs required in subsection a.iii above shall specifically address the drainage areas where the NAL exceedance(s) responsible for the Discharger's Level 2 status occurred, although any additional Level 2 ERA Action Plan BMPs may be implemented for all drainage areas; and,

vi. If an alternative design storm standard for treatment control BMPs (in lieu of the design storm standard for treatment control BMPs in Section X.H.6 in this General Permit) will achieve compliance with the effluent limitations of this General Permit, the Discharger shall provide an analysis describing the basis for the selection of the alternative design storm standard.

b. Non-Industrial Pollutant Source Demonstration

This shall include:

i. A statement that the Discharger has determined that the exceedance of the NAL is attributable solely to the presence of non-industrial pollutant sources. (The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance.) The sources shall be identified as either run-on from adjacent properties, aerial deposition from man-made sources, or as generated by on-site non-industrial sources;

ii. A statement that the Discharger has identified and evaluated all potential pollutant sources that may have commingled with storm water associated with the Discharger's industrial activity and may be contributing to the NAL exceedance;

iii. A description of any on-site industrial pollutant sources and corresponding industrial pollutants that are contributing to the NAL exceedance;

iv. An assessment of the relative contributions of the pollutant from (1) storm water run-on to the facility from adjacent properties or non-industrial portions of the Discharger's property or from aerial deposition and (2) the storm water associated with the Discharger's industrial activity;

v. A summary of all existing BMPs for that parameter; and,

vi. An evaluation of all on-site/off-site analytical monitoring data demonstrating that the NAL exceedances are caused by pollutants in storm water run-on to the facility from adjacent properties or non-industrial portions of the Discharger's property or from aerial deposition.

c. Natural Background Pollutant Source Demonstration

This shall include:

i. A statement that the Discharger has determined that the NAL exceedance is attributable solely to the presence of the pollutant in the natural background that has not been disturbed by industrial activities. (The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance);

ii. A summary of all data previously collected by the Discharger, or other identified data collectors, that describes the levels of natural background pollutants in the storm water discharge;

iii. A summary of any research and published literature that relates the pollutants evaluated at the facility as part of the Natural Background Source Demonstration;

iv. Map showing the reference site location in relation to facility along with available land cover information;

v. Reference site and test site elevation;

vi. Available geology and soil information for reference and test sites;

vii. Photographs showing site vegetation;

viii. Site reconnaissance survey data regarding presence of roads, outfalls, or other human-made structures; and,

ix. Records from relevant state or federal agencies indicating no known mining, forestry, or other human activities upstream of the proposed reference site.

3. Level 2 ERA Technical Report Submittal

a. The Discharger shall certify and submit via SMARTS the Level 2 ERA Technical Report described in Section D.2 above.

b. The State Water Board and Regional Boards (Water Boards) may review the submitted Level 2 ERA Technical Reports. Upon review of a Level 2 ERA Technical Report, the Water Boards may reject the Level 2 ERA Technical Report and direct the Discharger to take further action(s) to comply with this General Permit.

c. Dischargers with Level 2 status who have submitted the Level 2 ERA Technical Report are only required to annually update the Level 2 ERA Technical Report based upon additional NAL exceedances of the same parameter and same drainage area (if the original Level 2 ERA Technical Report contained an Industrial Activity BMP Demonstration and the implemented BMPs were expected to eliminate future NAL exceedances in accordance with Section XII.D.2.a.ii), facility operational changes, pollutant source(s) changes, and/or information that becomes available via compliance activities (monthly visual observations, sampling results, annual evaluation, etc.). The Level 2 ERA Technical Report shall be prepared by a QISP and be certified and submitted via SMARTS by the Discharger with each Annual Report. If there are no changes prompting an update of the Level 2 ERA Technical Report, as specified above, the Discharger will provide this certification in the Annual Report that there have been no changes warranting re-submittal of the Level 2 ERA Technical Report.

d. Dischargers are not precluded from submitting a Level 2 ERA Action Plan or ERA Technical Report prior to entering Level 2 status if information is available to adequately prepare the report and perform the demonstrations described above. A Discharger who chooses to submit a Level 2 ERA Action Plan or ERA Technical Report prior to entering Level 2 status will automatically be placed in Level 2 in accordance to the Level 2 ERA schedule.

4. Eligibility for Returning to Baseline Status

a. Dischargers with Level 2 status who submit an Industrial Activity BMPs Demonstration in accordance with subsection 2.a.i through iii above and have implemented BMPs to prevent future NAL exceedance(s) for the Level 2 parameter(s) shall return to baseline status for that parameter, if results from four (4) subsequent consecutive QSEs sampled indicate no additional NAL exceedance(s) for that parameter(s). If future NAL exceedances occur for the same parameter(s), the Discharger's Baseline status will return to Level 2 status on July 1 in the subsequent reporting year during which the NAL exceedance(s) occurred. These Dischargers shall update the Level 2 ERA Technical Report as required above in Section D.3.c.

b. Dischargers are ineligible to return to baseline status if they submit any of the following:

   i. A industrial activity BMP demonstration in accordance with subsection 2.a.iv above;

   ii. An non-industrial pollutant source demonstration; or,

   iii. A natural background pollutant source demonstration.

5. Level 2 ERA Implementation Extension

   a. Dischargers that need additional time to submit the Level 2 ERA Technical Report shall be automatically granted a single time extension for up to six (6) months upon submitting the following items into SMARTS, as applicable:

      i. Reasons for the time extension;

      ii. A revised Level 2 ERA Action Plan including a schedule and a detailed description of the necessary tasks still to be performed to complete the Level 2 ERA Technical Report; and

      iii. A description of any additional temporary BMPs that will be implemented while permanent BMPs are being constructed.

   b. The Regional Water Boards will review Level 2 ERA Implementation Extensions for completeness and adequacy. Requests for extensions that total more than six (6) months are not granted unless approved in writing by the Water Boards. The Water Boards may (1) reject or revise the time allowed to complete Level 2 ERA Implementation Extensions, (2) identify additional tasks necessary to complete the Level 2 ERA Technical Report, and/or (3) require the Discharger to implement additional temporary BMPs.

## XIII. INACTIVE MINING OPERATION CERTIFICATION

**A.** Inactive mining operations are defined in Part 3 of Attachment A of this General Permit. The Discharger may, in lieu of complying with the General Permit requirements described in subsection B below, certify and submit via SMARTS that their inactive mining operation meets the following conditions:

1. The Discharger has determined and justified in the SWPPP that it is impracticable to implement the monitoring requirements in this General Permit for the inactive mining operation;

2. A SWPPP has been signed (wet signature and license number) by a California licensed professional engineer and is being implemented in accordance with the requirements of this General Permit; and,

3. The facility is in compliance with this General Permit, except as provided in subsection B below.

**B.** The Discharger who has certified and submitted that they meet the conditions in subsection A above, are not subject to the following General Permit requirements:

1. Monitoring Implementation Plan in Section X.I;

2. Monitoring Requirements in Section XI;

3. Exceedance Response Actions (ERAs) in Section XII; and,

4. Annual Report Requirements in Section XVI.

**C.** Inactive Mining Operation Certification Submittal Schedule

1. The Discharger shall certify and submit via SMARTS NOI coverage PRDs listed in Section II.B.1 and meet the conditions in subsection A above.

2. The Discharger shall annually inspect the inactive mining site and certify via SMARTS no later than July 15th of each reporting year, that their inactive mining operation continues to meet the conditions in subsection A above.

3. The Discharger shall have a California licensed professional engineer review and update the SWPPP if there are changes to their inactive mining operation or additional BMPs are needed to comply with this General Permit. Any significant updates to the SWPPP shall be signed (wet signature and license number) by a California license professional engineer.

4. The Discharger shall certify and submit via SMARTS any significantly revised SWPPP within 30 days of the revision(s).

# XIV. COMPLIANCE GROUPS AND COMPLIANCE GROUP LEADERS

## A. Compliance Group Qualification Requirements

1. Any group of Dischargers of the same industry type or any QISP representing Dischargers of the same industry type may form a Compliance Group. A Compliance Group shall consist of Dischargers that operate facilities with similar types of industrial activities, pollutant sources, and pollutant characteristics (e.g., scrap metals recyclers would join a different group than paper recyclers, truck vehicle maintenance facilities would join a different group than airplane vehicle maintenance facilities, etc.). A Discharger participating in a Compliance Group is termed a Compliance Group Participant. Participation in a Compliance Group is not required. Compliance Groups may be formed at any time.

2. Each Compliance Group shall have a Compliance Group Leader.

3. To establish a Compliance Group, the Compliance Group Leader shall register as a Compliance Group Leader via SMARTS. The registration shall include documentation demonstrating compliance with the Compliance Group qualification requirements above and a list of the Compliance Group Participants.

4. Each Compliance Group Participant shall register as a member of an established Compliance Group via SMARTS.

5. The Executive Director of the State Water Board may review Compliance Group registrations and/or activities for compliance with the requirements of this General Permit. The Executive Director may reject the Compliance Group, the Compliance Group Leader, or individual Compliance Group Participants within the Compliance Group.

## B. Compliance Group Leader Responsibilities

1. A Compliance Group Leader must complete a State Water Board sponsored or approved training program for Compliance Group Leaders.

2. The Compliance Group Leader shall assist Compliance Group Participants with all compliance activities required by this General Permit.

3. A Compliance Group Leader shall prepare a Consolidated Level 1 ERA Report for all Compliance Group Participants with Level 1 status for the same parameter. Compliance Group Participants who certify and submit these Consolidated Level 1 ERA Reports are subject to the same provisions as individual Dischargers with Level 1 status, as described in Section XII.C. A Consolidated Level 1 ERA Report is equivalent to a Level 1 ERA Report.

4. The Compliance Group Leader shall update the Consolidated Level 1 ERA Report as needed to address additional Compliance Group Participants with ERA Level 1 status.

5. A Compliance Group Leader shall prepare a Level 2 ERA Action Plan specific to each Compliance Group Participant with Level 2 status. Compliance Group Participants who certify and submit these Level 2 ERA Action Plans are subject to the same provisions as individual Dischargers with Level 2 status, as described in Section XII.D.

6. A Compliance Group Leader shall prepare a Level 2 ERA Technical Report specific to each Compliance Group Participant with Level 2 status. Compliance Group Participants who certify and submit these Level 2 ERA Technical Reports are subject to the same provisions as individual Dischargers with Level 2 status, as described in Section XII.D.

7. The Compliance Group Leader shall inspect all the facilities of the Compliance Group Participants that have entered Level 2 status prior to preparing the individual Level 2 ERA Technical Report.

8. The Compliance Group Leader shall revise the Consolidated Level 1 ERA Report, individual Level 2 ERA Action Plans, or individual Level 2 Technical Reports in accordance with any comments received from the Water Boards.

9. The Compliance Group Leader shall inspect all the facilities of the Compliance Group Participants at a minimum of once per reporting year (July 1 to June 30).

### C. Compliance Group Participant Responsibilities

1. Each Compliance Group Participant is responsible for permit compliance for the Compliance Group Participant's facility and for ensuring that the Compliance Group Leader's activities related to the Compliance Group Participant's facility comply with this General Permit.

2. Compliance Group Participants with Level 1 status shall certify and submit via SMARTS the Consolidated Level 1 ERA Report. The Compliance Group Participants shall certify that they have reviewed the Consolidated Level 1 ERA Report and have implemented any required additional BMPs. Alternatively, the Compliance Group Participant may submit an individual Level 1 ERA Report in accordance with the provisions in Section XII.C.2.

3. Compliance Group Participants with Level 2 status shall certify and submit via SMARTS their individual Level 2 ERA Action Plan and Technical Report prepared by their Compliance Group Leader. Each Compliance Group Participant shall certify that they have reviewed the Level 2 ERA Action Plan and Technical Report and will implement any required additional BMPs.

4. Compliance Group Participants can at any time discontinue their participation in their associated Compliance Group via SMARTS. Upon discontinuation, the former Compliance Group Participant is immediately subject to the sampling and analysis requirements described in Section XI.B.2.

## XV. ANNUAL COMPREHENSIVE FACILITY COMPLIANCE EVALUATION (ANNUAL EVALUATION)

The Discharger shall conduct one Annual Evaluation for each reporting year (July 1 to June 30). If the Discharger conducts an Annual Evaluation fewer than eight (8) months, or more than sixteen (16) months, after it conducts the previous Annual Evaluation, it shall document the justification for doing so. The Discharger shall revise the SWPPP, as appropriate, and implement the revisions within 90 days of the Annual Evaluation. At a minimum, Annual Evaluations shall consist of:

**A.** A review of all sampling, visual observation, and inspection records conducted during the previous reporting year;

**B.** An inspection of all areas of industrial activity and associated potential pollutant sources for evidence of, or the potential for, pollutants entering the storm water conveyance system;

**C.** An inspection of all drainage areas previously identified as having no exposure to industrial activities and materials in accordance with the definitions in Section XVII;

**D.** An inspection of equipment needed to implement the BMPs;

**E.** An inspection of any BMPs;

**F.** A review and effectiveness assessment of all BMPs for each area of industrial activity and associated potential pollutant sources to determine if the BMPs are properly designed, implemented, and are effective in reducing and preventing pollutants in industrial storm water discharges and authorized NSWDs; and,

**G.** An assessment of any other factors needed to comply with the requirements in Section XVI.B.

## XVI. ANNUAL REPORT

**A.** The Discharger shall certify and submit via SMARTS an Annual Report no later than July 15$^{th}$ following each reporting year using the standardized format and checklists in SMARTS.

**B.** The Discharger shall include in the Annual Report:

1. A Compliance Checklist that indicates whether a Discharger complies with, and has addressed all applicable requirements of this General Permit;

2. An explanation for any non-compliance of requirements within the reporting year, as indicated in the Compliance Checklist;

3. An identification, including page numbers and/or sections, of all revisions made to the SWPPP within the reporting year; and,

4. The date(s) of the Annual Evaluation.

## XVII. CONDITIONAL EXCLUSION - NO EXPOSURE CERTIFICATION (NEC)

**A.** Discharges composed entirely of storm water that has not been exposed to industrial activity are not industrial storm water discharges. Dischargers are conditionally excluded from complying with the SWPPP and monitoring requirements of this General Permit if all of the following conditions are met:

1. There is no exposure of Industrial Materials and Activities to rain, snow, snowmelt, and/or runoff;

2. All unauthorized NSWDs have been eliminated and all authorized NSWDs meet the conditions of Section IV;

3. The Discharger has certified and submitted via SMARTS PRDs for NEC coverage pursuant to the instructions in Section II.B.2; and,

4. The Discharger has satisfied all other requirements of this Section.

### B. NEC Specific Definitions

1. No Exposure - all Industrial Materials and Activities are protected by a Storm-Resistant Shelter to prevent all exposure to rain, snow, snowmelt, and/or runoff.

2. Industrial Materials and Activities - includes, but is not limited to, industrial material handling activities or equipment, machinery, raw materials, intermediate products, by-products, final products, and waste products.

3. Material Handling Activities - includes the storage, loading and unloading, transportation, or conveyance of any industrial raw material, intermediate product, final product, or waste product.

4. Sealed - banded or otherwise secured, and without operational taps or valves.

5. Storm-Resistant Shelters - includes completely roofed and walled buildings or structures. Also includes structures with only a top cover supported by permanent supports but with no side coverings, provided material within the structure is not subject to wind dispersion (sawdust, powders, etc.), or track-out, and there is no storm water discharged from within the structure that comes into contact with any materials.

## C. NEC Qualifications

To qualify for an NEC, a Discharger shall:

1. Except as provided in subsection D below, provide a Storm-Resistant Shelter to protect Industrial Materials and Activities from exposure to rain, snow, snowmelt, run-on, and runoff;

2. Inspect and evaluate the facility annually to determine that storm water exposed to industrial materials or equipment has not and will not be discharged to waters of the United States. Evaluation records shall be maintained for five (5) years in accordance with Section XXI.J.4;

3. Register for NEC coverage by certifying that there are no discharges of storm water contaminated by exposure to Industrial Materials and Activities from areas of the facility subject to this General Permit, and certify that all unauthorized NSWDs have been eliminated and all authorized NSWDs meet the conditions of Section IV (Authorized NSWDs). NEC coverage and annual renewal requires payment of an annual fee in accordance with California Code of Regulations, title 23, section 2200 et seq.; and,

4. Submit PRDs for NEC coverage shall be prepared and submitted in accordance with the:

   a. Certification requirements in Section XXI.K; and,

   b. Submittal schedule in accordance with Section II.B.2.

## D. NEC Industrial Materials and Activities - Storm-Resistant Shelter Not Required

To qualify for NEC coverage, a Storm-Resistant Shelter is not required for the following:

1. Drums, barrels, tanks, and similar containers that are tightly Sealed, provided those containers are not deteriorated, do not contain residual industrial materials on the outside surfaces, and do not leak;

2. Adequately maintained vehicles used in material handling;

3. Final products, other than products that would be mobilized in storm water discharge (e.g., rock salt);

4. Any Industrial Materials and Activities that are protected by a temporary shelter for a period of no more than ninety (90) days due to facility construction or remodeling; and,

5. Any Industrial Materials and Activities that are protected within a secondary containment structure that will not discharge storm water to waters of the United States.

## E. NEC Limitations

1. NEC coverage is available on a facility-wide basis only, not for individual outfalls. If a facility has industrial storm water discharges from one or more drainage areas that require NOI coverage, Dischargers shall register for NOI coverage for the entire facility through SMARTS in accordance with Section II.B.2. Any drainage areas on that facility that would otherwise qualify for NEC coverage may be specially addressed in the facility SWPPP by including an NEC Checklist and a certification statement demonstrating that those drainage areas of the facility have been evaluated; and that none of the Industrial Materials or Activities listed in subsection C above are, or will be in the foreseeable future, exposed to precipitation.

2. If circumstances change and Industrial Materials and Activities become exposed to rain, snow, snowmelt, and/or runoff, the conditions for this exclusion shall no longer apply. In such cases, the Discharger may be subject to enforcement for discharging without a permit. A Discharger with NEC coverage that anticipates changes in circumstances should register for NOI coverage at least seven (7) days before anticipated exposure.

3. The Regional Water Board may deny NEC coverage and require NOI coverage upon determining that:

   a. Storm water is exposed to Industrial Materials and Activities; and/or

   b. The discharge has a reasonable potential to cause or contribute to an exceedance of an applicable water quality standards.

**F.** NEC Permit Registration Documents Required for Initial NEC Coverage

A Discharger shall submit via SMARTS the following PRDs for NEC coverage to document the applicability of the conditional exclusion:

1. The NEC form, which includes:

   a. The legal name, postal address, telephone number, and e-mail address of the Discharger;

   b. The facility business name and physical mailing address, the county name, and a description of the facility location if the facility does not have a physical mailing address; and,

   c. Certification by the Discharger that all PRDs submitted are correct and true and the conditions of no exposure have been met.

2. An NEC Checklist prepared by the Discharger demonstrating that the facility has been evaluated; and that none of the following industrial materials or activities are, or will be in the foreseeable future, exposed to precipitation:

a. Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed;

b. Materials or residuals on the ground or in storm water inlets from spills/leaks;

c. Materials or products from past industrial activity;

d. Material handling equipment (except adequately maintained vehicles);

e. Materials or products during loading/unloading or transporting activities;

f. Materials or products stored outdoors (except final products intended for outside use, e.g., new cars, where exposure to storm water does not result in the discharge of pollutants);

g. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;

h. Materials or products handled/stored on roads or railways owned or maintained by the Discharger;

i. Waste material (except waste in covered, non-leaking containers, e.g., dumpsters);

j. Application or disposal of processed wastewater (unless already covered by an NPDES permit); and,

k. Particulate matter or visible deposits of residuals from roof stacks/vents evident in the storm water outflow.

3. Site Map (see Section X.E).

## G. Requirements for Annual NEC Coverage Recertification

By October 1 of each reporting year beginning in 2015, any Discharger who has previously registered for NEC coverage shall either submit and certify an NEC demonstrating that the facility has been evaluated, and that none of the Industrial Materials or Activities listed above are, or will be in the foreseeable future, exposed to precipitation, or apply for NOI coverage.

## H. NEC Certification Statement

All NEC certifications and re-certifications shall include the following certification statement:

*I certify under penalty of law that I have read and understand the eligibility requirements for claiming a condition of 'no exposure' and obtaining an exclusion from NPDES storm water permitting; and that there are no discharges of storm water contaminated by exposure to industrial activities*

*or materials from the industrial facility identified in this document (except as allowed in subsection C above). I understand that I am obligated to submit a no exposure certification form annually to the State Water Board and, if requested, to the operator of the local Municipal Separate Storm Sewer System (MS4) into which this facility discharges (where applicable). I understand that I must allow the Water Board staff, or MS4 operator where the discharge is into the local MS4, to perform inspections to confirm the condition of no exposure and to make such inspection reports publicly available upon request. I understand that I must obtain coverage under an NPDES permit prior to any point source discharge of storm water from the facility. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly involved in gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

## XVIII. SPECIAL REQUIREMENTS - PLASTIC MATERIALS

**A.** Facilities covered under this General Permit that handle Plastic Materials are required to implement BMPs to eliminate discharges of plastic in storm water in addition to the other requirements of this General Permit that are applicable to all other Industrial Materials and Activities. Plastic Materials are virgin and recycled plastic resin pellets, powders, flakes, powdered additives, regrind, dust, and other similar types of preproduction plastics with the potential to discharge or migrate off-site. Any Dischargers' facility handling Plastic Materials will be referred to as Plastics Facilities in this General Permit. Any Plastics Facility covered under this General Permit that manufactures, transports, stores, or consumes these materials shall submit information to the State Water Board in their PRDs, including the type and form of plastics, and which BMPs are implemented at the facility to prevent illicit discharges. Pursuant to Water Code section 13367, Plastics Facilities are subject to mandatory, minimum BMPs.

1. At a minimum, Plastics Facilities shall implement and include in the SWPPP:

   a. Containment systems at each on-site storm drain discharge location down gradient of areas containing plastic material. The containment system shall be designed to trap all particles retained by a 1mm mesh screen, with a treatment capacity of no less than the peak flow rate from a one-year, one-hour storm.

   b. When a containment system is infeasible, or poses the potential to cause an illicit discharge, the facility may propose a technically feasible

alternative BMP or suite of BMPs. The alternative BMPs shall be designed to achieve the same or better performance standard as a 1mm mesh screen with a treatment capacity of the peak flow rate from a one-year, one-hour storm. Alternative BMPs shall be submitted to the Regional Water Board for approval.

c. Plastics Facilities shall use durable sealed containers designed not to rupture under typical loading and unloading activities at all points of plastic transfer and storage.

d. Plastics Facilities shall use capture devices as a form of secondary containment during transfers, loading, or unloading Plastic Materials. Examples of capture devices for secondary containment include, but are not limited to catch pans, tarps, berms or any other device that collects errant material.

e. Plastics Facilities shall have a vacuum or vacuum-type system for quick cleanup of fugitive plastic material available for employees.

f. Pursuant to Water Code section 13367(e)(1), Plastics Facilities that handle Plastic Materials smaller than 1mm in size shall develop a containment system designed to trap the smallest plastic material handled at the facility with a treatment capacity of at least the peak flow rate from a one-year, one-hour storm, or develop a feasible alternative BMP or suite of BMPs that are designed to achieve a similar or better performance standard that shall be submitted to the Regional Water Board for approval.

2. Plastics Facilities are exempt from the Water Code requirement to install a containment system under section 13367 of the Water Code if they meet one of the following requirements that are determined to be equal to, or exceed the performance requirements of a containment system:

   a. The Discharger has certified and submitted via SMARTS a valid No Exposure Certification (NEC) in accordance with Section XVII; or

   b. Plastics Facilities are exempt from installing a containment system, if the following suite of eight (8) BMPs is implemented. This combination of BMPs is considered to reduce or prevent the discharge of plastics at a performance level equivalent to or better than the 1mm mesh and flow standard in Water Code section 13367(e)(1).

      i. Plastics Facilities shall annually train employees handling Plastic Materials. Training shall include environmental hazards of plastic discharges, employee responsibility for corrective actions to prevent errant Plastic Materials, and standard procedures for containing, cleaning, and disposing of errant Plastic Materials.

ii. Plastics Facilities shall immediately fix any Plastic Materials containers that are punctured or leaking and shall clean up any errant material in a timely manner.

iii. Plastics Facilities shall manage outdoor waste disposal of Plastic Materials in a manner that prevents the materials from leaking from waste disposal containers or during waste hauling.

iv. Plastics Facilities that operate outdoor conveyance systems for Plastic Materials shall maintain the system in good operating condition. The system shall be sealed or filtered in such a way as to prevent the escape of materials when in operation. When not in operation, all connection points shall be sealed, capped, or filtered so as to not allow material to escape. Employees operating the conveyance system shall be trained how to operate in a manner that prevents the loss of materials such as secondary containment, immediate spill response, and checks to ensure the system is empty during connection changes.

v. Plastics Facilities that maintain outdoor storage of Plastic Materials shall do so in a durable, permanent structure that prevents exposure to weather that could cause the material to migrate or discharge in storm water.

vi. Plastics Facilities shall maintain a schedule for regular housekeeping and routine inspection for errant Plastic Materials. The Plastics Facility shall ensure that their employees follow the schedule.

vii. PRDs shall include the housekeeping and routine inspection schedule, spill response and prevention procedures, and employee training materials regarding plastic material handling.

viii. Plastics Facilities shall correct any deficiencies in the employment of the above BMPs that result in errant Plastic Materials that may discharge or migrate off-site in a timely manner. Any Plastic Materials that are discharged or that migrate off-site constitute an illicit discharge in violation of this General Permit.

## XIX. REGIONAL WATER BOARD AUTHORITIES

**A.** The Regional Water Boards may review a Discharger's PRDs for NOI or NEC coverage and administratively reject General Permit coverage if the PRDs are deemed incomplete. The Regional Water Boards may take actions that include rescinding General Permit coverage, requiring a Discharger to revise and re-submit their PRDs (certified and submitted by the Discharger) within a specified time period, requiring the Discharger to apply for different General Permit coverage or a different individual or general permit, or taking no action.

**B.** The Regional Water Boards have the authority to enforce the provisions and requirements of this General Permit. This includes, but is not limited to,

reviewing SWPPPs, Monitoring Implementation Plans, ERA Reports, and Annual Reports, conducting compliance inspections, and taking enforcement actions.

**C.** As appropriate, the Regional Water Boards may issue NPDES storm water general or individual permits to a Discharger, categories of Dischargers, or Dischargers within a watershed or geographic area. Upon issuance of such NPDES permits, this General Permit shall no longer regulate the affected Discharger(s).

**D.** The Regional Water Boards may require a Discharger to revise its SWPPP, ERA Reports, or monitoring programs to achieve compliance with this General Permit. In this case, the Discharger shall implement these revisions in accordance with a schedule provided by the Regional Water Board.

**E.** The Regional Water Boards may approve requests from a Discharger to include co-located, but discontiguous, industrial activities within the same facility under a single NOI or NEC coverage.

**F.** Consistent with 40 Code of Federal Regulations section 122.26(a)(9)(i)(D), the Regional Water Boards may require any discharge that is not regulated by this General Permit, that is determined to contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States, to be covered under this General Permit as appropriate. Upon designation, the Discharger responsible for the discharge shall obtain coverage under this General Permit.

**G.** The Regional Water Boards may review a Discharger's Inactive Mining Operation Certification and reject it at any time if the Regional Water Board determines that access to the facility for monitoring purposes is practicable or that the facility is not in compliance with the applicable requirements of this General Permit.

**H.** All Regional Water Board actions that modify a Discharger's obligations under this General Permit must be in writing and should also be submitted in SMARTS.

## XX. SPECIAL CONDITIONS

### A. Reopener Clause

This General Permit may be reopened and amended to incorporate TMDL-related provisions. This General Permit may also be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, water quality control plans or water quality control policies, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations sections 122.62, 122.63, 122.64, and 124.5.

### B. Water Quality Based Corrective Actions

1. Upon determination by the Discharger or written notification by the Regional Water Board that industrial storm water discharges and/or authorized NSWDs contain pollutants that are in violation of Receiving Water Limitations (Section VI), the Discharger shall:

    a. Conduct a facility evaluation to identify pollutant source(s) within the facility that are associated with industrial activity and whether the BMPs described in the SWPPP have been properly implemented;

    b. Assess the facility's SWPPP and its implementation to determine whether additional BMPs or SWPPP implementation measures are necessary to reduce or prevent pollutants in industrial storm water discharges to meet the Receiving Water Limitations (Section VI); and,

    c. Certify and submit via SMARTS documentation based upon the above facility evaluation and assessment that:

        i. Additional BMPs and/or SWPPP implementation measures have been identified and included in the SWPPP to meet the Receiving Water Limitations (Section VI); or

        ii. No additional BMPs or SWPPP implementation measures are required to reduce or prevent pollutants in industrial storm water discharges to meet the Receiving Water Limitations (Section VI).

2. The Regional Water Board may reject the Dischargers water quality based corrective actions and/or request additional supporting documentation.

**C. Requirements for Dischargers Claiming "No Discharge" through the Notice of Non-Applicability (NONA)**

1. For the purpose of the NONA, the Entity (Entities) is referring to the person(s) defined in section 13399.30 of the Water Code.

2. Entities who are claiming "No Discharge" through the NONA shall meet the following eligibility requirements:

    a. The facility is engineered and constructed to have contained the maximum historic precipitation event (or series of events) using the precipitation data collected from the National Oceanic and Atmospheric Agency's website (or other nearby precipitation data available from other government agencies) so that there will be no discharge of industrial storm water to waters of the United States; or,

    b. The facility is located in basins or other physical locations that are not hydrologically connected to waters of the United States.

3. When claiming the "No Discharge" option, Entities shall submit and certify via SMARTS both the NONA and a No Discharge Technical Report. The No

Discharge Technical Report shall demonstrate the facility meets the eligibility requirements described above.

4. The No Discharge Technical Report shall be signed (wet signature and license number) by a California licensed professional engineer.

## XXI. STANDARD CONDITIONS

### A. Duty to Comply

Dischargers shall comply with all standard conditions in this General Permit. Permit noncompliance constitutes a violation of the Clean Water Act and the Water Code and is grounds for enforcement action and/or removal from General Permit coverage.

Dischargers shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions.

### B. Duty to Reapply

Dischargers that wish to continue an activity regulated under this General Permit after the expiration date of this General Permit shall apply for and obtain authorization from the Water Boards as required by the new general permit once it is issued.

### C. General Permit Actions

1. This General Permit may be modified, revoked and reissued, or terminated for cause. Submittal of a request by the Discharger for General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not annul any General Permit condition.

2. If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge, and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition.

### D. Need to Halt or Reduce Activity Not a Defense

In an enforcement action, it shall not be a defense for a Discharger that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this General Permit.

## E. Duty to Mitigate

Dischargers shall take all responsible steps to reduce or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.

## F. Proper Operation and Maintenance

Dischargers shall at all times properly operate and maintain any facilities and systems of treatment and control (and related equipment and apparatuses) which are installed or used by the Discharger to achieve compliance with the conditions of this General Permit. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a Discharger when necessary to achieve compliance with the conditions of this General Permit.

## G. Property Rights

This General Permit does not convey any property rights of any sort or any exclusive privileges. It also does not authorize any injury to private property or any invasion of personal rights, nor does it authorize any infringement of federal, state, or local laws and regulations.

## H. Duty to Provide Information

Upon request by the relevant agency, Dischargers shall provide information to determine compliance with this General Permit to the Water Boards, U.S. EPA, or local Municipal Separate Storm Sewer System (MS4) within a reasonable time. Dischargers shall also furnish, upon request by the relevant agency, copies of records that are required to be kept by this General Permit.

## I. Inspection and Entry

Dischargers shall allow the Water Boards, U.S. EPA, and local MS4 (including any authorized contractor acting as their representative), to:

1. Enter upon the premises at reasonable times where a regulated industrial activity is being conducted or where records are kept under the conditions of this General Permit;

2. Access and copy at reasonable times any records that must be kept under the conditions of this General Permit;

3. Inspect the facility at reasonable times; and,

4. Sample or monitor at reasonable times for the purpose of ensuring General Permit compliance.

## J. Monitoring and Records

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

2. If Dischargers monitor any pollutant more frequently than required, the results of such monitoring shall be included in the calculation and reporting of the data submitted.

3. Records of monitoring information shall include:

   a. The date, exact location, and time of sampling or measurement;

   b. The date(s) analyses were performed;

   c. The individual(s) that performed the analyses;

   d. The analytical techniques or methods used; and,

   e. The results of such analyses.

4. Dischargers shall retain, for a period of at least five (5) years, either a paper or electronic copy of all storm water monitoring information, records, data, and reports required by this General Permit. Copies shall be available for review by the Water Board's staff at the facility during scheduled facility operating hours.

5. Upon written request by U.S. EPA or the local MS4, Dischargers shall provide paper or electronic copies of Annual Reports or other requested records to the Water Boards, U.S. EPA, or local MS4 within ten (10) days from receipt of the request.

## K. Electronic Signature and Certification Requirements

1. All Permit Registration Documents (PRDs) for NOI and NEC coverage shall be certified and submitted via SMARTS by the Discharger's Legally Responsible Person (LRP). All other documents may be certified and submitted via SMARTS by the LRP or by their designated Duly Authorized Representative.

2. When a new LRP or Duly Authorized Representative is designated, the Discharger shall ensure that the appropriate revisions are made via SMARTS. In unexpected or emergency situations, it may be necessary for the Discharger to directly contact the State Water Board's Storm Water Section to register for SMARTS account access in order to designate a new LRP.

3. Documents certified and submitted via SMARTS by an unauthorized or ineligible LRP or Duly Authorized Representative are invalid.

4. LRP eligibility is as follows:

    a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

        i. A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function; or

        ii. The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

    b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively;

    c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. This includes the chief executive officer of the agency or the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).

5. Duly Authorized Representative eligibility is as follows:

    a. The Discharger must authorize via SMARTS any person designated as a Duly Authorized Representative;

    b. The authorization shall specify that a person designated as a Duly Authorized Representative has responsibility for the overall operation of the regulated facility or activity, such as a person that is a manager, operator, superintendent, or another position of equivalent responsibility, or is an individual who has overall responsibility for environmental matters for the company; and,

    c. The authorization must be current (it has been updated to reflect a different individual or position) prior to any report submittals, certifications, or records certified by the Duly Authorized Representative.

## L. Certification

Any person signing, certifying, and submitting documents under Section XXI.K above shall make the following certification:

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons that manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

## M. Anticipated Noncompliance

Dischargers shall give advance notice to the Regional Water Board and local MS4 of any planned changes in the industrial activity that may result in noncompliance with this General Permit.

## N. Penalties for Falsification of Reports

Clean Water Act section 309(c)(4) provides that any person that knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years or by both.

## O. Oil and Hazardous Substance Liability

Nothing in this General Permit shall be construed to preclude the initiation of any legal action or relieve the Discharger from any responsibilities, liabilities, or penalties to which the Discharger is or may be subject to under section 311 of the Clean Water Act.

## P. Severability

The provisions of this General Permit are severable; if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

## Q. Penalties for Violations of Permit Conditions

1. Clean Water Act section 309 provides significant penalties for any person that violates a permit condition implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act or any permit condition or limitation implementing any such section in a permit issued under section 402. Any

person that violates any permit condition of this General Permit is subject to a civil penalty not to exceed $37,500[22] per calendar day of such violation, as well as any other appropriate sanction provided by section 309 of the Clean Water Act.

2. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties, which may be greater than penalties under the Clean Water Act.

## R. Transfers

Coverage under this General Permit is non-transferrable. When operation of the facility has been transferred to another entity, or a facility is relocated, new PRDs for NOI and NEC coverage must be certified and submitted via SMARTS prior to the transfer, or at least seven (7) days prior to the first day of operations for a relocated facility.

## S. Continuation of Expired General Permit

If this General Permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with 40 Code of Federal Regulations 122.6 and remain in full force and effect.

[22] May be further adjusted in accordance with the Federal Civil Penalties Inflation Adjustment Act.

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)**
**GENERAL PERMIT FACT SHEET FOR**
**STORM WATER DISCHARGES**
**ASSOCIATED WITH INDUSTRIAL ACTIVITIES**
**NPDES NO. CAS000001**

*The factsheet to the IGP was updated in January 2015 to correct typographical errors. The deadline listed in Section I.D.13 (page 8) and Section II.G.1 (page 27) of the factsheet for dischargers with outfalls to ocean waters to develop and implement a monitoring program in compliance with the California Ocean Plan model monitoring provisions was corrected to July 1, 2015, which is the deadline listed in finding 44 in the general order.

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# I. BACKGROUND

## A. Purpose

The purpose of this Fact Sheet is to explain the legal requirements and technical rationale that serve as the basis for the requirements of this Order 2014-0057-DWQ (General Permit), adopted by the State Water Resources Control Board (State Water Board) on April 1, 2014. This General Permit regulates operators of facilities subject to storm water permitting (Dischargers), that discharge storm water associated with industrial activity (industrial storm water discharges). This General Permit replaces Water Quality Order 97-03-DWQ**.** This Fact Sheet does not contain any independently-enforceable requirements; the General Permit contains all of the actual requirements applicable to Dischargers. In case of any conflict between the Fact Sheet and the General Permit, the terms of the General Permit govern.

## B. History

The Federal Clean Water Act (CWA)[1] prohibits discharges from point sources to waters of the United States, unless the discharges are in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. (CWA § 301(a).) In 1987, the CWA was amended to establish a framework for regulating municipal storm water discharges and discharges of storm water associated with industrial activity (industrial storm water discharges) under the NPDES program. (CWA § 402(p).) In 1990, the United States Environmental Protection Agency (U.S. EPA) promulgated regulations, commonly known as Phase I, establishing application requirements for storm water permits for specified categories of industries. (40 C.F.R. § 122.26.) In 1992, U.S. EPA revised the monitoring requirements for industrial storm water discharges. (40 C.F.R. § 122.44(i)(2), (4), (5).) In 1999, U.S. EPA adopted additional storm water regulations, known as Phase II. (64 Fed. Reg. 68722.) The Phase II regulations provide for, among other things, a conditional exclusion from NPDES permitting requirements for industrial activities that have no exposure to storm water.

Industrial storm water discharges are regulated pursuant to CWA section 402(p)(3)(A). This provision requires NPDES permits for industrial storm water discharges to implement CWA section 301, which includes requirements for Dischargers to comply with technology-based effluent limitations, and any more stringent water quality-based limitations necessary to meet water quality standards. Technology-based effluent limitations applicable to industrial activities are based on best conventional pollutant control technology (BCT) for conventional pollutants, and best available technology economically achievable (BAT) for toxic and non-conventional pollutants. (CWA § 301(b)(1)(A) and (2)(A).) To ensure compliance with water quality standards, NPDES permits may also require a Discharger to implement best management practices (BMPs). 40 Code of Federal Regulations section 122.44(k)(4) requires the use of BMPs to control or abate the discharge of pollutants when numeric effluent limitations (NELs) are infeasible. The State Water Board has concluded that it is infeasible to establish

[1] Federal Water Pollution Control Act of 1970 (also referred to as the Clean Water Act or CWA), 33 U.S.C. § 1201 et seq. All further statutory references herein are to the CWA unless otherwise indicated.

NELs for storm water discharges associated with industrial activity due to insufficient information at the time of adoption of this General Permit.

On April 17, 1997, the State Water Board issued NPDES General Permit for Industrial Storm Water Discharges, Excluding Construction Activities, Water Quality Order 97-03-DWQ (previous permit). This General Permit, Order 2014-0057-DWQ rescinds the previous permit and serves as the statewide general permit for industrial storm water discharges. The State Water Board concludes that significant revisions to the previous permit requirements are necessary for implementation, consistency and objective enforcement. As discussed in this Fact Sheet, this General Permit requires Dischargers to:

- Eliminate unauthorized non-storm water discharges (NSWDs);
- Develop and implement storm water pollution prevention plans (SWPPPs) that include best management practices (BMPs);
- Implement minimum BMPs, and advanced BMPs as necessary, to achieve compliance with the effluent and receiving water limitations of this General Permit;
- Conduct monitoring, including visual observations and analytical storm water monitoring for indicator parameters;
- Compare monitoring results for monitored parameters to applicable numeric action levels (NALs) derived from the U.S. EPA 2008 Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity (2008 MSGP) and other industrial storm water discharge monitoring data collected in California;
- Perform the appropriate Exceedance Response Actions (ERAs) when there are exceedances of the NALs; and,
- Certify and submit all permit-related compliance documents via the Storm Water Multiple Application and Report Tracking System (SMARTS). Dischargers shall certify and submit these documents which include, but are not limited to, Permit Registration Documents (PRDs) including Notices of Intent (NOIs), No Exposure Certifications (NECs), and Storm Water Pollution Prevention Plans (SWPPPs), as well as Annual Reports, Notices of Termination (NOTs), Level 1 ERA Reports, and Level 2 ERA Technical Reports.

## C. Blue Ribbon Panel of Experts (Panel)

In 2005 and 2006, the State Water Board convened a Blue Ribbon Panel of Experts (Panel) to address the feasibility of NELs in California's storm water permits. Specifically, the Panel was charged with answering the following questions:

> Is it technically feasible to establish numeric effluent limitations, or some other quantifiable limit, for inclusion in storm water permits?

How would such limitations or criteria be established, and what information and data would be required? [2]

The Panel was directed to answer these questions for industrial storm water discharge general permits, construction storm water discharge general permits, and area-wide municipal storm water discharge permits. The Panel was also directed to address both technology-based and water quality based limitations and criteria.

In evaluating the establishment of numeric limitations and criteria, the Panel was directed to consider all of the following:

- The ability of the State Water Board to establish appropriate objective limitations or criteria;
- How compliance is to be determined;
- The ability of Dischargers and inspectors to monitor for compliance; and
- The technical and financial ability of Dischargers to comply with the limitations or criteria.

Following an opportunity for public comment, the Panel identified several water quality concerns, public process and program effectiveness issues. A summary of the Panel's recommendations regarding industrial storm water discharges follows:[3]

- Current data are inadequate; accordingly, the State Water Board should improve monitoring requirements to collect useful data for establishing NALs and NELs.
- Required parameters for further monitoring should be consistent with the type of industrial activity (i.e., monitor for heavy metals when there is a reasonable expectation that the industrial activity will contribute to increased heavy metals concentrations in storm water).
- Insofar as possible, the use of California data (or national data applicable to California) is preferred when setting NELs and NALs.
- Industrial facilities that do not discharge to Municipal Separate Storm Sewer Systems (MS4s) should implement BMPs for their non-industrial exposure (e.g., parking lots, roof runoff) similar to BMPs implemented by commercial facilities in MS4 jurisdictions.

[2] State Water Board Storm Water Panel of Experts, The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 19, 2006). <http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/numeric/swpanel_final_report.pdf>. [as of February 4, 2014].

[3] See footnote 2.

- In all cases, Dischargers should implement a suite of minimum BMPs, including, but not limited to, good housekeeping practices, employee training, and preventing exposure of materials to rain.

- Standard Industrial Classification (SIC) code categories are not a satisfactory way of identifying industrial activities at any given site. The State Water Board should develop an improved method of characterizing industrial activities that will improve water quality in storm water.

- Recognizing that implementing the Panel's suggested changes is a large task, the State Water Board should set priorities for implementation of the Panel's suggested approach in order to achieve the greatest reduction of pollutants statewide.

- Recognizing that an increasing number of industries have moved industrial activities indoors to prevent storm water pollution, such facilities should be granted regulatory relief from NALs and/or NELs , but should still be required to comply with any applicable MS4 permit requirements.

- Recognizing the need for improved monitoring and reduction of pollutants in industrial storm water discharges, the State Water Board should consider the total economic impact of its requirements to not economically penalize California industries when compared to industries outside of California.

With regard to the industrial activities component of its charge, the Panel limited its focus to the question of whether sampling data can be used to derive technology-based NELs. The Panel did not address other factors or approaches that may relate to the task of determining technology- and water quality-based NELs consistent with the regulations and law. Examples of these other factors are discussed in more detail in this Fact Sheet. Additionally, in its final report the Panel did not clearly differentiate between the role of numeric and non-numeric effluent limitations, nor did it consider U.S. EPA procedures used to promulgate effluent limitation guidelines (ELGs) in 40 Code of Federal Regulations, Chapter I, Subchapter N (Subchapter N).

## D. Summary of Significant Changes in this General Permit

The previous permit issued by the State Water Board on April 17, 1997, had been administratively extended since 2002 until the adoption of this General Permit. Significant revisions to the previous permit were necessary to update permit requirements consistent with recent regulatory changes pertaining to industrial storm water under the CWA. This General Permit differs from the previous permit in the following areas:

1. Minimum Best Management Practices (BMPs)

   This General Permit requires Dischargers to implement a set of minimum BMPs. Implementation of the minimum BMPs, in combination with any advanced BMPs (BMPs, collectively,) necessary to reduce or prevent pollutants in industrial storm water discharges, serve as the basis for compliance with this General Permit's

technology-based effluent limitations and water quality based receiving water limitations. Although there is great variation in industrial activities and pollutant sources between industrial sectors and, in some cases between operations within the same industrial sector, the minimum BMPs specified in this General Permit represent common practices that can be implemented by most facilities.

The previous permit did not require a minimum set of BMPs but rather allowed Dischargers to consider which non-structural BMPs should be implemented and which structural BMPs should be considered for implementation when non-structural BMPs are ineffective.

This General Permit requires Dischargers to implement minimum BMPs (which are mostly non-structural BMPs), and advanced BMPs (which are mostly structural BMPs) when implementation of the minimum BMPs do not meet the requirements of the General Permit. Advanced BMPs consists of treatment control BMPs, exposure reduction BMPs, and storm water containment and discharge reduction BMPs. BMPs that exceed the performance expectation of minimum BMPs are considered advanced BMPs. Dischargers are encouraged to utilize advanced BMPs that infiltrate or reuse storm water where feasible.

The minimum and advanced BMPs required in this General Permit are consistent with U.S. EPA's 2008 Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (2008 MSGP), guidance developed by the California Stormwater Quality Association, and recommendations by Regional Water Quality Control Board (Regional Water Board) inspectors. Dischargers are required to evaluate BMPs being implemented and determine an appropriate interval for the implementation and inspection of these BMPs.

2. Conditional Exclusion - No Exposure Certification (NEC)

   This General Permit applies U.S. EPA Phase II regulations regarding a conditional exclusion for facilities that have no exposure of industrial activities and materials to storm water. (40 C.F.R. § 122.26(g).) (The previous permit required light industries to obtain coverage only if their activities were exposed to storm water.) This General Permit implements current U.S. EPA rules allowing any type of industry to claim a conditional exclusion. The NEC requires enrollment for coverage prior to conditionally excluding a Discharger from a majority of this General Permit's requirements.

3. Electronic Reporting Requirements

   This General Permit requires Dischargers to submit and certify all reports electronically via SMARTS. The previous permit used a paper reporting process with electronic reporting as an option.

4. Training Expectations and Roles

   This General Permit requires that Dischargers arrange to have appropriately trained personnel implementing this General Permit's requirements at each facility. In

addition, if a Discharger's facility enters Level 1 status, the Level 1 ERA Report must be prepared by a Qualified Industrial Storm Water Practitioner (QISP). All Action Plans and Technical Reports required in Level 2 status must also be prepared by a QISP.

Dischargers may appoint a staff person to complete the QISP training or may contract with an outside QISP. QISP training is tailored to persons with a high degree of technical knowledge and environmental experience. Although QISPs do not need to be California licensed professional engineers, it may be necessary to involve a California licensed professional engineer to perform certain aspects of the Technical Reports.

5. Numeric Action Levels (NALs) and NAL Exceedances

This General Permit contains two types of NAL exceedances. An annual NAL exceedance occurs when the average of all sampling results within a reporting year for a single parameter (except pH) exceeds the applicable annual NAL. The annual NALs are derived from, and function similarly to, the benchmark values provided in the 2008 MSGP. Instantaneous maximum NALs target hot spots or episodic discharges of pollutants. An instantaneous maximum NAL exceedance occurs when two or more analytical results from samples taken for any parameter within a reporting year exceed the applicable instantaneous maximum NAL value. Instantaneous maximum NALs for Total Suspended Solids (TSS) and Oil and Grease (O&G) are based on previously gathered California industrial storm water discharge monitoring data. The instantaneous maximum NAL for pH is derived from the benchmark value provided in the 2008 MSGP.

6. Exceedance Response Actions (ERA)

This General Permit requires Dischargers to develop and implement ERAs, when an annual NAL or instantaneous maximum NAL exceedance occurs during a reporting year. The first time an annual NAL or instantaneous maximum NAL exceedance occurs for any one parameter, a Discharger's status is changed from Baseline to Level 1 status, and the Discharger is required to evaluate and revise, as necessary, its BMPs (with the assistance of a QISP) and submit a report prepared by a QISP. The second time an annual NAL or instantaneous maximum NAL exceedance occurs for the same parameter in a subsequent reporting year, the Discharger's status is changed from Level 1 to Level 2 status, and Dischargers are required to submit a Level 2 ERA Action Plan and a Level 2 ERA Technical Report. Unless the demonstration is not accepted by the State Water Board or a Regional Water Board, the Discharger is not required to perform additional ERA requirements for the parameter(s) involved if the Discharger demonstrates that:

a. Additional BMPs required to eliminate NAL exceedances are not technologically available or economically practicable and achievable; or,

b. NAL exceedances are solely caused by non-industrial pollutant sources; or,

c. NAL exceedances are solely attributable to pollutants from natural background sources.

Information supporting the above demonstrations must be included in QISP-prepared Level 2 ERA Technical Reports.

7. CWA section 303(d) Impairment

This General Permit requires a Discharger to monitor additional parameters if the discharge(s) from its facility contributes pollutants to receiving waters that are listed as impaired for those pollutants (CWA section 303(d) listings). This General Permit lists the receiving waters that are 303(d) listed as impaired for pollutants that are likely to be associated with industrial storm water in Appendix 3. For example, if a Discharger discharges to a water body that is listed as impaired for copper, and the discharge(s) from its facility has the potential sources of copper, the Discharger must add copper to the list of parameters to monitor in its storm water discharge.

8. Design Storm Standards for Treatment Control BMPs

This General Permit includes design storm standards for Dischargers implementing treatment control BMPs. The design storm standards include both volume- and flow-based criteria. Dischargers are not required to retrofit existing treatment control BMPs unless required to meet the technology-based effluent limitations and receiving water limitations in this General Permit.

9. Qualifying Storm Event (QSE)

This General Permit defines a QSE as a precipitation event that:

a. Produces a discharge for at least one drainage area; and,

b. Is preceded by 48 hours with no discharge from any drainage area.

The definition above differs from the definition in the previous permit, resulting in an increase number of QSEs eligible for sample collection. Therefore, most Dischargers will be able to collect the required number of samples, regardless of their facility location.

10. Sampling Protocols

This General Permit requires Dischargers to collect samples during scheduled facility operating hours from each drainage location within four hours of: (1) the start of the discharge from a QSE occurring during scheduled facility operating hours, or (2) the start of scheduled facility operating hours if the QSE occurred in the previous twelve (12) hours. The benefits of this sampling protocol: (a) allows a more reasonable amount of time to collect samples, (b) increases the likelihood for samples collected at discharge locations to be representative of the drainage area discharge characteristics, (c) increases the number of QSEs eligible for sample collection, and, (d) reduces the likelihood of Dischargers collecting samples with short-term concentration spikes.

The previous permit required that Dischargers collect grab samples during the first hour of discharge that commenced during scheduled facility operating hours. These sample collection requirements were widely considered to be too rigid and out of step with other states' sample collection requirements. Since many storm events begin in the evening or early morning hours, numerous opportunities to collect samples were lost because Dischargers could not obtain samples during the first hour of discharge. Dischargers with facilities that have multiple discharge locations had difficulties collecting samples within such a short timeframe therefore affecting data quality.

11. Sampling Frequency

This General Permit increases the sampling frequency by requiring the Discharger to collect and analyze storm water samples from each discharge location for two (2) QSEs within the first half of each reporting year (July 1 to December 31), and two (2) QSEs within the second half of each reporting year (January 1 to June 30). The increased sampling, compared to the previous permit's two samples during the wet season, is consistent with the 2008 MSGP and other states' permit requirements and will improve compliance determination with this General Permit. The State Water Board expects that the elimination of the wet season sampling requirements will increase the number of possible QSEs eligible for monitoring.

12. Compliance Groups

To allow industrial facilities to efficiently share knowledge, skills and resources towards achieving General Permit compliance, this General Permit allows the formation of Compliance Groups and Compliance Group Leaders. Dischargers participating in a Compliance Group (Compliance Group Participants) are collectively required to sample twice a year. Compliance Group Leaders are required to be approved through the State Water Board-approved training program process, inspect each facility once within each reporting year, and prepare Level 1 and Level 2 ERA reports as necessary. The Compliance Group option is described in more detail in General Permit section XIV and in this Fact Sheet in the Section titled "Compliance Groups."

13. Discharges to Ocean Waters

This General Permit requires Dischargers with ocean-discharging outfalls subject to model monitoring provisions of the California Ocean Plan to develop and implement a monitoring plan in compliance with those provisions and any additional monitoring requirements established pursuant to Water Code section 13383. Dischargers who have not developed and implemented a monitoring program in compliance with the California Ocean Plan model monitoring provisions by July 1, 2015 or seven (7) days prior to commencing operations, whichever is later, are ineligible to obtain coverage under this General Permit.

## II. TECHNICAL RATIONALE FOR REQUIREMENTS IN THIS GENERAL PERMIT

### A. Receiving General Permit Coverage

1. This General Permit provides regulatory coverage for new and existing industrial storm water discharges and authorized NSWDs from:

   a. Facilities required by federal regulations to obtain an NPDES permit;

   b. Facilities designated by the Regional Water Boards to obtain an NPDES permit; and,

   c. Facilities directed by the Regional Water Boards to obtain coverage specifically under this General Permit. The Regional Water Board typically directs a Discharger to change General Permit coverage under two circumstances:

      (1) switch from an individual NPDES permit to this General Permit, or

      (2) switch from the NPDES General Permit for Storm Water Discharges Associated with Construction And Land Disturbance Activities, (Order 2009-0009-DWQ, NPDES No CAS000002 (to this General Permit for long-term construction related activities that are similar to industrial activities (e.g. concrete batch plants).

40 Code of Federal Regulations section 122.26(b)(14) defines "storm water discharge associated with industrial activity" and describes the types of facilities subject to permitting (primarily by Standard Industrial Classification (SIC) code). This General Permit provides regulatory coverage for all facilities with industrial activities described in Attachment A where the covered industrial activity is the Discharger's primary industrial activity. In some instances, a Discharger may have more than one primary industrial activity occurring at a facility.

The 1987 SIC manual uses the term "establishment" to determine the primary economic activity of a facility. The manual instructs that where distinct and separate economic activities are performed at a single location, each activity should be treated as a separate establishment (and, therefore, separate primary activity). For example, the United States Navy (primary SIC code 9711) may conduct industrial activities subject to permitting under this General Permit, such as landfill operations (SIC code 4953), ship and boat building and repair (SIC code 3731, and flying field operations (SIC code 4581).

The SIC manual also discusses "auxiliary" functions of establishments. Auxiliary functions provide management or support services to the establishment. Examples of auxiliary functions are warehouses and storage facilities for the establishment's own materials, maintenance and repair shops of the establishment's own machinery, automotive repair shops or storage garages of the establishment's own vehicles, administrative offices, research, development, field engineering support, and testing conducted for the establishment. When auxiliary functions are performed at physically separate facilities from the establishment they serve, they generally are not subject to General Permit coverage. If

auxiliary functions are performed at the same physical location as the establishment, then they are subject to General Permit coverage if they are associated with industrial activities.

This clarification does not change the scope of which facilities are subject to permitting relative to the 1997 IGP. The 1997 IGP Fact Sheet had used the term "auxiliary" to describe a facility's separate primary activities, which has caused confusion.

In 1997, the North American Industrial Classification System (NAICS) was published, replacing the SIC code system. The U.S. EPA has indicated that it intends to incorporate the NAICS codes into the federal storm water regulations but has not done so yet. The State Water Board recognizes that many Dischargers in newer industries were not included in the 1987 SIC code manual and may have difficulty determining their SIC code information. To address this transition, SMARTS has been modified to accept both SIC codes and NAICS codes, and NAICS codes are automatically translated into SIC codes. There may be instances of conflict between SIC and NAICS codes. The use of NAICS codes shall not expand or reduce the types of industries subject to this General Permit as compared to the SIC codes listed in the General Permit. State Water Board staff will work closely with the applicant to resolve these conflicts in SMARTS as they are identified. Dischargers should be aware that the use of an NAICS code which results in failure to submit any of the required PRDs under this General Permit remains a violation of the terms of this General Permit.

The facilities included in category one of Attachment A (facilities subject to Subchapter N) are subject to storm water ELGs that are incorporated into the requirements of this General Permit. Dischargers whose facilities are included in this category must examine the appropriate federal ELGs to determine the applicability of those guidelines. This General Permit contains additional requirements (Section XI.D) that apply only to facilities with storm water ELGs.

2. Types of Discharges Not Covered by this General Permit

   a. Discharges from construction and land disturbance activities that are subject to the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit).

   b. Discharges covered by an individual or general storm water NPDES permit. Some industrial storm water discharges may be regulated by other individual or general NPDES permits issued by the State Water Board or the Regional Water Boards (Water Boards, collectively,). This General Permit shall not regulate these discharges. When the individual or general NPDES permits for such discharges expire, the Water Boards may authorize coverage under this General Permit or another general NPDES permit, or may issue a new individual NPDES permit consistent with the federal and state storm water regulations. Interested parties may request that the State Water Board or appropriate Regional Water Board issue individual or general NPDES permits for specific discharges that, in their view are not properly regulated through this General Permit. General permits may be issued for a particular industrial group or watershed area which

would supersede this General Permit. To date, two Regional Water Board have issued such permits:

i. The Lahontan Regional Water Board has adopted an NPDES permit and general Waste Discharge Requirements to regulate discharges from marinas and maintenance dredging (Regional Water Board Order R6T-2005-0015 - NPDES Permit No. CAG616003) in the Lake Tahoe Hydrologic Unit.

ii. The Santa Ana Regional Water Board adopted the Sector Specific General Permit for Stormwater Runoff Associated with Industrial Activities from Scrap Metal Recycling Facilities within the Santa Ana Region, Order R8-2012-0012, NPDES Permit No. CAG 618001 (Scrap Metal Recycling Permit). The Scrap Metal Recycling Permit is applicable to facilities within the Santa Ana Region that are listed under Standard Industrial Classification (SIC) Code 5093 and engaged in the following types of activities: (1) automotive wrecking for scrap-wholesale (this category does not include facilities engaged in automobile dismantling for the primary purpose of selling second hard parts); (2) iron and steel scrap - wholesale; (3) junk and scrap metal - wholesale; (4) metal waste and scrap - wholesale; and (5) non-ferrous metals scrap - wholesale. Other types of facilities listed under SIC Code 5093 and engaged in waste recycling are not required to get coverage under the Scrap Metal Recycling Permit. A list of covered facilities as of February 8, 2011 was included in Attachment A of the Scrap Metal Recycling Permit.

c. Discharges that the Regional Water Boards determine to be ineligible for coverage under this General Permit. In such cases, a Regional Water Board will require the discharges be covered by another individual or general NPDES permit. The applicability of this General Permit to such discharges is terminated when the discharge is subject to another individual or general NPDES permit.

d. Discharges that do not enter waters of the United States. These include:

i. Discharges to municipal separate sanitary sewer systems;

ii. Discharges to evaporation ponds, discharges to percolation ponds, and/or any other methods used to retain and prevent industrial storm water discharges from entering waters of the United States;

iii. Discharges to combined sewer systems. In California, the only major combined sewer systems are located in San Francisco and downtown Sacramento. Dischargers who believe they discharge into a combined sewer system should contact the local Regional Water Board to verify discharge location; and,

iv. Dischargers Claiming the “No Discharge” Option in the Notice of Non-Applicability (NONA) (Fact Sheet Section II.S).

e. Discharges from mining operations or oil and gas facilities composed entirely of flows that are from conveyances or systems of conveyances used for collecting and conveying precipitation runoff and do not come into contact with any overburden, raw materials, intermediate products, finished products, by-products, or waste products located at the facility. (33 U.S.C. § 1342(l)(2).)

f. Discharges from facilities on Tribal Lands regulated by U.S. EPA.

3. Obtaining General Permit Coverage (Section II of this General Permit)

   The State Water Board has developed the SMARTS online database system to handle registration and reporting under this General Permit. More information regarding SMARTS and access to the database is available online at https://smarts.waterboards.ca.gov. The State Water Board has determined that all documents related to general storm water enrollment and compliance must be certified and submitted via SMARTS by Dischargers.

   This General Permit requires all Dischargers to electronically certify and submit PRDs via SMARTS to obtain: (1) regulatory coverage, or (2) to certify that there are no industrial activities exposed to storm water at the facility and obtain regulatory coverage under the NEC provision of this General Permit. Facilities that were eligible to self-certify no exposure under the previous permit (see category 10 in Attachment 1 of the previous permit) are required to certify and submit via SMARTS PRDs for NOI coverage under this General Permit by July 1, 2015 or for NEC coverage by October 1, 2015. The Water Board is estimating that 10,000 – 30,000 Dischargers may be registering for NOI or NEC coverage under this General Permit. Separate registration deadlines, one for NOI coverage and one for NEC coverage, provides Dischargers better assistance from Storm Water Helpdesk and staff.

   Dischargers shall electronically certify and submit the PRDs via SMARTS for each individual facility. This requirement is intended to establish a clear accounting of the name, address, and contact information for each Discharger, as well as a description of each Discharger's facility.

   The Water Boards recognize that certain information pertaining to an industrial facility may be confidential. Many Stakeholders were asking for clarification on the process the Water Boards would use to manage confidential information or the process Dischargers could use to redact such information. Dischargers may redact trade secrets information from required submittals (Section II.B.3.d). Dischargers are required to include a general description of the redacted information and the basis for the redaction. Dischargers are still required to submit complete and un-redacted versions of the information to the Water Boards within 30 days, however these versions should be clearly labeled "CONFIDENTIAL" so that the confidentiality of these documents is clear to Regional Water Board staff, even when there is a change in staff. This General Permit requires that all information provided to the Water Boards by the Discharger comply with the Homeland Security Act and other federal law that addresses security in the United States.

   All Dischargers who certify and submit PRDs via SMARTS for NOI coverage on or after July 1, 2015 or for NEC coverage on or after October 1, 2015, shall immediately comply with the provisions in this General Permit.

4. General Permit Coverage for Landfills

   This General Permit covers storm water discharges from landfills, land application sites, and open dumps that receive or have received industrial waste from any facility covered by this General Permit. Industrial storm water discharges from these

facilities must be covered by this General Permit unless (1) they are already covered by another NPDES permit, or (2) the Regional Water Board has determined that an NPDES permit is not required because the site has been stabilized or required closure activities have been completed.

In most cases, it is appropriate for new landfill construction or final closure to be covered by the Construction General Permit, rather than this General Permit. Questions have arisen as to what constitutes new landfill construction at an existing landfill versus the normal planned expansion of a landfill. Similarly, questions have arisen about the type of closure activities that may be subject to the Construction General Permit versus the normal closure of "cells" that occurs during continued landfill operations and are not subject to the Construction General Permit. Other questions such as whether temporary or permanent newly graded/paved roads disturbing greater than one acre at a landfill are subject to the Construction General Permit. Landfill Dischargers have asked for clarity regarding these questions. The previous permit required Dischargers to contact the Regional Water Boards to determine permit appropriateness. Site specific circumstances continue to require Dischargers to contact Regional Water Boards for final determinations.

Based upon the State Water Board's storm water program history, there are only a handful of instances where an operating landfill has been simultaneously subject to both the construction and industrial permitting requirements. Typically a landfill is subject to the construction permitting requirements during the time the landfill is initially constructed and prior to operation. A landfill is subject to the industrial permitting requirements during landfill operations, and subject to the construction permitting requirements during final landfill closure activities.

Once a landfill begins operations, continued expansion or closure of incremental landfill cells is authorized under the industrial permitting requirements since these are normal aspects of landfill operations. These expansion/closure activities occur within a limited timeframe (often taking less than 90 days from beginning to end) and are not separately subject to additional local approval (e.g., a new building permit). Any construction or demolition of temporary non-impervious roads directly related to landfill operations are subject to the industrial permitting requirements.

Construction or closure of a separate section of the landfill that is either subject to additional permitting by the local authorities and/or lasts more than 90 days requires coverage under the Construction General Permit. Construction of permanent facility structures such as buildings and impervious parking lots or roads that disturb greater than one acre are also subject to the Construction General Permit. (Permanent facility structures are defined as any structural improvements designed to remain until the landfill is closed.)

Site specific circumstances such as proximity to nearby waterways, extent of activities, pollutants of concern, and other considerations can impact any decision as to whether a particular activity is to be regulated under this General Permit or the Construction General Permit. Regional Water Boards will continue to exercise their discretion as necessary to protect the beneficial uses of the receiving water(s).

5. General Permit Coverage for Small Municipal Separate Storm Sewer Systems (MS4s)

   Section 1068 of the Intermodal Surface Transportation Efficiency Act of 1991 exempted municipal agencies serving populations of less than 100,000 from Phase I permit requirements other than sanitary landfills, power plants, and airports facilities. U.S. EPA's Phase II regulations eliminated the above exemption as of March 10, 2003. All facilities in Attachment A of this General Permit that are operated by a small municipal agency are subject to NPDES storm water permitting requirements and this General Permit.

6. Changes to General Permit Coverage

   Dischargers who no longer operate a facility required to be covered under this General Permit (either NOI or NEC coverage) are required to electronically certify and submit via SMARTS a Notice of Termination (NOT). An NOT is required when there is a change in ownership of the industrial activities subject to permitting or when industrial activities subject to permitting are permanently discontinued by the Discharger at the site. When terminating NOI coverage, Dischargers may only submit an NOT once all exposure of industrial materials and equipment have been eliminated. Dischargers may not submit NOTs for temporary or seasonal facility closures. The General Permit requires Dischargers to implement appropriate BMPs to reduce or prevent pollutants in storm water discharges during the temporary facility closure.

   This General Permit allows Dischargers to change General Permit coverage, as appropriate, from NOI coverage to NEC coverage or from NEC coverage to NOI coverage.

## B. Discharge Prohibitions

This General Permit covers industrial storm water discharges and authorized NSWDs from industrial facilities and prohibits any discharge of materials other than storm water and authorized NSWDs (Section III and Section IV of this General Permit). It is a violation of this General Permit to discharge hazardous substances in storm water in excess of the reportable quantities established in 40 Code of Federal Regulations sections 117.3 and 302.4.

The State Water Board is authorized, under Water Code section 13377, to issue NPDES permits which apply and ensure compliance with all applicable provisions of the CWA, and any more stringent limitations necessary to implement water quality control plans, protect beneficial uses, and prevent nuisance.

## C. Non-Storm Water Discharges (NSWDs)

Unauthorized NSWDs can be generated from various pollutant sources. Depending upon their quantity and location where generated, unauthorized NSWDs can discharge to the storm drain system during dry weather as well as during a storm event (comingled with storm water discharge). These NSWDs can consist of, but are not limited to; (1) waters generated by the rinsing or washing of vehicles, equipment,

buildings, or pavement, or (2) fluid, particulate or solid materials that have spilled, leaked, or been disposed of improperly.

Some NSWDs are not directly related to industrial activities and normally discharge minimal pollutants when properly managed. Section IV of this General Permit provides a limited list of NSWDs that are authorized if Dischargers implement BMPs to prevent contact with industrial materials prior to discharge. The list in Section IV is similar to the list provided in the 2008 MSGP but does not include pavement and external building surfaces washing without detergents. These two items are not included because the Discharger is responsible to reduce or prevent pollutants in storm water discharges from paved areas and buildings associated with industrial activities. Since industrial materials and non-industrial material likely co-exist, the washing of paved areas and external building surfaces may result in discharges of pollutants associated with industrial activities. In addition, washing activities generally occur during dry-weather periods when receiving water flows are lower than wet-weather periods. Wash waters are likely to discharge in higher concentrations than would occur if these pollutants were naturally discharged during a storm event. The discharge of high concentration wash water during a time of dry-weather flows is inconsistent with the goal of protecting receiving waters. These discharges are, therefore, considered unauthorized NSWDs. Similar to the 2008 MSGP, firefighting related discharges are not subject to this General Permit.

A major required element of the SWPPP is the identification and measures for elimination of unauthorized NSWDs. Unauthorized NSWDs can contribute a significant pollutant load to receiving waters. Measures to control spills, leakage, and dumping can often be addressed through BMPs. This General Permit's BMP requirements for NSWDs remain essentially unchanged from the previous permit other than the increased frequency of required visual observations from quarterly to monthly. See Section XI.A.1 of this General Permit.

## D. Effluent Limitations

1. Technology-Based and Water Quality-Based Effluent Limitations

   CWA Section 301(b)(1)(C) requires that discharges from existing facilities must, at a minimum, comply with technology-based effluent limitations based on the technological capability of Dischargers to control pollutants in their discharges. Discharges must also comply with any more stringent water quality-based limitations necessary to meet water quality standards in accordance with CWA Section 301(b)(1)(C). Water quality-based limitations are discussed in Section E of this Fact Sheet titled "Receiving Water Limitations." Both technology-based effluent limitations and water quality-based limitations are implemented through NPDES permits. (CWA sections 301(a) and (b).)

2. Types of Technology-Based Effluent Limitations

   All NPDES permits are required to contain technology-based effluent limitations (TBELs). (40 C.F.R. §§122.44(a)(1) and 125.3.) TBELs may consist of effluent limitations guidelines (ELGs) established by U.S. EPA through regulation, or may be developed using best professional judgment on a case-by-case basis.

The CWA sets forth standards for TBELs based on the type of pollutant or the type of facility/source involved. The CWA establishes two levels of pollution control for existing sources. For the first level, existing sources that discharge pollutants directly to receiving waters were initially subject to effluent limitations based on the "best practicable control technology currently available" (BPT). (33 U.S.C. § 1314(b)(1)(B).) BPT applies to all pollutants. For the second level, existing sources that discharge conventional pollutants are subject to effluent limitations based on the "best conventional pollutant control technology" (BCT). (33 U.S.C. §1314(b)(4)(A); see also 40 C.F.R. §401.16 (list of conventional pollutants).) Also for the second level, other existing sources that discharge toxic pollutants or "nonconventional" pollutants ("nonconventional" pollutants are pollutants that are neither "toxic" nor "conventional") are subject to effluent limitations based on "best available technology economically achievable" (BAT). (33 U.S.C. §1311(b)(2)(A); see also 40 C.F.R. §401.15 (list of toxic pollutants).) The factors to be considered in establishing the levels of these control technologies are specified in section 304(b) of the CWA and in U.S. EPA's regulations at 40 C.F.R. §125.3.

When establishing ELGs for an industrial category, U.S. EPA evaluates a wide variety of technical factors to determine BPT, BCT, and BAT. U.S. EPA considers the specific factors of an industry such as pollutant sources, industrial processes, and the size and scale of operations. U.S. EPA evaluates the specific treatment, structural, and operational source control BMPs available to reduce or prevent pollutants in the discharges. The costs of implementing BMPs to address these factors are weighed against their effectiveness and ability to protect water quality. Factors such as industry economic viability, economies of scale, and retrofit costs are also considered.

To date, U.S. EPA has: (1) not promulgated storm water ELGs for most industrial categories, (2) not established NELs within all ELGs that have been promulgated, and (3) exempted certain types of facilities within an industrial category from complying with established ELGs. The feedlot category (40 Code of Federal Regulations part 412) provides an example of several of these points. In that instance, U.S. EPA did not establish numeric effluent limitations but instead: (1) established a narrative effluent limitation requiring retention of all feedlot-related runoff from a 25-year, 24-hour storm, and (2) limited application of the ELG to feedlots with a minimum number of animals. U.S. EPA also recently promulgated ELGs for the "Construction and Development (C&D)" industry, which included, among many other limitations, conditional numeric effluent limitations. Though the NELs in these ELGs were later stayed by U.S. EPA, the ELGs exempted construction sites of less than 30 acres from complying with the established numeric effluent limitations.

40 Code of Federal Regulations, Chapter I, Subchapter N ("Subchapter N"), includes over 40 separate industrial categories where the U.S. EPA has established ELGs for new and existing industrial wastewater discharges to surface waters, discharges to publicly owned treatment works (pre-treatment standards), and storm water discharges to surface waters. Generally, U.S. EPA has focused its efforts on the development of ELGs for larger industries and those industries with the greatest potential to pollute. In total, the 40 categories for which ELGs have been

established (not including construction) represent less than 10 percent of the types of facilities subject to this General Permit. Additionally, most ELGs focus on industrial process wastewater discharges and pre-treatment standards, and only 11 of the 40 categories establish numeric or narrative ELGs for industrial storm water discharges. Those that do include ELGs for industrial storm water discharges generally address storm water discharges that are generated from direct contact with primary pollutant sources at the subject facilities, and not the totality of the industrial storm water discharge from the facility, as the term "storm water discharge associated with industrial activity" for this General Order is defined in the CWA. (40 C.F.R. § 122.26(b)(14).) Where U.S. EPA has not issued effluent limitation guidelines for an industry, the State Water Board is required to establish effluent limitations for NPDES permits on a case-by-case basis based on best professional judgment (BPJ). (33 U.S.C. § 1342(a)(1); 40 C.F.R. § 125.3(c)(2).) In this General Permit, most of the TBELs are based on BPJ decision-making because no ELG applies.

The TBELs in this General Permit represent the BPT (for conventional, toxic, and non-conventional pollutants), BCT (for conventional pollutants), and BAT (for toxic pollutants and non-conventional pollutants) levels of control for the applicable pollutants. If U.S. EPA has not promulgated ELGs for an industry, or if a Discharger is discharging a pollutant not covered by the otherwise applicable ELG, the State Water Board is required to establish effluent limitations in NPDES permit limitations based on best professional judgment. (33 U.S.C. § 1342(a)(1); 40 C.F.R. 125.3(c).) This General Permit includes TBELS established on best professional judgment and limitations based on storm water-specific ELGs listed in Attachment F of this General Permit, where applicable.

3. Authority to Include Non-Numeric Technology-Based Limits in NPDES Permits

TBELs in this General Permit are based on best professional judgment and are non-numeric ("narrative") technology-based effluent limitations expressed as requirements for implementation of effective BMPs. Federal regulations provide that permits must include BMPs to control or abate the discharge of pollutants when where "[n]umeric effluent limitations are infeasible." 40 C.F.R. 122.44(k)(3).

Since 1977, courts have recognized that there are circumstances when numeric effluent limitations are infeasible and have held that EPA may issue permits with conditions (e.g., BMPs) designed to reduce the level of effluent discharges to acceptable levels. Natural Res. Def. Council, Inc. v. Costle, 568 F.2d 1369 (D.C.Cir.1977).

U.S. EPA has also interpreted the CWA to allow BMPs to take the place of numeric effluent limitations under certain circumstances. 40 C.F.R. §122.44(k), titled "Establishing limitations, standards, and other permit conditions (applicable to State NPDES programs ...)," provides that permits may include BMPs to control or abate the discharge of pollutants when: (1) "[a]uthorized under section 402(p) of the CWA for the control of stormwater discharges"; or (2) "[n]umeric effluent limitations are infeasible." 40 C.F.R. § 122.44(k).

In 2006, The U.S. Court of Appeals for the Sixth Circuit held that the CWA does not require U.S. EPA to set numeric limits where such limits are infeasible. (Citizens Coal Council v. United States Environmental Protection Agency, 447 F.3d 879, 895-96 (6th Cir. 2006)). The Citizens Coal court cited to the statement in Waterkeeper Alliance, Inc. v. EPA, 399 F.3d 486, 502 (2d Cir. 2005) that "site-specific BMPs are effluent limitations under the CWA" in concluding that "the EPA's inclusion of numeric and non-numeric limitations in the guideline for the coal remining subcategory was a reasonable exercise of its authority under the CWA." (447 F.3d at 896.) Additionally, the Citizen's Coal court cited to Natural Res. Def. Council, Inc. v. EPA, 673 F.2d 400, 403 (D.C.Cir.1982) noting that "section 502(11) [of the CWA] defines 'effluent limitation' as 'any restriction' on the amounts of pollutants discharged, not just a numerical restriction." NPDES permit writers have substantial discretion to impose non-quantitative permit requirements pursuant to section 402(a)(1)), especially when the use of numeric limits is infeasible. (NRDC v. EPA, 822 F.2d 104, 122-24 (D.C. Cir. 1987); 40 C.F.R. 122.44(k)(3).)

4. Decision to Include Non-Numeric Technology-Based Effluent Limits in This General Permit

   It is infeasible for the State Water Board to develop numeric effluent limitations using the best professional judgment approach due to lack of sufficient information. Previous versions of this General Permit required Dischargers to sample their industrial storm water discharges and report the results to the Regional Water Boards. Dischargers were not required to submit this data online into a statewide database; as a result, much of this data is not available for analysis. Moreover, much of the data that are available for analysis are not of sufficient quality to make conclusions or perform basic statistical tests.

   The Blue Ribbon Panel of Experts, State Water Board staff, and many stakeholders evaluated the available storm water data set and concluded that the information provides limited value due to the limited pool of industrial facilities submitting data, poor overall data quality, and extreme variance within the dataset, as described below.

   The poor quality of the existing data set is attributable a number of factors. For example, the previous permits have required Dischargers to sample during the first hour of discharge from two storm events a year. This sampling schedule was designed to catch what was considered to represent the higher end of storm water discharge concentrations for most parameters. The results from this type of sampling were thought to be an indicator of whether or not additional BMPs would be necessary. The sampling schedule was not designed, however, to estimate pollutant discharge loading, or to characterize the impact of the discharge on the receiving water. Doing so would normally require the use of more advanced sampling protocols such as flow meters, continuous automatic sampling devices, certified/trained sampling personnel, and other facility-specific considerations.

   Furthermore, there is currently no data which details the relationship between the BMPs implemented at each facility and the facility's sampling results. The SWPPPs required by the previous permits were not submitted to the Water Boards, but were

kept onsite by Dischargers. Due to the limited availability of quality sampling data and "level of effort" information contained in SWPPPs, the State Water Board is unable to exercise best professional judgment to make the connection between effluent quality (sampling results) and the level of effort, costs, and performance of the various technologies that is needed in order to express the TBELs in this General Permit numerically, as NELs.

Some stakeholders have suggested that separating the data sets by industry type would lead to more reliable data with which to develop NELs. Advocates of this approach suggest that the variability of the data may be caused in part by the mixing of data from different industrial categories. The State Water Board believes that the variation is primarily due to storm intensity, duration, time of year, soil saturation or some other factors. It is necessary to collect information related to those factors and BMPs implemented in order to evaluate the variability attributable to those factors. There is currently too large of an information gap to begin the process of developing NELs for all industrial sectors not currently subject to ELGs.

The State Water Board has proposed NELs in past drafts of this General Permit. In comments, many stakeholders have highlighted the difficulty of developing statewide NELs that are applicable to all industry sectors, or even NELs that cover any specific industry sectors. For example, stakeholders have commented that:

a. Background/ambient conditions in some hydrogeologic zones may contribute pollutant loadings that would significantly contribute to, if not exceed, the NEL values;

b. Some advanced treatment technologies have flow/volume limitations as well as economy of scale issues for smaller facilities;

c. Treatment technologies that require that sheet flows be captured and conveyed via discrete channels or basins may not only result in significant retrofit costs, but may conflict with local ordinances that prohibit such practices, as they can cause damage or erosion to down gradient property owners, or cause other environmental problems;

d. There is insufficient regulatory guidance and procedures to allow permit writers to properly specify monitoring frequency and sampling protocols (e.g., instantaneous maximum, 1-day average, 3-day average, etc.), and for Dischargers to obtain representative samples to compare to NELs for the purpose of strict compliance; and,

e. NELs must be developed with consideration of what is economically achievable for each industrial sector. These stakeholders point out that the U.S. EPA goes to great lengths evaluating the various BMP technologies available for a particular pollutant, the costs and efficiency of each BMP, and the applicability of the BMPs to the industry as a whole or to a limited number of industrial sites based upon the size of the facility, the quantity of material, and other considerations.

The State Water Board does not have the information (including monitoring data, industry specific information, BMP performance analyses, water quality information, monitoring guidelines, and information on costs and overall effectiveness of control technologies) necessary to promulgate NELs at the time of adoption of this General Permit. Therefore, it is infeasible to include NELs in this statewide General Permit.

Many of the new requirements in this General Permit have been designed to address the shortcomings of previous permits and the existing storm water data set. Under this General Permit, sampling results must be certified and submitted into SMARTS by Dischargers, along with SWPPPs which outline the technologies and BMPs used to control pollutants at each facility. The ERA process will also collect information on costs and the engineering aspects of the various control technologies employed by each facility. Previous permit versions did not have a mechanism for receiving this site specific information electronically, and only a small percentage of Dischargers submitted their Annual Reports via SMARTS. This General Permit will make this information more accessible, allowing the Water Boards to evaluate the relationship between BMPs and the ability of facilities to meet the NALs set forth in this General Permit. Finally, the new Qualified Industrial Storm Water Practitioner (QISP) training requirements of this General Permit have been designed in part to improve the quality of the data submitted.

5. Narrative Technology-Based Effluent Limitations (TBELs) and Best Management Practices (BMPs)

   The primary TBEL in this General Permit requires Dischargers to "implement BMPs that comply with the BAT/BCT requirements of this General Permit to reduce or prevent discharges of pollutants in their storm water discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability." (Section V.A of this General Permit). This TBEL is a restatement of the BAT/BCT standard, as articulated by U.S. EPA in the 2008 MSGP and accompanying Fact Sheet. In order to comply with this TBEL, Dischargers must implement BMPs that meet or exceed the BAT/BCT technology-based standard. The requirement to "reduce or prevent" is equivalent to the requirement in the federal regulations that BMPs be used in lieu of NELs to "control or abate" the discharge of pollutants. (40 C.F.R. § 122.44(k).)

   BMPs are defined as the "scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to reduce or prevent the discharge of pollutants… includ[ing] treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage." (40 C.F.R. § 122.2.)

   This General Permit (Sections X.H.1 and X.H.2) requires all Dischargers to implement minimum BMPs, as well as any advanced BMPs that are necessary to adequately reduce or prevent pollutants in discharges consistent with the TBELs. The minimum BMPs specified in this General Permit represent common practices that can be implemented by most facilities. This General Permit generally does not mandate the specific mode of design, installation or implementation for the minimum BMPs at a Discharger's facility. It is up to the Discharger, in the first instance, to

determine what must be done to meet the applicable effluent limits. For example, Section X.H.1.a.vi of this General Permit requires Dischargers to contain all stored non-solid industrial materials that can be transported or dispersed via wind or contact with storm water. How this is achieved will vary by facility: for some facilities, all activities may be moved indoors, while for others this will not be feasible. However, even for the latter, many activities may be moved indoors, others may be contained using tarps or a containment system, while still other activities may be limited to times when exposure to precipitation is not likely. Each of these control measures is acceptable and appropriate depending upon the facility-specific circumstances.

BMPs can be actions (including processes, procedures, schedules of activities, prohibitions on practices and other management practices), or structural or installed devices to reduce or prevent water pollution. (40 C.F.R. § 122.2.) They can be just about anything that is effective at preventing pollutants from entering the environment, and for meeting applicable limits of this General Permit. In this General Permit, Dischargers are required to select, design, install, and implement facility-specific control measures to meet these limits. Many industrial facilities already have such control measures in place for product loss prevention, accident and fire prevention, worker health and safety or to comply with other environmental regulations. Dischargers must tailor the BMPs detailed in this General Permit to their facilities, as well as improve upon them as necessary to meet permit limits. The examples detailed in this Fact Sheet emphasize prevention over treatment. However, sometimes more traditional end-of-pipe treatment may be necessary, particularly where a facility might otherwise cause or contribute to an exceedance of water quality standards.

This General Permit requires Dischargers to implement BMPs "to the extent feasible." Consistent with the control level requirements of the CWA, for the purposes of this General Permit, the requirement to implement BMPs "to the extent feasible" means to reduce and/or prevent discharges of pollutants using BMPs that represent BAT and BPT in light of best industry practice. [4] In other words, Dischargers are required to select, design, install and implement BMPs that reduce or prevent discharges of pollutants in their storm water discharge in a manner that reflects best industry practice considering their technological availability and economic practicability and achievability.

To determine technological availability and economic practicability and achievability, Dischargers need to consider what control measures are considered "best" for their industry, and then select and design control measures for their site that are viable in terms of cost and technology. The State Water Board believes that for many facilities minimization of pollutants in storm water discharges can be achieved without using highly engineered, complex treatment systems. The BMPs included in

[4] Because toxic and nonconventional pollutants are controlled in the first step by BPT and in the second step by BAT, and the second level of control is "increasingly stringent" (EPA v. National Crushed Stone, 449 U.S. 64, 69 (1980), for simplicity of discussion, the rest of this discussion will focus on BAT. Similarly, because the BAT levels of control in this General Permit are expressed as BMPs and pollution prevention measures, they will also control conventional pollutants. Therefore this discussion will focus on BAT rather than BCT or BPT for conventional pollutants.

this General Permit emphasize effective “low-tech” controls, such as regular cleaning of outdoor areas where industrial activities may take place, proper maintenance of equipment, diversion of storm water around areas where pollutants may be picked up, and effective advanced planning and training (e.g., for spill prevention and response).

## E. Receiving Water Limitations and Water Quality Standards

Pursuant to CWA section 301(b)(1)(C) and Water Code section 13377, this General Permit requires compliance with receiving water limitations based on water quality standards. The primary receiving water limitation requires that industrial storm water discharges not cause or contribute to an exceedance of applicable water quality standards. Implementation of the BMPs as required by the technology-based effluent limitation in Section V of this General Permit will typically result in compliance with the receiving water limitations. The discussion of BMPs in this General Permit generally focuses on requiring implementation of BMPs to the extent necessary to achieve compliance with the technology-based effluent limitations, because the technology-based limitations apply similarly to all facilities. In addition, however, this General Permit also makes it clear that, if any individual facility's storm water discharge causes or contributes to an exceedance of a water quality standard, that Discharger must implement additional BMPs or other control measures that are tailored to that facility in order to attain compliance with the receiving water limitation. A Discharger that is notified by a Regional Water Board or who determines the discharge is causing or contributing to an exceedance of a water quality standard must comply with the Water Quality Based Corrective Actions found in Section XX.B of this General Permit.

Water Quality Based Corrective Actions are different from the Level 1 and Level 2 ERAs that result from effluent-based monitoring. It is possible for a Discharger to be engaged in Level 1 or Level 2 ERAs for one or more pollutants and simultaneously be required to perform Water Quality Based Corrective Actions for one or more other pollutants.

Failure to comply with these additional Water Quality Based Corrective Action requirements is a violation of this General Permit. If additional operational source control measures do not adequately reduce the pollutants, Dischargers must implement additional measures such as the construction of treatment systems and/or overhead coverage. Overhead coverage is any structure or temporary shelter that prevents the vertical contact of precipitation with industrial materials or activities. If the Regional Water Board determines that the Discharger’s selected BMPs are inadequate, the Regional Water Board may require implementation of additional BMPs and/or may take enforcement against Dischargers for failure to comply with this General Permit.

## F. Total Maximum Daily Loads (TMDLs)

TMDLs are regulatory tools that provide the maximum amount of a pollutant from potential source in the watershed that a water body can receive while attaining water quality standards. A TMDL is defined as the sum of the allowable loads of a single pollutant from all contributing point sources (the waste load allocations) and non-point sources (load allocations), plus the contribution from background sources. (40 C.F.R. § 130.2, subd. (i).) Discharges covered by this General Permit are considered to be point

source discharges, and therefore must comply with effluent limitations that are "consistent with the assumptions and requirements of any available waste load allocation for the discharge prepared by the State and approved by EPA pursuant to 40 Code of Federal Regulations section 130.7." (40 C.F.R. § 122.44, subd. (d)(1)(vii).) In addition, Water Code section 13263, subdivision (a), requires that waste discharge requirements implement relevant water quality control plans. Many TMDLs in existing water quality control plans include both waste load allocations and implementation requirements. Attachment E of this General Permit lists the watersheds with U.S. EPA-approved and U.S. EPA-established TMDLs that include TMDL requirements for Dischargers covered by this General Permit.

NPDES-regulated storm water discharges (which include industrial storm water) must be addressed by waste load allocations in TMDLs. (40 C.F.R. § 130.2(h).) NPDES permits must contain effluent limits and conditions consistent with the requirements and assumptions of the waste load allocations in TMDLs. (40 C.F.R. § 122.44(d)(1)(vii)(B).) To date, the relevant waste load allocations assigned to industrial storm water discharges are not directly translatable to effluent limitations. Many of the TMDLs lack sufficient facility specific information, discharge characterization data, implementation requirements, and compliance monitoring requirements. Accordingly, an analysis of each TMDL applicable to industrial storm water discharges must to be performed to determine if it is appropriate to translate the waste load allocation into a numeric effluent limit, or if the effluent limit is to be expressed narratively using a BMP approach. U.S. EPA recognizes that because storm water discharges are highly variable in frequency and duration and are not easily characterized, it is often not feasible or appropriate to establish numeric limits. Variability and the lack of data available make it difficult to determine with precision or certainty actual and projected loadings for individual Dischargers or groups of Dischargers.

Regardless of whether the effluent limit is to be numeric or narrative, the existing waste load allocations must be carefully analyzed, and in many cases translated, to determine the appropriate effluent limitations. Issues of interpretation exist with all of the waste load allocations applicable to Dischargers, and these issues vary based on the TMDL. Below is an example of one of the simpler issues:

**FIGURE 1: Example Waste Load Allocations Proposed Translation: Ballona Creek Estuary – Toxic Pollutants**

| **Metals per Acre Waste Load Allocations for Individual General Construction or Industrial Storm Water Permittees (grams/year/acre)** | | | | |
|---|---|---|---|---|
| Cadmium | Copper | Lead | Silver | Zinc |
| 0.1 | 3 | 4 | 0.1 | 13 |
| **Metals per Acre Waste Load Allocations for Individual General Construction or Industrial Storm Water Permittees (milligrams/year/acre)** | | | | |
| Chlordane | DDTs | Total Polychlorinated biphenyl (PCBs) | Total Polycyclic aromatic hydrocarbons (PAHs) | |
| 0.04 | 0.14 | 2 | 350 | |

In order for the above waste load allocations to effectively be implemented as effluent limits under the General Permit, the Water Boards must (1) identify which discharges the waste load allocations apply to, (2) identify the acreages of the individual facilities, (3) convert the waste load allocations from grams/year/acre (or milligrams/year/acre) to grams/year (or milligrams/year) based on the acreage at each identified facility, (4) assign the effluent limits to the identified Dischargers, (5) determine appropriate monitoring to assess compliance with the effluent limits, and (6) develop a tracking mechanism for each identified facility and their individual effluent limits. A similar stepwise process is necessary for each TMDL with waste load allocations assigned to industrial storm water discharges. For TMDLs where effluent limits will be expressed as BMPs, analysis must to be performed to determine the appropriate BMPs and the corresponding effectiveness to comply with the assigned waste load allocations.

Some waste load allocations are already expressed as concentration based numbers. It may appear simple to incorporate these values into this General Permit as effluent limits, but the questions still remain regarding how to determine compliance. The monitoring requirements in this General Permit are not designed to measure compliance with a numeric effluent limit or to measure the effect of a discharge on a receiving water body. (See the discussion on monitoring requirements in Fact Sheet Section II.J.) This General Permit requires sampling of four (4) storm events a year, with certain limitations as to when a discharge may be sampled. This method of monitoring may not appropriately serve as TMDL compliance sampling since grab samples are only representative of the particular moment in time when the sample was taken. Since storm water is highly variable, four grab samples per year may not provide sufficient confidence that the effluent limit is being met. An alternative monitoring scheme may be necessary to determine the facility's impact on the receiving water and to determine compliance with any assigned effluent limits. Questions concerning whether sampling results should be grab samples, composite samples, flow-weighted averaged over all drainage areas, etc. cannot be determined for each concentration-based TMDL without a more thorough analysis.

Additionally, monitoring and assessment requirements must be developed for all of the TMDLs to determine compliance with or progress towards meeting TMDL requirements. The proposed monitoring requirements in this General Permit are not designed to assess pollutant loading or determine compliance with TMDL-specific effluent limits.

Due to the large number and variety of discharges subject to a wide range of TMDLs statewide, to prevent a severe delay in the adoption of this General Permit, TMDL-specific permit requirements for the TMDLs listed in Attachment E will be proposed by the Regional Water Boards. Since the waste load allocations and/or implementation requirements apply to multiple discharges in the region(s) the TMDL were developed, the development of TMDL-specific permit requirements is best coordinated at the Regional Water Board level. The development of TMDL-specific permit requirements is subject to notice and a public comment period prior to incorporation into this General Permit.

Regional Water Board staff, with the assistance of State Water Board staff, will develop and submit the proposed TMDL-specific permit requirements for each of the TMDLs listed in Attachment E by July 1, 2016.[5] After conducting a 30-day public comment period, the Regional Water Boards will propose TMDL-specific permit requirements to the State Water Board for adoption into this General Permit. The Regional Water Boards may also include TMDL-specific monitoring requirements for inclusion in this General Permit, or may issue Regional Water Board orders pursuant to Water Code section 13383 requiring TMDL-specific monitoring. The Regional Water Boards or their Executive Officers may complete these tasks, and the proposed TMDL-specific permit requirements shall have no force or effect until adopted, with or without modification, by the State Water Board. Unless directed to do so by the Regional Water Board, Dischargers are not required to take any additional actions to comply with the TMDLs listed in Attachment E until the State Water Board reopens this General Permit and includes TMDL-specific permit requirements. This approach is consistent with the 2008 MSGP. TMDL-specific permit requirements are not limited by the BAT/BCT technology-based standards.

The Regional Water Boards will submit to the State Water Board the following information for each of the TMDLs listed in Attachment E:

- Proposed TMDL-specific permit requirements, including any applicable effluent limitations, implementation timelines, additional monitoring requirements, reporting requirements, an explanation of how an exceedance of an effluent limitation or a violation of the TMDL will be determined, and required deliverables consistent with the TMDL(s);
- An explanation of how the proposed TMDL-specific permit requirements, timelines, and deliverables are consistent with the assumptions and requirements of applicable waste load allocation(s) to implement the TMDL(s);
- Where a BMP-based approach is proposed, an explanation of how the proposed BMPs will be sufficient to implement applicable waste load allocations; and
- Where concentration-based monitoring is required, an explanation of how the required monitoring, reporting and calculation methodology for an exceedance of an effluent limitation or a violation of the TMDL(s) will be sufficient to demonstrate compliance with the TMDL(s).

Upon receipt of the information described above, the State Water Board will conduct a public comment period and reopen this General Permit to populate Attachment E, the Fact Sheet, and other provisions as necessary in order to incorporate these TMDL-specific permit requirements into this General Permit. Attachment E may also be reopened during the term of this General Permit to add additional TMDLs and corresponding implementation requirements.

This General Permit (Section X.G.2.a.ix) requires a Discharger to identify any additional industrial parameters that may be discharged to a waterbody with a 303(d) impairment identified in Appendix 3 as likely to be associated with industrial storm water.

[5] Due to the workload associated with the implementation of this General Permit (e.g., training program development, NEC outreach, electronic enrollment and reporting via SMARTS) it is believed that two years in necessary for Staff to complete a comprehensive analysis and stakeholder process for TMDLS applicable to Dischargers under this General Permit.

Dischargers may need to implement additional monitoring for any applicable parameters (Section XI.B.6.e). Appendix 3 of this General Permit includes the water bodies with 303(d) impairments or TMDLs for pollutants that are likely to be associated with industrial storm water in black font, and those that are not likely to be associated with industrial storm water in red font. This determination is based on the pollutant or pollutants that are causing each impairment, and the State Water Board's general experience regarding the types of pollutants that are typically found in industrial storm water discharges. The list of waterbodies is from the State Water Boards statewide 2010 Integrated CWA Section 303(d) List / Section 305(b) Report.

Some of the water bodies with 303(d) impairments or TMDLs listed in Appendix 3 of this General Permit are not applicable to Dischargers covered under this General Permit. Appendix 3 indicates these water bodies Dischargers are not required to include in their pollutant source assessment (unless directed to do so by the Regional Water Board).

New Dischargers (as defined in Attachment C) applying for NOI coverage under this General Permit that will be discharging to an impaired water body with a 303(d) listed impairment are ineligible for coverage unless the Discharger submits data and/or information, prepared by a QISP, demonstrating that the facility will not cause or contribute to the impairment. Section VII.B of this General Permit describes the three different options New Dischargers have for making this determination. This General Permit requires a QISP to assist the New Discharger with this determination because individuals making this determination will need expertise in industrial storm water pollutant sources, BMPs and a thorough understanding of complying with U.S. EPA's storm water regulations and this General Permit's requirements. Not requiring New Dischargers to have a QISP assist in this demonstration would possibly lead to costly retrofits or closure of a new facility that has not demonstrated that the facility will not cause or contribute to the impairment.

## G. Discharges Subject to the California Ocean Plan

1. Discharges to Ocean Waters

   On October 16, 2012 the State Water Board amended the California Ocean Plan (California Ocean Plan) to require industrial storm water Dischargers with outfalls discharging to ocean waters to comply with the California Ocean Plan's model monitoring provisions. The amended California Ocean Plan requires industrial storm water dischargers with outfalls discharging to ocean waters to comply with the California Ocean Plan's model monitoring provisions. These provisions require Dischargers to: (a) monitor runoff for specific parameters at all outfalls from two storm events per year, and collect at least one representative receiving water sample per year, (b) conduct specified toxicity monitoring at certain types of outfalls at a minimum of once per year, and (c) conduct marine sediment monitoring for toxicity under specific circumstances (California Ocean Plan, Appendix III). The California Ocean Plan provides conditions under which some of the above monitoring provisions may be waived by the Water Boards.

   This General Permit requires dischargers with outfalls that discharge to ocean waters to comply with the California Ocean Plan's model monitoring provisions and

any additional monitoring requirements established pursuant to Water Code section 13383. Dischargers who have not developed and implemented a monitoring program in compliance with the California Ocean Plan's model monitoring provisions by July 1, 2015 or seven (7) days prior to commencing operations, whichever is later, are ineligible to obtain coverage under this General Permit.

2. Areas of Special Biological Significance (ASBS) Exception

   The State Water Board adopted the California Ocean Plan (California Ocean Plan) in 1972, and has subsequently amended the Plan. The California Ocean Plan prohibits the discharge of waste to designated ASBS. ASBS are ocean areas designated by the State Water Board as requiring special protection through the maintenance of natural water quality. The California Ocean Plan states that the State Water Board may grant an exception to California Ocean Plan provisions where the State Water Board determines that the exception will not compromise protection of ocean waters for beneficial uses and the public interest will be served.

   On March 20, 2012, the State Water Board adopted Resolution 2012-0012 (ASBS Exception), which grants an exception to the California Ocean Plan prohibition on discharges to ASBS for a limited number of industrial storm water Discharger applicants. The ASBS Exception contains "Special Protections" to maintain natural water quality and protect the beneficial uses of the ASBS. In order to legally discharge into an ASBS, these Dischargers must comply with the terms of the ASBS Exception and obtain coverage under this General Permit. This General Permit incorporates the terms of the ASBS Exception and includes the applicable monitoring requirements for all Dischargers discharging to an ASBS under the ASBS Exception.

## H. Training Qualifications

This General Permit and the previous permit both require Dischargers to ensure that personnel responsible for permit compliance have an acceptable level of knowledge. Stakeholders have observed that the previous permit did not adequately specify how to comply with various elements of the permit, such as selecting discharge locations representative of the facility storm water discharge and evaluating potential pollutant sources, nor did it provide a clearly outlined Discharger training program. Guidance that is available from outside sources can be complicated to understand or costly to obtain, which can result in many Dischargers developing and implementing deficient SWPPPs and conducting inadequate monitoring activities. Some Dischargers under the previous permit had the resources to hire professional environmental staff or environmental consultants to assist in compliance. Even in those cases, however, there was little certainty that Dischargers received training regarding implementation of the various BMPs being implemented and required monitoring activities under the previous permit. Through this General Permit, the State Water Board seeks to improve compliance and monitoring data quality, and expand each Discharger's understanding of this General Permit's requirements.

This General Permit establishes the Qualified Industrial Storm Water Practitioner (QISP) role. A QISP is someone who has completed a State Water Board sponsored or

approved QISP training course and has registered in SMARTS. A QISP is required to implement certain General Permit requirements at the facility once it has entered Level 1 status in the ERA process as described in Section XII of this General Permit. In some instances it may be advisable for a facility employee to take the training, or for a facility to hire a QISP prior to entering Level 1 status as the training will contain information on the new permit requirements and how to perform certain tasks such as selecting discharge locations representative of the facility storm water discharge, evaluating potential pollutant sources, and identifying inadequate SWPPP elements.

Some industry stakeholders have claimed that their staff is already adequately trained. These employees may continue to perform the basic permit functions (e.g. prepare SWPPPs, perform monitoring requirements, and prepare Annual Reports) without receiving any additional training if the facility's sampling and analysis results do not exceed the NALs. This requirement is structured in a manner to reduce the costs of compliance for facilities that may not negatively impact receiving water quality.

California licensed professional civil, industrial, chemical, and mechanical engineers and geologists have licenses that have professional overlap with the topics of this General Permit. The California Department of Consumer Affairs, Board for Professional Engineers, Land Surveyors and Geologists (CBPELSG) provides the licensure and regulation of professional civil, industrial, chemical, and mechanical engineers and professional geologists in California. The State Water Board is developing a specialized self-guided State Water Board-sponsored registration and training program specifically for these CPBELSG licensed engineers and geologists in good standing with CBPELSG. The CBPELSG has staff and resources dedicated to investigate and take appropriate enforcement actions in instances where a licensed professional engineer or geologist is alleged to be noncompliant with CBPELSG's laws and regulations. Actions that result in noncompliance with this General Permit may constitute a potential violation of the CBPELSG requirements and may subject a licensee to investigation by the CBPELSG.

A QISP may represent one or more facilities but must be able to perform the functions required by this General Permit at all times. It is advisable that this individual be limited to a specific geographic region due to the difficulty of performing the needed tasks before, during, and after qualifying storm events may be difficult or impossible if extensive travel is required. Dischargers are required to ensure that the designated QISP has completed the appropriate QISP training course.

This General Permit contains a mechanism that allows for the Water Boards' Executive Director or Executive Officer to rescind the registration of any QISPs who are found to be inadequately performing their duties as a QISP will no longer be able to do so. A QISP may ask the State Water Board to review any decision to revoke his or her QISP registration. Table 1 of this Fact Sheet below describes the different roles that the QISP and California licensed professional engineers have in this General Permit.

**TABLE 1: Role-Specific Permit Requirements**

| Qualifications | Task |
|---|---|
| QISP | Assist New Dischargers determine coverage eligibility for Discharges to an impaired water body, Level 1 ERA Evaluation and report, Level 2 ERA Action Plan, and Technical Report, and the Level 2 ERA extension |
| California licensed professional engineer | Inactive Mining Operation Certification, SWPPPs for inactive mining, and annual re-certification of Inactive Mining Operation Certification, NONA Technical Reports, and Subchapter N calculations |

## I. Storm Water Pollution Prevention Plan (SWPPP)

1. General

This General Permit requires that all Dischargers develop, implement, and retain onsite a site-specific SWPPP. The SWPPP requirements generally follow U.S. EPA's five-phase approach to developing SWPPPs, which has been adapted to reflect the requirements of this General Permit in Figure 2 of this Fact Sheet. This approach provides the flexibility necessary to establish appropriate BMPs for different industrial activities and pollutant sources. This General Permit requires a Discharger to include in its SWPPP (Section X of this General Permit) a site map, authorized NSWDs at the facility, and an identification and assessment of potential pollutants sources resulting from exposure of industrial activities to storm water.

This General Permit requires that Dischargers clearly describe the BMPs that are being implemented in the SWPPP. In addition to providing descriptions, Dischargers must also describe who is responsible for the BMPs, where the BMPs will be installed, how often and when the BMPs will be implemented, and identify any pollutants of concern. Table 2 of this Fact Sheet provides an example of how a Discharger could assess potential pollution sources and provide a corresponding BMPs summary.

This General Permit requires that Dischargers select an appropriate facility inspection frequency beyond the required monthly inspections if necessary, and to determine if SWPPP revisions are necessary to address any physical or operational changes at the facility or make changes to the existing BMPs (Section X.H.4.a.vii and Section XI.A.4 of this General Permit). Facilities that are subject to multi-phased physical expansion or significant seasonal operational changes may require more frequent SWPPP updates and facility inspections. Facilities with very stable operations may require fewer SWPPP updates and facility inspections.

Failure to develop or implement an adequate SWPPP, or update or revise an existing SWPPP as required, is a violation of this General Permit. Failure to maintain the SWPPP on-site and have it available for inspection is also a violation of this General Permit.

Dischargers are also required to submit their SWPPPs and any SWPPP revisions via SMARTS; accordingly, BMP revisions made in response to observed compliance problems will be included in the revised SWPPP electronically submitted via SMARTS. Not all SWPPP revisions are significant and it is up to the Dischargers to distinguish between revisions that are significant and those that are not significant. If no changes are made at all to the SWPPP, the Discharger is not required to resubmit the SWPPP on any specific frequency.

- Significant SWPPP Revisions: Dischargers are required to certify and submit via SMARTS their SWPPP within 30 days of the significant revision(s). While it is not easy to draw a line generally between revisions that are significant and those that are not significant, Dischargers are not required to certify and submit via SMARTS any SWPPP revisions that are comprised of only typographical fixes or minor clarifications.

- All Other SWPPP Revisions: Dischargers are required to submit revisions to the SWPPP that are determined to not be significant every three (3) months in the reporting year.

**FIGURE 2:** Five Phases for Developing and Implementing an Industrial Storm Water Pollution Prevention Plan (SWPPP)

**PLANNING AND ORGANIZATION**

*Form Pollution Prevention Team
*Review other facility plans

**ASSESSMENT**

*Develop a site map
*Identify potential pollutant sources
*Inventory of materials and chemicals
*List significant spills and leaks
*Identify Non-Storm Water Discharges
*Assess pollutant risk

**Best Management Practice (BMP) IDENTIFICATION**

*Identify minimum required BMPs
*Identify any advanced BMPs

**IMPLEMENTATION**

*Train employees for the Pollution Prevention Team
*Implement BMPs
*Collect and review records

**EVALUATION / MONITORING**

*Conduct annual facility evaluation (Annual Evaluation)
*Review monitoring information
*Evaluate BMPs
*Review and revise SWPPP

**TABLE 2: Example - Assessment of Potential Industrial Pollution Sources and Corresponding BMPs Summary**

| Area | Activity | Pollutant Source | Industrial Pollutant | BMPs |
|---|---|---|---|---|
| Vehicle and Equipment Fueling | Fueling | Spills and leaks during delivery | Fuel oil | -Use spill and overflow protection |
| | | Spills caused by topping off fuel tanks | Fuel oil | -Train employees on proper fueling, cleanup, and spill response techniques |
| | | Hosing or washing down fuel area | Fuel oil | -Use dry cleanup methods rather than hosing down area<br><br>-Implement proper spill prevention control program |
| | | Leaking storage tanks | Fuel oil | -Inspect fueling areas regularly to detect problems |
| | | Rainfall running off fueling area, and rainfall running onto and off fueling area | Fuel oil | -Minimize run-on of storm water into the fueling area, cover fueling area |

2. Minimum and Advanced BMPs

Section V of this General Permit requires the Discharger to comply with technology-based effluent limitations (TBELs). In this General Permit, TBELs rely on implementation of BMPs for Dischargers to reduce and prevent pollutants in their discharge. The BMP effluent limitations have been integrated into the Section X.H of this General Permit and are divided into two categories – minimum BMPs which are generally non-structural BMPs that all Dischargers must implement to the extent feasible, and advanced BMPs which are generally structural BMPs that must be implemented if the minimum BMPs are inadequate to achieve compliance with the TBELs. Section X of this General Permit includes both substantive control requirements in the form of the BMPs listed in Section X.H, as well as various reporting and recordkeeping requirements. The requirement to implement BMPs "to the extent feasible" allows Dischargers flexibility when implementing BMPs, by not requiring the implementation of BMPs that are not technologically available and economically practicable and achievable in light of best industry practices.

The 2008 MSGP requires Dischargers to comply with 12 non-numeric technology-based effluent limits in Section 2.1.2 of the permit through the implementation of "control measures." This requirement is an expansion of the general considerations outlined in the MSGP adopted in 2000. The control measures specified by the U.S. EPA in the 2008 MSGP are as follows (in order as listed in the 2008 MSGP):

1. Minimize Exposure
2. Good Housekeeping
3. Maintenance
4. Spill Prevention and Response Procedures
5. Erosion and Sediment Controls
6. Management of Runoff
7. Salt Storage Piles or Piles Containing Salt
8. Sector Specific Non-Numeric Effluent Limits
9. Employee Training
10. Non-Storm Water Discharges (NSWDs)
11. Waste, Garbage and Floatable Debris
12. Dust Generation and Vehicle Tracking of Industrial Materials

This General Permit addresses eleven of the above twelve control measures from the 2008 MSGP Section 2.1.2 Non-Numeric Technology-Based Effluent Limits (BPT/BAT/BCT). Eleven of the control measures are addressed as minimum BMPs that the State Water Board has determined to be most applicable to California's Dischargers. Two of those eleven control measures (1- Minimize Exposure, 6 – Management of Runoff) are also identified as advanced BMPs (Section X.H.2 of this General Permit). This General Permit is not a sector-specific permit and therefore does not contain limitations to address control measure number 8 (Sector Specific Non-Numeric Effluent Limits).

The non-structural elements of the control measure to minimize exposure are addressed in the minimum BMP Section X.H.1 of this General Permit while structural control elements are addressed in the advanced BMP Section X.H.2 of this General Permit. The on-site diversion elements of the control measure to minimize exposure are addressed as minimum BMPs.

The runoff reduction elements of the control measure to minimize exposure are included as advanced BMPs. Advanced BMPs that are required to be implemented when a Discharger has implemented the minimum BMPs to the extent feasible and they are not adequate to comply with the TBELs. The advanced BMP categories are: (1) exposure minimization BMPs, (2) storm water containment and discharge reduction BMPs, (3) treatment control BMPs, and (4) additional advanced BMPs needed to meet the effluent limitations of this General Permit. Advanced BMPs are generally structural control measures and can include any BMPs that exceed the minimum BMPs. The control measure for Non-Storm Water Discharges (NSWDs) is addressed in both the discharge prohibitions (Section III) and authorized non-storm water discharges (Section IV) of this General Permit and essentially represents a minimum BMP.

This General Permit encourages Dischargers to utilize BMPs that infiltrate or reuse storm water where feasible. The State Water Board expects that these types of BMPs will not be appropriate for all industrial facilities, but recognizes the many possible benefits (e.g. increased aquifer recharge, reduces flooding, improvements to water quality) associated with the infiltration and reuse of storm water. Encouraging the use of storm water infiltration and reuse BMPs is consistent with the statewide approach to managing storm water with lower impact methods.

The BMPs in this General Permit that coincide with the control measures in the 2008 MSGP are as follows (in order as listed in the 2008 MSGP):

a. Minimization of Exposure to Storm Water

Section 2.1.2.1 of the 2008 MSGP requires Dischargers to minimize the exposure of industrial materials and areas of industrial activity to rain, snow, snowmelt, and runoff. The 2008 MSGP mixes both structural and nonstructural BMPs and specifies particular BMPs to consider when minimizing exposure such as grading/berming areas to minimize runoff, locating materials indoors, spill clean up, contain vehicle fluid leaks or drain fluids before storing vehicles on-site, secondary containment of materials, conduct cleaning activities undercover, indoors or in bermed areas, and drain all wash water to a proper collection system.

This General Permit requires the evaluation of BMPs in the potential pollutant source assessment in the SWPPP (Section X.G.2). When the minimum BMPs are not adequate to comply with the TBELs, Dischargers are required to implement advanced BMPs (Section X.H.2.a). These advanced BMPs may include additional exposure minimization BMPs (Section X.H.2.b.1).

b. Good Housekeeping

Section 2.1.2.2 of the 2008 MSGP requires that Dischargers keep all exposed areas that may be a potential source of pollutants clean and orderly. This General Permit (Section X.H.1.a) seeks to define “clean and orderly” by specifying a required set of nine (9) minimum good housekeeping BMPs, which include: observations of outdoor/exposed areas, BMPs for controlling material tracking, BMPs for dust generated from industrial materials or activities, BMPs for rinse/wash water activities, covering stored industrial materials/waste, containing all stored non-solid industrial materials, preventing discharge of rinse/wash waters/industrial materials, prevent non-industrial area discharges from contact with industrial areas of the facility, and prevent authorized NSWDs from non-industrial areas from contact with industrial areas of the facility.

c. Preventative Maintenance

Section 2.1.2.3 of the 2008 MSGP requires that Dischargers regularly inspect, test, maintain, and repair all industrial equipment to prevent leaks, spills and releases of pollutants that may be exposed to storm water discharged to receiving waters. This General Permit (Section X.H.1.b) incorporates this

concept by requiring four (4) nonstructural BMPs which include: identification and inspection of equipment, observations of potential leaks in identified equipment, an equipment maintenance schedule, and equipment maintenance procedures.

d. Spill and Leak Prevention and Response

Section 2.1.2.4 of the 2008 MSGP requires that Dischargers minimize the potential for leaks, spills and other releases that may be exposed to storm water. Dischargers are also required to develop a spill response plan which includes procedures such as labeling of containers that are susceptible to a spill or a leakage, establishing containment measures for such industrial materials, procedures for stopping leaks/spills, and provisions for notification of the appropriate personnel about any occurrence. This General Permit (Section X.H.1.c) requires implementation of four (4) BMPs to address spills. These BMPs include: developing a set of spill response procedures to minimize spills/leaks, develop procedures to minimize the discharge of industrial materials generated through spill/leaks, identifying/describing the equipment needed and where it will be located at the facility, and identify/training appropriate spill response personnel.

e. Erosion and Sediment Controls

Section 2.1.2.5 of the 2008 MSGP requires the use of structural and/or non-structural control measures to stabilize exposed areas and contain runoff. Also required is the use of a flow velocity dissipation device(s) in outfall channels where necessary to reduce erosion and/or settle out pollutants. This General Permit (Section X.H.1.e) requires the implementation of (5) BMPs to prevent erosion and sediment discharges. The erosion and sediment control BMPs include: implementing effective wind erosion controls, providing for effective stabilization of erodible areas prior to a forecasted storm event, site entrance stabilization/prevent material tracking offsite and implement perimeter controls, diversion of run-on and storm water generated from within the facility away from all erodible materials, and ensuring compliance with the design storm standards in Section X.H.6. U.S. EPA has developed online resources for erosion and sediment controls.[6]

f. Management of Runoff

Section 2.1.2.6 of the 2008 MSGP requires the diversion, infiltration, reuse, containment, or otherwise reduction of storm water runoff, to minimize pollutants in discharges. This General Permit (Sections X.H.1.a.viii, X.H.1.d.iv., and

[6] U.S. EPA. 2008 MSGP. <http://cfpub.epa.gov/npdes/stormwater/msgp.cfm> [as of February 4, 2014].
U.S. EPA. National Menu of BMPs. <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm>. [as of February 4, 2014].
U.S. EPA. National Management Measures to Control Nonpoint Source Pollution from Urban Areas <http://water.epa.gov/polwaste/nps/urban/index.cfm>. [as of February 4, 2014].

X.H.1.e.iv) requires Dischargers to divert run-on from non-industrial sources and manage storm water generated within the facility away from industrial materials and erodible surfaces. Runoff reduction is required as an advanced BMP when minimum BMPs are not adequate to comply with the TBELs. The 2008 MSGP encouraged Dischargers to consult with EPA's internet-based resources relating to runoff management.[7]

g. Salt Storage Piles or Piles Containing Salt

Section 2.1.2.7 of the 2008 MSGP requires salt storage piles/piles containing salt that may be discharged to be enclosed or covered and to use BMPs when the salt is being used. This General Permit does not have a minimum BMP specifically for salt storage, however it does require all stockpiled/stored industrial materials be managed in a way to reduce or prevent industrial storm water discharges of the stored/stockpiled pollutants. The good housekeeping (Section X.H.1.a) and material handling and waste management (Section X.H.1.d) minimum BMPs in this General Permit require that all materials readily mobilized by storm water be covered, the minimization of handling of industrial materials or wastes that can be readily mobilized by contact with storm water during a storm event, and the diversion of run-on from stock piled materials.

h. Sector Specific Non-Numeric Effluent Limits

Section 2.1.2.8 of the 2008 MSGP requires Dischargers to achieve any additional non-numeric limits stipulated in the relevant sector-specific section(s) of Part 8 of the 2008 MSGP. This General Permit is not a sector-specific permit and does not contain sector-specific non-numeric effluent limitations like the 2008 MSGP. While this General Permit does not specify sector-specific BMPs, Dischargers are required to select and implement BMPs for their specific facility to reduce or prevent industrial storm water discharges of pollutants to comply with the technology-based effluent limitations. In addition, sectors with applicable ELGs must comply with those ELGs.

i. Employee Training Program

Section 2.1.2.9 of the 2008 MSGP requires all employees engaged in industrial activities or the handling of industrial materials that may affect storm water to obtain training covering implementation of this General Permit. This General Permit (Section X.D.1 and X.H.1.f) requires a facility to establish a Pollution Prevention Team (team members, collectively) responsible for implementing permit requirements such as the SWPPP, monitoring requirements, or BMPs.

[7] U.S. EPA. Sector-Specific Industrial Stormwater Fact Sheet Series <www.epa.gov/npdes/stormwater/msgp>. [as of February 4, 2014].
U.S. EPA. National Menu of Stormwater BMPs <www.epa.gov/npdes/stormwater/menuofbmps> [as of February 4, 2014].
U.S. EPA. National Management Measures to Control Nonpoint Source Pollution from Urban Areas (and any similar State or Tribal publications) <www.epa.gov/owow/nps/urbanmm/index.html>. [as of February 4, 2014].

The five (5) minimum training BMPs include: ensuring that all team members are properly trained, preparing the proper training materials and manuals, identifying which individuals needs to be trained, providing a training schedule, and maintaining documentation on the training courses and which individuals received the training.

This General Permit also requires a QISP to be assigned to each facility that reaches Level 1 status. One purpose of a QISP is to have an individual available who can provide compliance assistance with these training requirements. The QISP is responsible for training the appropriate team members. Appropriate team members are any team members involved in implementing this General Permit for drainage areas causing NAL exceedances, and any other team members identified by the QISP that need additional training to implement this General Permit.

j. NSWDs

Section 2.1.2.10 of the 2008 MSGP requires that unauthorized NSWDs are eliminated (Part 1.2.3 of the 2008 MSGP lists the NSWDs authorized by the 2008 MSGP). The good housekeeping minimum BMP (Section X.H.1.a.ix of this General Permit) requires that contact between authorized NSWDs and industrial areas of the facility be minimized. This General Permit (Section IV) also includes separate requirements for authorized NSWDs and (Section III) prohibits unauthorized NSWDs.

k. Material Handling and Waste Management

Section 2.1.2.11 of the 2008 MSGP requires that Dischargers ensure waste, garbage, and floatable debris are not discharged into receiving waters. The 2008 MSGP identifies keeping areas clean and intercepting such materials as ways to minimize such discharges. This General Permit (Section X.H.1.d) requires Dischargers to implement six (6) general BMPs that address material handling and waste management. These BMPs include: preventing or minimizing handling of waste or materials during a storm event that could potentially result in a discharge, containing industrial materials susceptible to being dispersed by the wind, covering industrial waste disposal containers when not in use to contain industrial materials, diversion of run-on and storm water generated from within the facility away from all stock piled materials, cleaning and managing spills of such wastes or materials (in accordance with Section X.H.1.e of this General Permit), and conducting observations of outdoor areas and equipment that may come into contact with such materials or waste and become contaminated.

l. Waste, Garbage and Floatable Debris

Section 2.1.2.11 of the 2008 MSGP requires that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged. Material handling and waste management BMPs are included in Section X.H.1.d of this General Permit. Dischargers are required to: prevent handling of waste materials during a storm event that could result in a discharge, contain waste disposal

containers when not in use, clean and manage spills from waste, and observe outdoor areas and equipment that may come into contact with waste and become contaminated.

m. Dust Generation and Vehicle Tracking of Industrial Materials

Section 2.1.2.12 of the 2008 MSGP requires that generation of dust and off-site tracking of raw, final, or waste materials is minimized. This General Permit does not require minimization of dust generation and vehicle tracking of industrial materials as a minimum BMP directly. Dust generation and vehicle tracking of industrial materials BMPs are included in Section X.H.1.a ("good housekeeping") of this General Permit where Dischargers must prevent dust generation from industrial materials or activities and contain all stored non-solid industrial materials that can be transported or dispersed via wind or come in contact with storm water, and Section X.H.1.d. ("material handling and waste management") of this General Permit, which requires Dischargers to contain non-solid industrial materials or wastes that can be dispersed via wind erosion or come into contact with storm water during handling.

n. Quality Assurance and Record Keeping

Section 2.1.2 of the 2008 MSGP does not directly designate record keeping as a control measure. This General Permit (Section X.H.1.g) includes quality assurance and record keeping as a minimum BMP and requires Dischargers to implement three (3) general BMPs. These BMPs include: developing and implementing procedures to ensure that all elements of the SWPPP are implemented, develop a method of tracking and recording the implementation of all BMPs identified in the SWPPP, and a requirement to keep and maintain those records. This ensures that management procedures are designed and permit requirements are implemented by appropriate staff.

o. Implementation of BMPs in the SWPPP

Like the previous permit, this General Permit does not assign Dischargers a schedule to implement BMPs. Instead, this General Permit requires Dischargers to select the appropriate schedule to implement the minimum BMPs. In addition, this General Permit requires Dischargers to identify, as necessary, any BMPs that should be implemented prior to precipitation events. Although Dischargers are required to maintain internal procedures to ensure the BMPs are implemented according to schedule or prior to precipitation events, Dischargers are only required to certify in the Annual Report whether they complied with the BMP implementation requirements.

Dischargers are required to implement an effective suite of BMPs that meet the technology and water-quality based limitations of this General Permit. Based upon Regional Water Board staff inspections, there is significant variation between Dischargers' interpretations of what BMPs were necessary to comply with the previous permit. This General Permit establishes a new requirement that Dischargers must implement, to the extent feasible, specific minimum BMPs

to reduce or prevent the presence of pollutants in their industrial storm water discharge. In addition, due to the wide variety of facilities conducting numerous and differing industrial activities throughout the state, this General Permit retains the requirement from the previous permit that Dischargers establish and implement additional BMPs beyond the minimum. Implementation of this General Permit's minimum BMPs, together with any necessary advanced BMPs, will result in compliance with the effluent limitations of this General Permit (Section V.A). All Dischargers must evaluate their facilities and determine the best practices within their industry considering technological availability and economic practicability and achievability to implement these minimum BMPs and any advanced BMPs.

The State Water Board has selected minimum BMPs that are generally applicable at all facilities. The minimum BMPs are consistent with the types of BMPs normally found in properly developed SWPPPs and, in most cases, should represent a significant portion of the effort required for a Discharger to achieve compliance. Due to the diverse industries covered by this General Permit, the development of a more comprehensive list of minimum BMPs is not currently feasible. The selection, applicability, and effectiveness of a given BMP is often related to industrial activity type and to facility-specific facts and circumstances. Advanced BMPs must be selected and implemented by Dischargers, based on the type of industry and facility-specific conditions, to the extent necessary to comply with the technology-based effluent limitation requirements of this General Permit.

Failure to implement all of the minimum BMPs to the extent feasible is a violation of this General Permit. (Section X.H.1.) Dischargers must justify any determination that it is infeasible to implement a minimum BMP in the SWPPP (Section X.H.4.b). Failure to implement advanced BMPs necessary to achieve compliance with either the technology or water quality standards requirements in this General Permit is a violation of this General Permit.

p. Temporary Suspension of Industrial Activities

The exception for inactive and unstaffed sites in section 6.2.1.3 of the 2008 MSGP does not require a Discharger with a facility that is inactive and unstaffed with no industrial materials or activities exposed to storm water (in accordance with the substantive requirements in 40 Code of Federal Regulations section 122.26(g)) to complete benchmark monitoring. The Discharger is required to sign and certify a statement in the SWPPP verifying that the site is inactive and unstaffed. If circumstances change and industrial materials or activities become exposed to storm water or the facility becomes active and/or staffed, this exception no longer applies and the Discharger is required to begin complying immediately with the applicable benchmark monitoring requirements under part 6.2 of the 2008 MSGP.

This General Permit allows Dischargers to temporarily suspend monitoring at facilities where industrial activities have been suspended in accordance with Section X.H.3. This is only intended for Dischargers with facilities where it is

infeasible to comply with this General Permit's monitoring while activities are suspended (e.g. remote, unstaffed, or inaccessible facilities during the time of such a suspension). Dischargers are required to update the facility's SWPPP with the BMPs being used to stabilize the site and submit the suspension dates and a justification for the suspension of monitoring via SMARTS.

3. Design Storm Standards for Treatment Control BMPs

It is the State Water Board's intent to minimize the regulatory uncertainty and costs concerning treatment control BMPs in order to encourage the implementation of treatment control BMPs when appropriate. Section X.H.6 of this General Permit specifies a design storm standard for use when treatment controls BMPs are installed. There is both a volume-based and flow-based design storm standard in this General Permit. Both are based on the 85$^{th}$ percentile 24-hour storm event. Without a design storm standard, Dischargers have installed treatment controls using a wide variety of designs that were sometimes either unnecessarily stringent/expensive, or deficient in complying with the requirements of the relevant permit. Some Dischargers have been hesitant to consider treatment options because of the uncertainty concerning acceptable treatment design. The design storm standards are generally expected to:

- Be consistent with the effluent limitations of this General Permit;
- Be protective of water quality;
- Be achievable for most pollutants and their associated treatment technologies; and,
- Reduce the costs associated with treating industrial storm water discharges beyond the levels necessary to achieve compliance with this General Permit.

In lieu of complying with the design storm standards for treatment control BMPs, Dischargers may certify and submit a Level 2 ERA Technical Report, including an Industrial Activity BMPs Demonstration (Section XII.D.2.a of this General Permit). The Level 2 ERA Technical Report requirement is based upon NAL exceedances. Under this option, a Discharger with Level 2 status must either implement BMPs to eliminate future NAL exceedances, or justify what BMPs must be implemented to comply with this General Permit even if the BMPs will not eliminate future exceedances of NALs. Dischargers who implement treatment control BMPs that vary from the design storm standards in Section X.H.6 must include an analysis showing that their treatment control BMPs comply with this General Permit's effluent limitations in the Industrial Activity BMP Demonstration.

This General Permit does not require Dischargers to retrofit existing treatment controls that do not meet the design storm standard, unless the Discharger determines that the existing treatment controls are not adequate to comply with this General Permit. In addition, once TMDL-specific implementation requirements are added to this General Permit, those Dischargers subject to TMDLs may need to add

new or retrofitted treatment control BMPs to meet the TMDL implementation requirements.

To arrive at these design storm standards, the State Water Board has relied heavily on previous Water Board decisions concerning treatment efficacy for municipalities, published documents, stakeholder comments, and reasonableness. In 2000, the State Water Board issued State Water Board Order WQ 2000-11, which upheld Los Angeles Regional Water Board's permit requirements which mandated that all new development and redevelopment exceeding certain size criteria design treatment BMPs based on a specific storm volume: the 85th percentile 24-hour storm event. This design storm standard was based on research demonstrating that the standard represents the maximized treatment volume cut-off at the point of diminishing returns for rainfall/runoff frequency.[8] On the basis of this equation, the maximized runoff volume for 85 percent treatment of annual runoff volumes in California can range from 0.08 to 0.86 inch depending on the imperviousness of the watershed area and the mean amount of rainfall. This design storm standard is referred to as the Standard Urban Storm Water Mitigation Plan's volumetric criterion and there are multiple acceptable methods of calculating this volume. For more information, see the California Stormwater Best Management Practices Handbook.[9]

The San Diego Regional Water Board first established both volumetric and flow-based design storm criteria for NPDES MS4 permits. It is generally accepted by civil engineers doing hydrology work to use twice the peak hourly flow of a specific storm event to use as the basis for flow-based design of BMPs. This General Permit therefore establishes the flow-based design storm standard to be twice the peak hourly flow of the 85th percentile 24-hour storm event.

The primary objective of specifying a design storm standard is to properly size BMPs to, at a minimum, effectively treat the first flush of run-off from all storm events. The economic impacts of treating all storm water from a facility versus the minimal environmental benefit of complete treatment justify the design storm approach. It is unrealistic to require each facility to do a cost benefit analysis of their treatment structures. To simplify the requirements for design, the State Water Board reviewed research from the City of Portland[10] and the City of San Jose[11] to determine the volume of each rain event compared to the amount of events that occur for that volume. The results of their findings show an inflection point that is typically found at approximately the 80 to 85 percentile of recorded storm events.

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[8] California Regional Water Quality Control Board Los Angeles Region, Standard Urban Storm Water Mitigation Plans and Numerical Design Standards for Best Management Practices - Staff Report and Record of Decision (Jan. 18, 2000) <http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/susmp/susmp_final_staff_report.pdf>. [as of February 4, 2014].

[9] California Stormwater Quality Association, Stormwater Best Management Practice New Development and Redevelopment Handbook (2003) <http://www.casqa.org/>. [as of February 4, 2014].

[10] City of Portland Oregon. Portland Stormwater Management Manual Appendix E.1: Pollution Reduction Methodology E.1-1 (August 1, 2008). <http://www.portlandoregon.gov/bes/article/202909>. [as of February 4, 2014].

[11] California Stormwater Quality Association (CASQA). CASQA BMP Handbook (January 2003) New Development and Redevelopment (Errata 9-04) <http://www.casqa.org/>. [as of February 4, 2014].

Dischargers should be aware of the potential unintended public health concerns associated with treatment control BMPs. Extensive monitoring studies conducted by the California Department of Public Health (CDPH) have documented that mosquitoes opportunistically breed in structural BMPs, particularly those that hold standing water for over 96 hours. BMPs that produce mosquitoes create potential public health concerns and increase the burden on local vector control agencies that are mandated to inspect for and abate mosquitoes and other vectors within their jurisdictional boundaries. These unintended consequences can be lessened when BMPs incorporate design, construction, and maintenance principles developed specifically to minimize standing water available to mosquitoes[12] while having negligible effects on the capacity of the structures to provide water quality improvements. The California Health and Safety Code prohibits landowners from knowingly providing habitat for or allowing the production of mosquitoes and other vectors, and gives local vector control agencies broad inspection and abatement powers.[13]

Dischargers who install any type of volume-based treatment device are encouraged to consider the BMPs in the California Department of Public Health's guidance manual published July 2012, "Best Management Practices for Mosquito Control in California" at http://www.cdph.ca.gov/HealthInfo/discond/Documents/BMPforMosquitoControl07-12.pdf.

4. Monitoring Implementation Plan

Dischargers are required to prepare and implement a Monitoring Implementation Plan (Section X.I of this General Permit). The Monitoring Implementation Plan requirements are designed to assist the Discharger in developing a comprehensive plan for the monitoring requirements in this General Permit and to assess their monitoring program. The Monitoring Implementation Plan includes a description of visual observation procedures and locations, as well as sampling procedures, locations, and methods. The Monitoring Implementation Plan shall be included in the SWPPP.

## J. Monitoring and Reporting Requirements

1. General Monitoring Provisions

This General Permit requires Dischargers to develop and implement a facility-specific monitoring program. Monitoring is defined as visual observations, sampling and analysis. The monitoring data will be used to determine:

[12] California Department of Public Health. (2012). Best Management Practices for Mosquito Control in California. < http://www.westnile.ca.gov/resources.php>. [as of February 4, 2014]
[13] California Health & Safety Code, Division 3, Section 2060 and following.

a. Whether BMPs addressing pollutants in industrial storm water discharges and authorized NSWDs are effective for compliance with the effluent and receiving water limitations of this General Permit,

b. The presence of pollutants in industrial storm water discharges and authorized NSWDs (and their sources) that may trigger the implementation of additional BMPs and/or SWPPP revisions; and,

c. The effectiveness of BMPs in reducing or preventing pollutants in industrial storm water discharges and authorized NSWDs.

Effluent sampling and analysis information may be useful to Dischargers when evaluating the need for improved BMPs. The monitoring requirements in this General Permit recognize the 2008 MSGP approach to visual observations as an effective monitoring method for evaluating the effectiveness of BMPs at most facilities. Section 6.2 of the 2008 MSGP limits its monitoring sampling requirements to certain industrial categories. Similar to the previous permit, this General Permit requires all Dischargers to sample unless they have obtained NEC coverage or have an inactive mining operation(s) certified as allowed under this General Permit Section XIII.

This General Permit defines a Qualifying Storm Event (QSE) to provide clarity to Dischargers of when sampling is required. The previous permit (Section B.5.a) specified that sampling was required within the first hour of discharge, however, this General Permit requires Dischargers to sample within four hours of the start of Discharge. Many Dischargers were not able to get samples of their discharge locations within one (1) hour under the previous permit so this general permit has expanded the timeframe allowed to provide enough time to sample all discharge locations. The previous permit required three working dry days before sampling and this General Permit defines this period as 48 hours, this timeframe was decreased to provide more opportunities for Dischargers to obtain samples. This General Permit does not specify a volume for sampling due to the complexity of using rain gauges and the limited access of rain gauge station data.

Dischargers are only required to obtain samples required during scheduled facility operating hours and when sampling conditions are safe in accordance with Section XI.C.6.a.ii of this General Permit. If a storm event occurs during unscheduled facility operating hours (e.g. during the weekend or night) and during the 12 hours preceding the scheduled facility operating hours, the Dischargers is still responsible for obtaining samples at discharge locations that are still producing a discharge at the start of facility operations. Under the previous permit, many Dischargers were unable to obtain samples due to rainfall beginning at night.

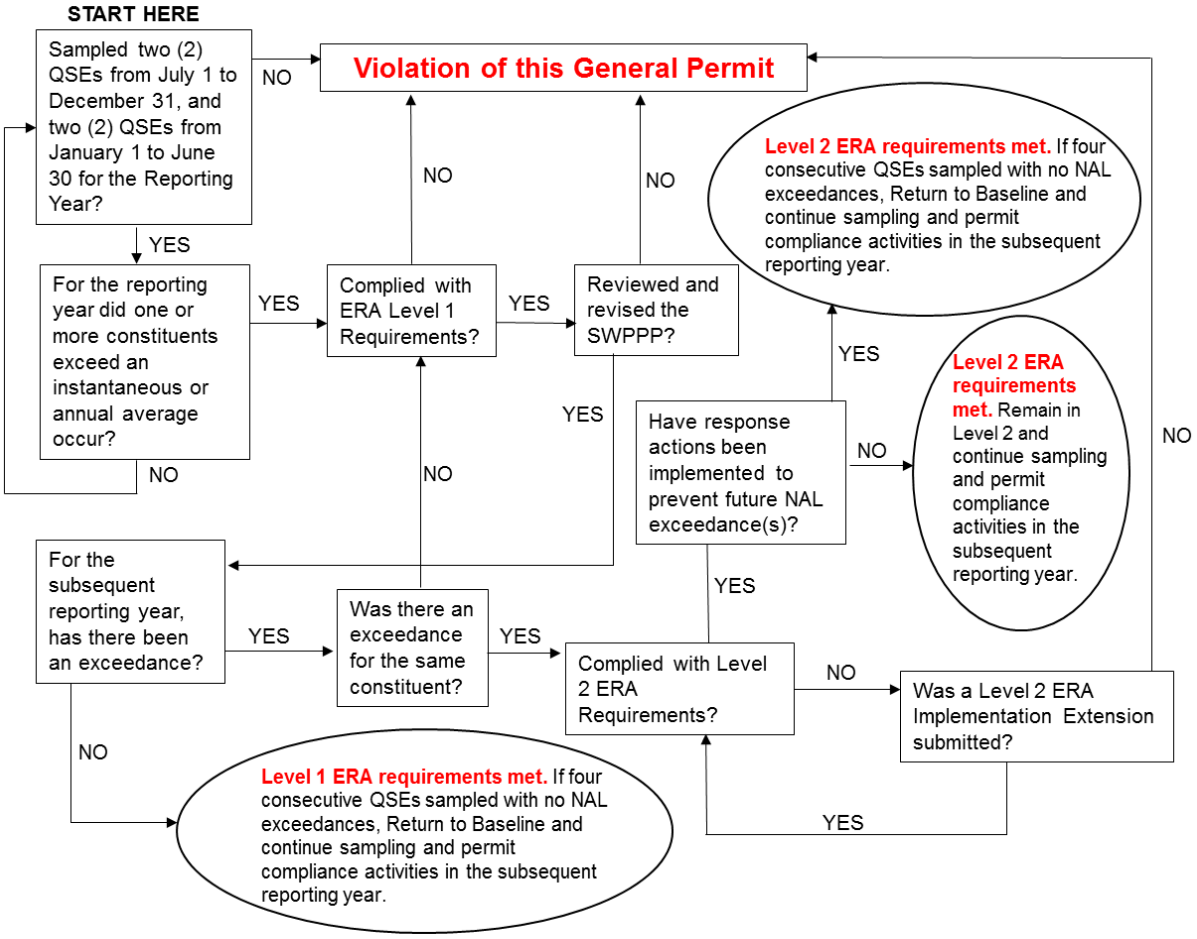
The State Water Board recognizes that it may not be feasible for all facilities to obtain four QSEs in a reporting year because there may not be enough qualifying storm events to do so. Therefore, a Discharger that is unable to collect and analyze storm water samples from two QSEs in each half of a reporting year due to a lack of QSEs is not in violation of Section XI.B.2. Dischargers that miss four QSEs during

a reporting year due to the fact that four QSEs did not occur are not required to make up these sampling events in subsequent reporting years.

The State Water Board recognizes that each facility has unique physical characteristics, industrial activities, and/or variations in BMP implementation and performance which warrants the requirement that each facility demonstrate its compliance. Figure 3 of this Fact Sheet provides a summary of all the monitoring-related requirements of this General Permit. This General Permit's monitoring requirements include sampling and analysis requirements for specific indicator parameters that indicate the presence of pollutants in industrial storm water discharges. The "indicator parameters" are oil and grease (for petroleum hydrocarbons), total suspended solids (for sediment and sediment bound pollutants) and pH (for acidic and alkaline pollutants). Additionally, Dischargers are required to evaluate their facilities and analyze samples for additional facility-specific parameters. These monitoring program requirements are designed to provide useful, cost-effective, timely, and easily obtained information to assist Dischargers as they identify their facility's pollutant sources and implement corrective actions and revise BMPs as necessary (Section XI.A.4 of this General Permit).

This General Permit requires a combination of visual observations and analytical monitoring. Visual observations provide Dischargers with immediate information indicating the presence of many pollutants and their sources. Dischargers must implement timely actions and revise BMPs as necessary (Section XI.A.4) when the visual observations indicate pollutant sources have not been adequately addressed in the SWPPP. Analytical monitoring provides an additional indication of the presence and concentrations of pollutants in storm water discharge. Dischargers are required to evaluate potential pollutant sources and corresponding BMPs and revise the SWPPP appropriately when specific types of NAL exceedances occur as described below.

**FIGURE 3: Compliance Determination Flowchart**




2. Visual Observations

There are two major changes to the visual observation requirements in this General Permit compared to the previous permit, which include:

a. Monthly Visual Observations

The previous permit required separate quarterly visual observations for unauthorized and authorized non-storm water discharges. It did not require periodic visual observations of the facility to determine whether all potential pollutant sources were being adequately controlled with BMPs. Prior drafts of this General Permit proposed the addition of pre-storm inspections. This was met with great resistance by Dischargers because of the complexity and burden of determining when a QSE would occur. Many of these Dischargers recommended that monthly BMP and non-storm water discharge visual observations should replace the proposed pre-storm inspections. This General Permit merges all visual observations into a single monthly visual observation.

b. Sampling Event Visual Observations

The previous permit required monthly storm water visual observations. This required Dischargers to conduct visual observations for QSEs that were not being sampled since only two QSEs were required to be sampled in the previous permit. As discussed below, the sampling requirement has been increased to four QSEs within each reporting year with two QSEs required in each half of the reporting year. We expect that this will result in more samples being collected and analyzed, since most of California experiences, on average, at least two QSEs per half year. This General Permit streamlines the storm water visual observation requirement by linking the visual observations to the time of sampling.

3. Sampling and Analysis

   a. General

      As part of the process for developing previous drafts of this General Permit, the State Water Board considered comments from numerous stakeholders concerning sampling and analysis. Sampling and analysis issues were the most dominant of all issues raised in the comments.

      The State Water Board received stakeholder comments that fall into three primary categories concerning this General Permit's sampling and analysis approach:

      i. Comments supporting an intensive water quality sampling and analysis approach (with the goal of producing more accurate discharge-characterizing and pollutant concentration data) as the primary method of determining compliance with effluent limitations and receiving water limitations. Since this approach requires large amounts of high quality data to accurately quantify the characteristics of the discharges, it is referred to as the quantitative monitoring approach. Stakeholders supporting the quantitative approach generally also support the use of stringent NELs to evaluate compliance with this General Permit;

      ii. Comments supporting only visual observations as the primary method of determining compliance: These stakeholders generally assert that storm water sampling is an incomplete and not very cost effective means of determining water quality impacts on the receiving waters; and,

      iii. Comments supporting a combination of visual observations and cost-effective water quality sampling and analysis approach (sampling and analysis that would produce data indicating the presence of pollutants) to determine compliance (similar to the previous permit's approach). Since this approach uses more qualitative information to describe the quality and characteristics of the discharges, it is referred to as the qualitative monitoring approach.

      Within each of the three categories, there are various recommendations and rationales as to the exact monitoring frequencies, procedures and methods, required to implement the approach. Stakeholders in favor of the quantitative monitoring approach commented that it is the only reliable and meaningful

method of assuring that: (1) BMPs are effective in reducing or preventing pollutants in storm water discharge in compliance with BAT/BCT, and (2) the discharge is not causing or contributing to an exceedance of a water quality standards. The stakeholders state that visual observations are not effective in measuring pollutant concentrations nor is it effective in determining the presence of colorless and/or odorless pollutants. The stakeholders state that qualitative monitoring (and the use of indicator parameters) will not provide results useful for calculating pollutant loading nor will it accurately characterize the discharge.

Stakeholders in favor of requiring only visual observations state that sampling and analysis is unnecessary because (1) the previous permit did not include NELs so the usefulness of sampling and analysis data is limited, (2) a significant majority of Dischargers should be able to develop appropriate BMPs without sampling and analysis data, (3) most pollutant sources and pollutants can be detected and mitigated through visual observations, (4) the costs associated with quantitative monitoring are excessive and disproportionate to any benefits, (5) U.S. EPA's storm water regulations do not require sampling, (6) The 2008 MSGP relies heavily on visual observations and requires only a limited number of specific industries to conduct sampling and analysis, and (7) the majority of Dischargers are small businesses and do not have sufficient training or understanding to perform accurate sampling and analysis.

Stakeholders in favor of requiring both visual observations and a cost-effective qualitative monitoring program state that (1) both are within the means and understanding of most Dischargers, and (2) monitoring results are useful for evaluating a Discharger's compliance without unnecessarily increasing the burden on the Discharger and without subjecting Dischargers to non-technical enforcement actions.

The State Water Board finds that it is feasible for the majority of Dischargers to develop appropriate BMPs without having to perform large amounts of quantitative monitoring, which can be very costly. In the absence of implementing NELs, the State Water Board has determined that the infeasibility and costs associated with developing quantitative monitoring programs at each of thousands industrial facilities currently permitted would outweigh the limited benefits. The primary difficulty associated with requiring intensive quantitative monitoring lies with the cost and the difficulty of accurately sampling industrial storm water discharges.

Stakeholders that support quantitative monitoring believe the data is necessary to determine pollutant loading, concentration, or contribution to water quality violations. In order to derive data necessary to support those goals, however, the data must be of high quality, meaning it must be accurate, precise and have an intact chain of custody. Many industrial facilities do not have well-defined storm water conveyance systems for sample collection. Storm water frequently discharges from multiple locations through sheet flow into nearby streets and adjoining properties. Sample collection from a portion of the sheet flow is an inexact measurement since not all of the flow is sampled. Requiring every Discharger to construct well-defined storm water conveyances may cost

anywhere from thousands to hundreds of thousands of dollars per facility depending on the size and nature of each industrial facility. At many facilities, the construction of such conveyances may also violate local building codes, create safety hazards, cause flooding, or increase erosion. In addition, eliminating sheet flow at some facilities could result in increased pollutant concentrations.

The State Water Board has considered the complexity and costs associated with quantitative monitoring. Unlike continuous point source discharges (e.g., publicly owned treatment works), storm water discharges are variable in intensity and duration. The concentration of pollutants discharged at any one time is dependent on many complex variables. The largest concentration of pollutants would be expected to discharge earlier in the storm event and taper off as discharges continue. Therefore, effective quantitative monitoring of storm water discharges would require that storm water discharges be collected and sampled until most or all of the pollutants have been discharged. Multiple samples would need to be collected over many hours. To determine the pollutant mass loading, the storm water discharge flow must also be measured each time a sample is collected.

For a quantitative monitoring approach to yield useful pollutant loading information, the installation of automatic sampling devices and flow meters at each discharge location would usually be necessary. In addition, qualified individuals would be needed to conduct the monitoring procedures, and to handle and maintain flow meters and automatic samplers are needed. A significant majority of storm water Dischargers under this General Permit do not possess the skills to manage such an effort. Dischargers will bear the cost of employing and/or training on-site staff to do this work, or the cost of contracting with environmental consultants and acquiring the required flow meters and automatic samplers. The cost to Dischargers to conduct quantitative monitoring varies depending on the number of outfalls, the number of storms, the length of each storm, the amount of staff training, and other variables.

To address these concerns, this General Permit includes a number of new items that bridge the gap between the previous permit's qualitative monitoring and the quantitative approach recommended by many commenters. This General Permit includes a requirement for all Dischargers to designate a QISP when they enter Level 1 status due to NAL exceedances. The QISP is required to be trained to: (1) more accurately identify discharge locations representative of the facility storm water discharge (2) select and implement appropriate sampling procedures (3) evaluate and develop additional BMPs to reduce or prevent pollutants in the industrial storm water discharges.

Dischargers that fail to develop and implement an adequate Monitoring Implementation Plan that includes both visual observations and sampling and analysis, are in violation of this General Permit. Dischargers that fail to comply with Level 1 status and Level 2 status ERA requirements, triggered by NAL exceedances, are in violation of this General Permit.

Water Code section 13383.5 requires that the State Water Board include (1) standardized methods for collection of storm water samples, (2) standardized methods for analysis of storm water samples, (3) a requirement that every sample analysis be completed by a State certified laboratory or in the field in accordance with Quality Assurance and Quality Control (QA/QC) protocols, (4) a standardized reporting format, (5) standardized sampling and analysis programs for QA/QC, and (6) minimum detection limits. The monitoring requirements in this General Permit (Section XI), as supplemented by SMARTS, address these requirements.

Under the previous permit, many Dischargers did not developed adequate sample collection and handling procedures, decreasing the quality of analytical results. In addition, Dischargers often selected inappropriate test methods, method detection limits, or reporting units. This General Permit requires all Dischargers to identify discharge locations that are representative of industrial storm water discharges and develop and implement reasonable sampling procedures to ensure that samples are not mishandled or contaminated.

It is infeasible for the State Water Board to provide a single comprehensive set of sample collection and handling procedures/instructions due to the wide variation in storm water conveyance and collection systems in use at facilities around the state. As an alternative, Attachment H of this General Permit provides minimum storm water sample collection and handling instructions that pertain to all facilities. Dischargers are required to develop facility-specific sample collection and handling procedures based upon these minimum requirements. Table 2 in this General Permit provides the minimum test methods that shall be used for a variety of common pollutants. Dischargers must be aware that use of more sensitive test methods (e.g., U.S. EPA Method 1631 for Mercury) may be necessary if they discharge to an impaired water body or are otherwise required to do so by the Regional Water Board. This General Permit allows Dischargers to propose an analytical test method for any parameter or pollutant that does not have an analytical test method specified in Table 2 or in SMARTS. Dischargers may also propose analytical test methods with substantially similar or more stringent method detection limits than existing approved analytical test methods. Upon approval, SMARTS will be updated over time to add additional acceptable analytical test methods.

The previous permit allowed Dischargers to reduce sampling analysis requirements for substantially similar drainage areas by either (1) combining samples for an unspecified maximum number of substantially similar drainage areas, or (2) sampling a reduced number of substantially similar drainage areas. The State Water Board provided this procedure to reduce analytical costs. The complexity associated with determining substantially similar drainage areas has led Dischargers to produce various, and sometimes questionable, analytical schemes. In addition, the previous permit did not establish a maximum number of samples that could be combined.

To standardize sample collection and analysis as required by Water Code section 13383.5, while continuing to offer a reduced analytic cost option, these

requirements have been revised. Section XI.B.4 of this General Permit requires Dischargers to collect samples from all discharge locations regardless of whether the discharges are substantially similar or not. Dischargers may analyze each sample collected, or may analyze a combined sample consisting of equal volumes, collected from as many as four (4) substantially similar discharge locations. A minimum of one combined sample shall be analyzed for every one (1) to four (4) discharge locations, and the samples shall be combined in the lab in accordance with Section XI.C.5 of this General Permit.

Representative sampling is only allowed for sheet flow discharges or discharges from drainage areas with multiple discharge locations. Dischargers shall select the appropriate location(s) to be sampled and intervals necessary to obtain samples representative of storm water associated with industrial activities generated within the corresponding drainage area. Dischargers are not required to sample discharge locations that have no exposure of industrial activities or materials as defined in Section XVII of this General Permit within the corresponding drainage area. However, Dischargers are required to conduct the monthly visual observations regardless of the selected locations to be sampled.

This General Permit defines a QSE as a precipitation event that produces a discharge from any drainage area that is preceded by 48 consecutive hours without a discharge from any drainage area. The previous permit did not include a QSE definition; instead, it utilized a different approach to defining the storm events that were required to be sampled. Under the previous permit, eligible storm events were storm events that occurred after three consecutive working days of dry weather. The three consecutive working days of dry weather definition in the previous permit led Dischargers to miss many opportunities to sample. Some Dischargers were unable to collect samples from two storm events in certain years under the previous definition. To resolve this difficulty, this General Permit increases the sampling requirements to four (4) QSEs per year, while decreasing the number of days without a discharge, resulting in additional opportunities for Dischargers to sample. Additionally, by eliminating the previous permit's reference to "dry weather," this General Permit allows some precipitation to occur between QSEs so long as there is no discharge from any drainage area. This change will result in more QSE sampling opportunities.

To improve clarity and consistency, the definitions contained in other storm water permits were considered with the goal of developing a standard definition for 'dry weather' for this General Permit. The 2008 MSGP sets a "measurable storm event" as one that produces at least 0.1 inches of precipitation and results in an actual discharge after 72 hours (three days) of dry weather. The State of Washington defines a "qualifying storm event" as a storm with at least 0.1 inches of precipitation preceded by at least 24 hours of no measurable precipitation, mirroring the definition found in the previous MSGP (2000 version). The State of Oregon requires that samples be taken in the first 12 hours of discharge and no less than 14 days apart. Review of other permits concludes that there is not a single commonly used approach to triggering sampling in industrial general permits. Therefore an enforceable sampling trigger is included in this General

permit that requires Dischargers to sample four storm events within each reporting year.

b. Effluent Water Quality Sampling and Analysis Parameters

Dischargers are required to sample and analyze their effluent for certain parameters. "Parameter" is a term used in laboratory analysis circles to represent a distinct, reportable measure of a particular type. For example, ammonia, hexavalent chromium, total nitrogen and chemical oxygen demand are all parameters that a laboratory can analyze storm water effluent for and report a quantity back. A parameter is also an indicator of pollution. In this General Permit, pH, total suspended solids and chemical oxygen demand are examples of indicator parameters. They are not direct measures of a water quality problem or condition of pollution but can be used to indicate a problem or condition of pollution. Indicator parameters can also be used to indicate practices and/or the presence of materials at a facility to bring forth information for compliance evaluation processes, like annual report review and inspection. For example, chemical oxygen demand concentrations can indicate the presence of dissolved organic compounds, like residual food from collected recycling materials.

Minimum parameter-specific monitoring is required for Dischargers, regardless of whether additional facility-specific parameters are selected. This General Permit requires some parameters to be analyzed and reported for the duration of permit coverage to develop comparable sampling data over time and over many storm events and to demonstrate compliance. The Regional Water Boards may use such data to evaluate individual facility compliance and assess the differences between various industries. Accordingly, the parameters selected correspond to a broad range of industrial facilities, are inexpensive to sample and analyze, and have sampling and analysis methods which are easy to understand and implement. Some analytical methods for field measurements of some parameters, such as pH, may be performed using relatively inexpensive field instruments and provides an immediate alert to possible pollutant sources.

The following three selected minimum parameters are considered indicator parameters, regardless of facility type. These parameters typically provide indication and/or the correlation of whether other pollutants are present in storm water discharge. These parameters were selected for the following reasons:

i. pH is a numeric measurement of the hydrogen-ion concentration. Many industrial facilities handle materials that can affect pH. A sample is considered to have a neutral pH if it has a value of 7. At values less than 7, water is considered acidic; above 7 it is considered alkaline or basic. Pure rain water in California typically has a pH value of approximately 7.

ii. Total Suspended Solids (TSS) is an indicator of the un-dissolved solids that are present in storm water discharge. Sources of TSS include sediment from erosion, and dirt from impervious (i.e., paved) areas. Many pollutants adhere to sediment particles; therefore, reducing sediment will reduce the amount of these pollutants in storm water discharge.

iii. Oil and Grease (O&G) is a measure of the amount of O&G present in storm water discharge. At very low concentrations, O&G can cause sheen on the surface of water. O&G can adversely affect aquatic life, create unsightly floating material, and make water undrinkable. Sources of O&G include, but are not limited to, maintenance shops, vehicles, machines and roadways.

The previous permit allowed Dischargers to analyze samples for either O&G or Total Organic Carbon (TOC). This General Permit requires all Dischargers analyze samples for O&G since almost all Dischargers with outdoor activities operate equipment and vehicles can potentially generate insoluble oils and greases. Dischargers with water soluble-based organic oils may be required to also test for TOC. The TOC and O&G tests are not synonymous, duplicative or interchangeable.

This General Permit removes the requirement to analyze for specific conductance as part of the minimum analytic parameters. Specific conductance is not required by U.S. EPA for any industry type. Additionally, stakeholder comments indicate that there are many non-industrial sources that may cause high specific conductance and interfere with the efficacy of the test. For example, salty air deposition that occurs at facilities in coastal areas may raise the specific conductance in water over 500 micro-ohms per centimeter (µhos/cm). Dischargers are not prevented from performing a specific conductance test as a screening tool if it is useful to detect a particular pollutant of concern as required (e.g. salinity).

This General Permit requires Dischargers subject to Subchapter N ELGs for pH to analyze for pH using approved test methods in accordance with 40 Code of Federal Regulations part 136. These federal regulations specify that analysis of pH must take place within 15 minutes of sample collection. All other Dischargers may screen for pH using wide range litmus pH paper or other equivalent pH test kits within 15 minutes of sample collection. If in any reporting year a Discharger has two or more pH results outside of the range of 6.0 – 9.0 pH units, that Discharger is required to comply with the approved test methods in 40 Code of Federal Regulations part 136 in subsequent reporting years.

For almost all Dischargers, obtaining laboratory analysis within 15 minutes is logistically impossible. For many Dischargers, maintaining a calibrated pH meter is difficult, labor intensive, and error prone. Screening for pH will limit the number of additional Dischargers required to comply with 40 Code of Federal Regulations part 136 methods to those that have pH measures outside the range of 6.0-9.0 pH units. The use of wide range litmus pH paper or other equivalent pH test kits is not as accurate as a calibrated pH meter, however litmus paper is allowed in the 2008 MSGP, and when used properly it can provide an accurate screening measure to determine if further more-accurate pH sampling is necessary to determine compliance.

Review of available monitoring data shows that storm water discharges from most types of industrial facilities comply with the pH range of 6.0 to 9.0 pH units. There are specific types of industries, like cement or concrete manufacturers that

have shown a trend of higher pH values very close to 9.0 pH units. Rather than require all industries as a whole to monitor with the more costly 40 Code of Federal Regulations part 136 methods, this General Permit establishes a triggering mechanism for these more advanced pH test methods. The Regional Water Boards retain their authority to require more accurate test methods. Once a Discharger triggers the requirement to use the more accurate testing methods in 40 Code of Federal Regulations part 136, the Discharger may not revert back to screening for pH for the duration of coverage under this General Permit.

In the early 1990s, U.S. EPA, through its group application program, evaluated nationwide monitoring data and developed the listed parameters and SIC associations shown in Table 1 of this General Permit. The 2008 MSGP requires that Dischargers analyze storm water effluent for the listed parameters under certain conditions. In addition to the parameters in Table 1 of this General Permit, Dischargers are required to select additional facility-specific analytical parameters to be monitored, based upon the types of materials that are both exposed to and mobilized by contact with storm water. Dischargers must, at a minimum, understand how to identify industrial materials that are handled outdoors and which of those materials can easily dissolve or be otherwise transported via storm water.

The Regional Water Boards have the authority to revise the monitoring requirements for an individual facility or group of facilities based on site-specific factors including geographic location, industry type, and potential to pollute. For example, the Los Angeles Regional Water Board required all dismantlers (SIC Code 5015) within their jurisdiction to monitor for copper and zinc instead of aluminum and iron during the term of the previous permit. SMARTS will be programmed to incorporate any monitoring revisions required by the Regional Water Boards. Dischargers will receive email notification of the monitoring requirement revision and their SMARTS analytical reporting input screen will display the corresponding revisions. Dischargers may add, but not otherwise modify, the sampling parameters on their SMARTS input screen.

Dischargers are also required to identify pollutants that may cause or contribute to an existing exceedance of any applicable water quality standards for the receiving water. This General Permit requires Dischargers to control its discharge as necessary to meet the receiving water limitations, and to select additional monitoring parameters that are representative of industrial materials handled at the facility (regardless of the degree of storm water contact or relative mobility) that may be related to pollutants causing a water body to be impaired.

4. Methods and Exceptions

   a. Storm Water Discharge Locations

      Dischargers are required to visually observe and collect samples of industrial storm water discharges from each drainage area at all discharge locations. These samples must be representative of the storm water discharge leaving each drainage area. This is a change from the previous permit which allowed a

Discharger to reduce the number of discharge locations sampled if two or more discharge locations were substantially similar.

Dischargers are required to identify, when practicable, alternate discharge locations if: (1) the facility's industrial drainage areas are affected by storm water run-on from surrounding areas that cannot be controlled, or (2) discharge locations are difficult to observe or sample (e.g. submerged discharge outlets, dangerous discharge location accessibility).

b. Representative Sampling Reduction

Some stakeholders have indicated that there are unique circumstances where sampling a subset of representative discharge locations fully characterizes the full set of storm water discharges. Stakeholders provided examples related to drainage areas with multiple discharge locations where sampling only a subset of these discharge locations produces results that are representative of the drainage areas' storm water discharges. In such situations, this General Permit allows Dischargers to reduce the number of discharge locations. For each drainage area with multiple discharge locations (e.g. roofs with multiple downspouts, loading/unloading areas with multiple storm drain inlets), the Discharger may reduce the number of discharge locations to be sampled if the conditions in Section XI.C.4 of this General Permit are met.

c. Qualified Combined Samples

Dischargers may combine samples from up to four (4) discharge locations if the industrial activities within each drainage area and each drainage area's physical characteristics (i.e. grade, surface materials) are substantially similar.

Dischargers are required to provide documentation in the Monitoring Implementation Plan supporting that the above conditions have been evaluated and fulfilled. A Discharger may combine samples from more than four (4) discharge locations only with approval from the appropriate Regional Water Board.

d. Sample Collection and Visual Observation Exceptions

Dischargers are not required to collect samples or conduct visual observations during dangerous weather conditions such as flooding or electrical storms, or outside of scheduled facility operating hours. A Discharger is not precluded from conducting sample collection activities or visual observations outside of scheduled facility operating hours.

In the event that a Discharger is unable to collect the required samples or conduct visual observations due to the above exceptions, the Discharger must include an explanation of the conditions obstructing safe monitoring in its Annual Report. If access to a discharge location is dangerous on a routine basis, a Discharger must choose an alternative discharge location in accordance with General Permit Section XI.C.3.

e. Sampling Frequency Reduction

Facilities that do not have NAL exceedances for four (4) consecutive QSEs are unlikely to pose a significant threat to water quality. If the storm water from these facilities is also in full compliance with this General Permit, the Discharger is eligible for a reduction in sampling frequency. The Sampling Frequency Reduction allows a Discharger to decrease its monitoring from four (4) samples within each reporting year to one (1) QSE within the first half of each reporting year (July 1 to December 31) and one (1) QSE within the second half of each reporting year (January 1 to June 30). If a Discharger has a subsequent NAL exceedance after the Sampling Frequency Reduction, it must comply with the original sampling requirements of this General Permit. Only Dischargers that have baseline status or that have satisfied the Level 1 requirements are eligible for this sampling and analysis reduction.

A Discharger requesting to reduce its sampling frequency shall certify and submit a Sampling Frequency Reduction certification via SMARTS. The Sampling Frequency Reduction certification shall include documentation that the General Permit conditions for the Sampling Frequency Reduction have been satisfied.

Dischargers participating in a Compliance Group and certifying a Sampling Frequency Reduction are only required to collect and analyze storm water samples from one (1) QSE within each reporting year. These Dischargers must receive year-round compliance assistance from their Compliance Group Leader and must comply with all requirements of this General Permit.

5. Facilities Subject to Federal Storm Water Effluent Limitation Guidelines (ELGs)

Federal regulations at Subchapter N establish ELGs for industrial storm water discharges from facilities in eleven industrial sectors. For these facilities, compliance with the ELGs constitutes compliance with the technology standard of BPT, BAT, BCT, or New Source Performance Standards provided in the ELG for the specified pollutants, and compliance with the technology-based requirements in this General Permit for the specified pollutant.

## K. Exceedance Response Actions (ERAs)

1. General

The previous permit did not incorporate the benchmarks from any of the MSGPs or NALs for Dischargers to evaluate sampling results. Unlike the requirements for industrial storm water discharges that cause or contribute to an exceedance of a water quality standards, the previous permit did not provide definitions, procedures or guidelines to assess sampling results. Many Regional Water Boards have formally or informally notified Dischargers that exceedances of the MSGP benchmarks should be used to determine whether additional BMPs are necessary. However, there was considerable confusion as to the extent to which a Discharger would be expected to implement actions in response to exceedances of these values, and the timelines that had to be met to prevent an enforcement action. The lack of specificity with regards to what constituted an exceedance, and what actions

are required in response to an exceedance, have been identified as a problem by the Water Boards, industry and environmental stakeholders.

This General Permit contains two (2) types of NALs. Annual NALs function similarly to, and are based upon, the values provided in the 2008 MSGP. Instantaneous maximum NALs target hot spots or episodic discharges of pollutants and are established based on California industrial storm water discharge monitoring data. When a Discharger exceeds an NAL it is required to perform ERAs. The ERAs are divided into two levels of responses and can generally be differentiated by the number of years in which a facility's discharge exceeds an NAL trigger. These two levels are explained further in Section XII of this General Permit. This ERA process provides Dischargers with an adaptive management-based process to develop and implement cost-effective BMPs that are protective of water quality and compliant with this General Permit. This process is also designed to provide Dischargers with a more defined pathway towards full compliance.

The ERA requirements in this General Permit were developed using best professional judgment and Water Board experience with the shortcomings of the previous permit's compliance procedures. Public comments received during State Water Board hearings on the 2002, 2005, 2011, 2012 and 2013 draft permits, and NPDES industrial storm water discharge permits from other states with well-defined ERA requirements were also considered by the State Water Board.

The State Water Board presumes that one single NAL exceedance for a particular parameter is not a clear indicator that a facility's discharge is out of compliance with the technology-based effluent limitations or receiving water limitations. This presumption recognizes the highly variable nature of storm water discharge and the limited value of a single quarterly grab sample to represent the quality of a facility's storm water discharge for an entire storm event and all other non-sampled storm events. With this presumption, the State Water Board is addressing costly monitoring requirements that do not bring forth valuable compliance and/or water quality information.

2. NALs and NAL Exceedances

   a. This General Permit contains two types of NAL exceedances as follows:

      Annual NAL exceedance - the Discharger is required to calculate the average annual concentration for each parameter using the results of all sampling and analytical results for the entire facility for the reporting year (i.e., all "effluent" data), and compare the annual average concentration to the corresponding Annual NAL values in Table 2 of this General Permit. An annual NAL exceedance occurs when the annual average of all the sampling results for a parameter taken within a reporting year exceeds the annual NAL value for that parameter listed in Table 2 of this General Permit.

      For the purposes of calculating the annual average concentration for each parameter, this General Permit considers any sampling result that are a "non-detect" or less than the method detection limit as a zero (0) value. The reason to use zero (0) values instead of the detected but not quantifiable

value (minimum level or reporting limit) is that these values are very low and are unlikely to contribute to an NAL exceedance. There are statistical methods to include low values when calculations are for numeric criteria and limitations, however, the NALs in this General Permit are approximate values used to provide feedback to the Discharger on site performance, and are not numeric criteria or limitations. Therefore, it is not necessary to include these insignificant values in the calculations for the NALs. For Dischargers using composite sampling or flow measurement in accordance with standard practices, the average concentrations shall be calculated in accordance with the U.S. EPA Guidance Manual for the Monitoring and Reporting Requirements of the NPDES Multi-Sector Storm Water General Permit.[14]

i. Instantaneous maximum NAL exceedance - the Discharger is required to compare all sampling and analytical results from each distinct sample (individual or combined) to the corresponding instantaneous maximum NAL values in Table 2 of this General Permit. An instantaneous maximum NAL exceedance occurs when two or more analytical results from samples taken for any parameter within a reporting year exceed the instantaneous maximum NAL value (for TSS and O&G), or are outside of the instantaneous maximum NAL range (for pH).

b. Instantaneous maximum NAL analysis

In its June 19, 2006 report, the Blue Ribbon Panel of Experts (Panel) made several specific recommendations for how to set numeric limitations in future industrial storm water general permit(s). For sites not subject to TMDLs, the Panel suggested that the numeric values be based upon industry types or categories, with the recognition that each industry has its own specific water quality issues and financial viability. Furthermore, the Panel concluded:

> To establish Numeric Limits for industrial sites requires a reliable database, describing current emissions by industry types or categories, and performance of existing BMPs. The current industrial permit has not produced such a database for most industrial categories because of inconsistencies in monitoring or compliance with monitoring requirements. The Board needs to reexamine the existing data sources, collect new data as required and for additional water quality parameters (the current permit requires only pH, conductivity, total suspended solids, and either total organic carbon or oil and grease) to establish practical and achievable Numeric Limits.

The Panel suggested an alternative method that would allow the use of the existing Water Board dataset to establish action levels, referred to as the “ranked percentile” method. The Panel recommended:

[14] U.S. EPA. NPDES Storm Water Sampling Guidance Document. Web. July 1992. <http://www.epa.gov/npdes/pubs/owm0093.pdf>. [as of February 4, 2014].

> The ranked percentile approach (also a statistical approach) relies on the average cumulative distribution of water quality data for each constituent developed from many water quality samples taken for many events at many locations. The Action Level would then be defined as those concentrations that consistently exceed some percentage of all water quality events (i.e. the 90$^{th}$ percentile). In this case, action would be required at those locations that were consistently in the outer limit (i.e. uppermost 10th percentile) of the distribution of observed effluent qualities from urban runoff.

After performing various data analysis exercises with the Water Board dataset, State Water Board staff concluded that the Water Board dataset is not adequate to calculate instantaneous NAL values using the Panel's recommended method for all of parameters that have annual NAL values based on the U.S. EPA benchmarks. Additionally, public comments on the January 2011 draft of this General Permit suggest that it is problematic to calculate NAL values based on the existing data. Therefore, the Water Board dataset was not used to calculate instantaneous NAL values for all parameters.

However, since all Dischargers regulated under the previous permit were required to sample for TSS and O&G/TOC, State Water Board staff found that the existing dataset for these parameters is of sufficient quality to calculate instantaneous NAL values. State Water Board staff also found that this data was less prone to what appear to be data input errors. The final dataset used to calculate the instantaneous NALs in this General Permit had outlier values that were eliminated from the dataset by using approved test method detection limits ranges. The methods and corresponding method detection limit ranges used to screen outliers are as follows:

- O&G - EPA 413.1 Applicable Range: 5-1,000 mg/L
- O&G - EPA 1664 Applicable Range: 5-1,000 mg/L
- TSS - EPA 160.2 Applicable Range: 4-20,000 mg/L

The intent of the instantaneous maximum NAL is to identify specific drainage areas of concern or episodic sources of pollution in industrial storm water that may indicate inadequate storm water controls and/or water quality impacts. In the effort to add instantaneous NAL exceedances to the ERA process, the State Water Board explored different options for the development of an appropriate value (i.e. percentile approach, benchmarks times a multiplier, confidence intervals). The California Stormwater Quality Association's comments on the previous draft permit included a proposed method for calculating NAL values using a percentile approach. The State Water Board researched and evaluated this methodology and determined it is the most appropriate way to directly compare available electronic sampling data from Dischargers regulated under the previous permit. This percentile approach was used to establish the instantaneous maximum NALs in this General Permit, for discharges to directly compare with sampling results and identify drainage areas of water quality concern.

The percentile approach is a non-parametric approach identified in many statistical textbooks for determining highly suspect values. Highly suspect values are defined as values that exceed the limits of the outer fences of a box plot. Upper limits of the outer fence are calculated by adding three times the inter-quartile range (25th to 75th percentiles) to the upper-end of the inter-quartile range (the 75th percentile). The California Stormwater Quality Association calculated an NAL value of 401 mg/L for TSS using the percentile approach using the Water Board dataset. The State Water Board performed the same analysis with the same Water Board dataset and calculated a slightly different value of 396 mg/L; therefore, the instantaneous maximum NAL value for TSS of 400 mg/L was established. Appling the percentile approach to the existing O&G data results in the instantaneous maximum NAL value for O&G of 25 mg/L.

The State Water Board compared existing sampling data to the instantaneous maximum NAL values and concluded that seven (7) percent of the total samples exceeded the highly suspected value for TSS and 7.8 percent of the total samples exceeded the highly suspected value for O&G. These results suggest that the instantaneous maximum NAL values are adequate to identify drainage areas of concern statewide since they are not regularly exceeded. Using best professional judgment, the State Water Board concludes that an exceedance of these values twice within a reporting year is unlikely to be the result of storm event variability or random BMP implementation problems, and the use of the percentile approach is therefore appropriate.

Due to issues with the ranges of concentrations and the logarithmic nature of pH, statistical methods cannot be applied to pH in the same ways as other parameters. Review of storm water sampling data by the State Water Board and other stakeholders has shown that pH is not typically a parameter of concern for most industrial facilities. Accordingly, a range of pH limits established in Regional Water Board Basin Plans is implemented in this General Permit for the instantaneous maximum NAL values. Most Basin Plans set a water quality objective of 6.0 - 9.0 pH units for water bodies, an exceedance outside the range of 6.0 - 9.0 pH units is consistent with the water quality concerns for pH among Regional Water Boards. An industrial facility with proper BMP implementation is expected to have industrial storm water discharges within the range of 6.0 - 9.0 pH units.

High concentrations of TSS and O&G, or pH values outside the range of 6.0 – 9.0 pH units, in a discharge may be an indicator of potential BMP implementation or receiving water quality concerns with other pollutants with parameters that do not have an instantaneous maximum NAL value. The State Water Board may consider instantaneous maximum NAL values for other parameters in a subsequent reissuance of this General Permit, based on data collected during this General Permit term.

The percentile approach is considered by many stakeholders to be the best method to evaluate BMP performance and general effluent quality in a community or population where the vast majority of the industrial facilities are implementing sufficient pollutant control measures. The Water Board's current

dataset does not provide a way of evaluating actual BMP implementation at each facility when analyzing the data; therefore the monitoring information reported during the previous permit term cannot be linked to compliance with technology-based standards. The State Water Board intends to use data collected during this General Permit term to evaluate the percentile approach, improve the quality of collected data for other parameters, and further develop an understanding of how reported data relates to implemented BMP-control technologies.

Under this General Permit, a Discharger enters Level 1 status and must fulfill the Level 1 status ERA requirements following its first occurrence of any NAL exceedance. Level 2 status ERA requirements follow the second occurrence of an NAL exceedance for the same parameter in a subsequent reporting year. This ERA process provides Dischargers with an adaptive management-based process to develop and implement cost-effective BMPs that are protective of water quality and compliant with this General Permit. This General Permit's ERA process is designed to have a well-defined compliance end-point. It is not a violation of this General Permit to exceed the NAL values; it is a violation of the permit, however, to fail to comply with the Level 1 status and Level 2 status ERA requirements in the event of NAL exceedances.

The State Water Board acknowledges that storm water discharge concentrations are often highly variable and dependent upon numerous circumstances such as storm size, the time elapsed since the last storm, seasonal activities, and the time of sample collection. Since there are potential enforcement consequences for failure to comply with this General Permit's ERA process, the State Water Board's intention is to use NAL exceedances to solely require Dischargers with recurring annual NAL exceedances or drainage areas that produce recurring instantaneous maximum NAL exceedances to be subject to the follow-up ERA requirements.

If NALs exceedances do not occur, the State Water Board generally expects that the Discharger has implemented sufficient BMPs to control storm water pollution. When NAL exceedances do occur, however, the potential that the Discharger may not have implemented appropriate and/or sufficient BMPs increases, and the Discharger is required to implement escalating levels of ERAs. If NAL exceedances occur, this General Permit requires Dischargers to evaluate and potentially install additional BMPs, or re-evaluate and improve existing BMPs to be in compliance with this General Permit.

3. Baseline Status

At the beginning of a Discharger's NOI coverage under this General Permit, the Discharger has Baseline status. A Discharger demonstrating compliance with all NALs will remain at Baseline status and is not required to complete Level 1 status and Level 2 status ERA requirements.

If a Discharger has returned to Baseline status (from Level 2 status) and additional NAL exceedances occur, the Discharger goes into Level 1 status, then potentially

Level 2 status. Dischargers do not go directly into Level 2 status from Baseline status.

4. Level 1 Status

   Regardless of when an NAL exceedance occurs during Baseline status, a Discharger's status changes from Baseline status to Level 1 status on July 1 of the subsequent reporting year. By October 1 following the commencement of Level 1 status, the Discharger is required to appoint a QISP to assist with the completion of the Level 1 Evaluation. The Level 1 Evaluation must include a review of the facility's SWPPP for compliance with the effluent and receiving water limitations of this General Permit, an evaluation of the industrial pollutant sources at the facility that are or may be related to the NAL exceedance(s), and identification of any additional BMPs that will eliminate future exceedances. When conducting the Level 1 Evaluation, a Discharger must ensure that all potential pollutant sources that could be causing or contributing to the NAL exceedance(s) are fully characterized, that the current BMPs are adequately described, that employees responsible for implementing BMPs are appropriately trained, and that internal procedures are in place to track that BMPs are being implemented as designed in the SWPPP. A Discharger is additionally required to evaluate the need for additional BMPs. Level 1 ERAs are designed to provide the Discharger the opportunity to improve existing BMPs or add additional BMPs to comply with the requirements of this General Permit.

   By January 1 following commencement of Level 1 status, a Discharger is required to certify and submit via SMARTS a Level 1 ERA Report prepared by a QISP. The Level 1 ERA Report must contain a summary of the Level 1 Evaluation, all new or revised BMPs added to the SWPPP.

   In most cases, the State Water Board believes that Level 1 status BMPs will be operationally related rather than structural and, therefore can be implemented without delay. Recognizing that a Discharger should not be penalized for sampling results obtained before implementing BMPs, sampling results for parameters and their corresponding drainage areas that caused the NAL exceedance up to October 1 or the date the BMPs were implemented, whichever is sooner, will not be used for calculating NAL exceedances. Although this General Permit allows up to January 1 to implement Level 1 status BMPs, the State Board has chosen an interim date of October 1 to encourage more timely Level 1 BMP implementation. Dischargers who implement Level 1 BMPs after October 1 may risk obtaining subsequent sampling results that may cause them to go into Level 2 status.

5. Level 2 Status

   Level 2 ERAs are required during any subsequent reporting year in which the same parameter(s) has an NAL exceedance (annual average or instantaneous maximum), if this occurs, a Discharger's status changes from Level 1 status to Level 2 status on July 1 of the subsequent reporting year. Dischargers with Level 2 status must further evaluate BMP options for their facility. Dischargers may have to implement additional BMPs, which may include physical, structural, or mechanical devices that

are intended to prevent pollutants from contacting storm water. Examples of such controls include, but are not limited to:

- Enclosing and/or covering outdoor pollutant sources within a building or under a roofed or tarped outdoor area.

- Physically separating the pollutant sources from contact with run-on of uncontaminated storm water.

- Devices that direct contaminated storm water to appropriate treatment BMPs (e.g., discharge to sanitary sewer as allowed by local sewer authority).

- Treatment BMPs including, but not limited to, detention ponds, oil/water separators, sand filters, sediment removal controls, and constructed wetlands.

Dischargers may select the most cost-effective BMPs to control the discharge of pollutants in industrial storm water discharges. Where appropriate, BMPs can be designed and targeted for various pollutant sources (e.g., providing overhead coverage for one potential pollutant while discharging to a detention basin for another source may be the most cost-effective solution).

a. Level 2 ERA Action Plans

The State Water Board acknowledges that there may be circumstances that make it difficult, if not impossible, for a Discharger to immediately implement additional BMPs. For example, it may take time to get a contract for construction in place, obtain necessary building permits, and design and construct the BMPs. Dischargers may also suspect that pollutants are from a non-industrial or natural background source and need time to study their site. A Discharger is required to certify and submit an Action Plan prepared by a QISP via SMARTS by January 1 following the reporting year in which the NAL exceedance that resulted in the Discharger entering Level 2 occurred. The Level 2 ERA Action Plan requires a Discharger to propose actions necessary to complete the Level 2 ERA Technical Report, the demonstrations the Discharger has selected, and propose a time frame for implementation.

If a Discharger changes the QISP assisting with the Level 2 ERA requirements this General Permit requires the Discharger to update the QISP information via SMARTS. Current information on individuals assisting Dischargers with compliance of this General Permit provides the Water Boards with the necessary contact information if there are questions on the submitted documents, and for possible verification of a QISP's certification.

Dischargers are required to address each Level 2 NAL exceedance in an Action Plan. The State Water Board recognizes that Dischargers with Level 2 status may have multiple parameters or facility areas that have Level 2 NAL exceedances and the timing of the exceedances may make it very difficult to address all Level 2 NAL exceedances in one Action Plan. When Level 2 ERA exceedances occur in subsequent reporting years, after an Action Plan is

certified and submitted, a Discharger will need to develop an Action Plan for this new Level 2 NAL exceedance. This General Permit defines new Level 2 NAL exceedances as an exceedance for a new parameter in any drainage area at the facility, or an exceedance for the same parameter being addressed in an existing Action Plan, but where the exceedance occurred in a different drainage area than identified in the existing Action Plan.

b. Level 2 ERA Technical Reports

The Level 2 ERA Technical Report contains three different options that require a Discharger to submit demonstrations showing the cause of the NAL exceedance(s). This General Permit requires a Discharger to appoint a QISP to prepare the Level 2 ERA Technical Reports. The State Water Board acknowledges that there may be cases where a combination of the demonstrations may be appropriate; therefore a Discharger may combine any of the following three demonstration options in their Level 2 ERA Technical Report when appropriate. A Discharger is only required to annually update its Level 2 ERA Technical Report when necessary as defined in Section XII.D.3.c of this General Permit, and is not required to annually re-certify and re-submit the entire Level 2 ERA Technical Report. If there are no changes prompting an update of the Level 2 ERA Technical Report, as specified in Section XII.D.3.c of this General Permit, the Discharger will provide this certification in the Annual Report that there have been no changes warranting re-submittal of the Level 2 ERA Technical Report.

i. Industrial Activity BMPs Demonstration

The Industrial Activity BMPs Demonstration is for the following:

- Dischargers who decided to implement additional BMPs that are expected to eliminate future NAL exceedance(s) and that have been implemented in order to achieve compliance with the technology-based effluent limitations of this General Permit, and

- Dischargers who decided to implement additional BMPs that may not eliminate future NAL exceedance(s) and that have been implemented in order to achieve compliance with the technology-based effluent limitations of this General Permit.

When preparing the Industrial Activity BMPs Demonstration, the QISP shall identify and evaluate all individual pollutant source(s) associated with industrial activity that are or may be related to an NAL exceedance and all designed, information on the drainage areas associated with the Level 2 NAL exceedances, and installed BMPs that are implemented to reduce or prevent pollutants in industrial storm water discharges in compliance with this General Permit.

If an Industrial Activity BMPs Demonstration is submitted as the Level 2 ERA Technical Report and the Discharger is able to show reductions in pollutant concentrations below the NALs for four (4) subsequent consecutive QSEs, the Discharger returns to Baseline Status. A Discharger that submits an Industrial Activity BMPs Demonstration but has not installed additional BMPs that are expected to eliminate future NAL exceedance(s) will remain with Level 2 status but is not subject to additional ERAs unless directed by the Regional Water Board.

ii. Non-Industrial Pollutant Source Demonstration

A Non-Industrial Pollutant Source Demonstration is for a Discharger to demonstrate that the pollutants causing the NAL exceedances are not related to industrial activities conducted at the facility, and additional BMPs at the facility will not contribute to the reduction of pollutant concentrations.

Dischargers including the Non-Industrial Pollutant Demonstration in their Level 2 ERA Technical Report shall have a QISP determine that the sources of non-industrial pollutants in storm water discharges are not from industrial activity or natural background sources within the facility.

Sources of non-industrial pollutants that are discharged separately and are not comingled with storm water associated with industrial activity are not considered subject to this General Permit's requirements. When pollutants from non-industrial sources are comingled with storm water associated with industrial activity, the Discharger is responsible for all the pollutants in the combined discharge unless the technical report clearly demonstrates that the NAL exceedances due to the combined discharge are solely attributable to the non-industrial sources. The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance. In most cases, the Non-Industrial Pollutant Source Demonstration will contain sampling data and analysis distinguishing the pollutants from non-industrial sources from the pollutants generated by industrial activity.

Once the Level 2 ERA Technical Report, including this demonstration is certified and submitted via SMARTS, the Discharger has satisfied all the requirements necessary for that pollutant for ERA purposes. A Discharger that submits a Non-Industrial Pollutant Demonstration remains with Level 2 status but is not subject to additional ERAs unless directed by the Regional Water Board.

iii. Natural Background Pollutant Source Demonstration

The benchmark monitoring schedule in section 6.2.1.2 of the 2008 MSGP allows a Discharger to determine that the exceedance of the benchmark is attributable solely to the presence of that pollutant in the natural background. A Discharger making this determination is not required to perform corrective

action or additional benchmark monitoring providing that the other 2008 MSGP requirements are met. The 2008 MSGP Fact Sheet requires Dischargers to include in the following in the SWPPP: 1) map(s) showing the reference site location, facility, available land cover information, reference site and test site elevation, available geology and soil information for reference and test sites, photographs showing site vegetation, site reconnaissance survey data and records. This General Permit requires this information to be included in the Natural Background Pollutant Source Demonstration in Section XII.D.2.c.

The Natural Background Pollutant Source Demonstration in this General Permit is for a Discharger that can demonstrate that pollutants causing the NAL exceedances are not related to industrial activities conducted at the facility, and are solely attributable to the presence of those pollutants in natural background. The pollutant may also be present due to industrial activities, in which case the Discharger must demonstrate that the pollutant contribution from the industrial activities by itself does not result in an NAL exceedance. Natural background pollutants include those substances that are naturally occurring in soils or groundwater that have not been disturbed by industrial activities. Natural background pollutants do not include legacy pollutants from earlier activity on a site, or pollutants in run-on from neighboring sources which are not naturally occurring. Dischargers are not required to reduce concentrations for pollutants in the effluent caused by natural background sources if these pollutants concentrations are not increased by industrial activity.

The 2008 MSGP Fact Sheet states that the background concentration of a pollutant in runoff from a non-human impacted reference site in the same watershed must be determined by evaluation of ambient monitoring data or by using information from a peer-reviewed publication or a local, state, or federal government publication specific to runoff or storm water in the immediate region. Studies that are in other geographic areas, or are clearly based on different topographies or soils, are not sufficient to meet this requirement. When such data is not available, and there are no known sources of the pollutant, the background concentration should be assumed to be zero.
In cases where historic monitoring data from a site are used for generating a natural background concentration, and the site is no longer accessible or able to meet reference site acceptability criteria, the Discharger must submit documentation (e.g., historic land use maps) indicating the site did meet reference site criteria (such as indicating the absence of human activity) during the time data collection occurred.

Once the Level 2 ERA Technical Report, including a Natural Background Demonstration meeting the conditions in Section XII.D.2.c of this General Permit is certified and submitted via SMARTS, the Discharger is no longer responsible for the identified background parameters(s) in the corresponding drainage area(s). A Discharger that submits this type of demonstration will

remain with Level 2 status but is not subject to additional ERAs unless directed by the Regional Water Board.

c. Level 2 ERA Implementation Extension

The State Water Board recognizes that there may be circumstances that make implementation of all necessary actions required in the Level 2 ERAs by the permitted due dates infeasible. In such circumstances a Discharger may request additional time by submitting a Level 2 ERA Implementation Extension. The Level 2 ERA Implementation Extension will automatically allow Dischargers up to an additional six (6) months to complete the tasks identified in the Level 2 ERA Action Plans while remaining in compliance with this General Permit. The Level 2 ERA Implementation Extension is subject to Regional Water Board review. If additional time is needed beyond the initial six (6) month extension, a second Level 2 ERA Implementation Extension may be submitted but is not effective unless it is approved by the Water Board.

## L. Inactive Mining Operations

Inactive mining sites may need coverage under this General Permit. Inactive mining operations are mining sites, or portions of sites, where mineral mining and/or dressing occurred in the past with an identifiable Discharger (owner or operator), but are no longer actively operating. Inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials. A Discharger has the option to certify and submit via SMARTS that its inactive mining operations meet the conditions for an Inactive Mining Operation Certification in Section XIII of this General Permit. The Discharger must have a SWPPP for an inactive mine signed (wet signature with license number) by a California licensed professional engineer. The Inactive Mining Operation Certification in this General Permit is in lieu of performing certain identified permit requirements. This General Permit requires an annual inspection of an inactive mining site and an annual re-certification of the SWPPP. Any significant updates to the SWPPP shall be signed (wet signature and license number) by a California license professional engineer. The Discharger must certify and submit via SMARTS any significantly revised SWPPP within 30 days of the revision(s)

## M. Compliance Groups and Compliance Group Leaders

Group Monitoring, as defined in the previous permit, has been eliminated in this General Permit and replaced with a new compliance option called Compliance Groups. The Compliance Group option differs from Group Monitoring as it requires (1) all Dischargers participating in a Compliance Group (Compliance Group Participants) sample two QSEs each year, (2) the Compliance Group Leader to inspect each Participant's facility within each reporting year, (3) the Compliance Group Leader must complete a State Water Board sponsored or approved training program for Compliance Group Leaders, and (4) the Compliance Group Leader to prepare Consolidated Level 1 ERA Reports, and individual Level 2 ERA Action Plans and Technical Reports. The Compliance Group option is similar to Group Monitoring as it retains a mechanism that

allows Dischargers of the same industry type to comply with this General Permit through shared resources in a cost saving manner.

This General Permit emphasizes sampling and analysis as a means to evaluate BMP performance and overall compliance, and the significantly reduced sampling requirements previously afforded to Group Monitoring Participants (two samples within a five-year period) does not provide the necessary information to achieve these goals. However, a moderate reduction in sampling requirements is included as an incentive for Compliance Group Participants while concurrently requiring sufficient individual facility sampling data to determine compliance. A Compliance Group Leader is required to provide the necessary sampling training and guidance to the Compliance Group Participants. This additional training requirement will increase sampling data quality that will offset the reduced sampling frequency for Compliance Groups.

Participation in Compliance Groups will provide additional cost savings for Dischargers in the preparation of the Consolidated Level 1 ERA Reports, and for Compliance Group Leader assistance in preparing the Level 2 ERA Action Plans and the individual Level 2 ERA Technical Reports. It is likely that many of the pollutant sources causing NAL exceedances, and the corresponding BMP cost evaluation and selection, when appropriate, will overlap for groups of facilities in a similar industry type. When these overlaps occur, a Compliance Group Leader should be able to more efficiently evaluate the pollutant sources and BMP options, and prepare the necessary reports.

The State Water Board believes that it is necessary for Compliance Group Leaders to have a higher level of industrial storm water compliance and training experience than the expectations of a QISP. Many stakeholder comments on this General Permit suggested various certifications to provide this higher level of experience; however, the State Water Board believes a process similar to the Trainer of Record process for the Construction General Permit training program will develop Compliance Group Leaders with the appropriate level of experience to fulfill the necessary qualifications.

The intent of the Compliance Groups is to have only one or a small number of Compliance Groups per industrial sector. The process for becoming a QISP trainer and/or a Compliance Group Leader is purposely similar to the Construction General Permit trainer of record process for consistency within storm water regulatory leaders. The formal process to qualify to conduct trainings for QISPs and/or to be a Compliance Group Leader will include the submittal of a statement of qualifications for review, a review fee, completion of an exam and training specific to this role. For more information see the Construction General Permit trainer of record process: http://www.casqa.org/TrainingandEducation/ConstructionGeneralPermitTrainingQSDQSPToR/tabid/205/Default.aspx

After the initial Compliance Group registration, Compliance Group Leaders are required to submit and maintain their list of Compliance Group Participants via SMARTS. There are no additional administrative documents required. The previous permit required group leaders to provide annual group evaluation reports and a letter of intent to continue group monitoring. The State Water Board found these items to be resource intensive and placed an unnecessary administrative burden on group leaders. The

Compliance Group requirements in this General Permit reduces the administrative burden on both the Compliance Group Leaders and Water Board staff.

The State Water Board's intent for the effluent data, BMP selection, cost, and performance information, and other industry specific information provided in Compliance Group reports is for evaluation of sector-specific permitting approaches and the use of NALs in the next reissuance of this General Permit.

## N. Annual Evaluation

Federal regulations require NPDES industrial storm water Dischargers to evaluate their facility and SWPPP annually. Typically this requires an inspection of the facility to ensure: (1) the SWPPP site map is up to date, (2) control of all potential pollutant sources is included in the SWPPP, and (3) sampling data and visual observation records are used to evaluate if the proper BMPs are being implemented. As Dischargers are required to conduct monthly visual observation that partially overlap with the actions required by the annual evaluation requirements, Dischargers may perform the annual evaluation inspection concurrent with a monthly visual observation.

## O. Annual Report

All Dischargers shall certify and submit via SMARTS an Annual Report no later than July 15 following each reporting year. The reporting requirements for this General Permit's Annual Report are streamlined in comparison to the previous permit. The Annual Report now consists of two primary parts: (1) a compliance checklist indicating which permit requirements were completed and which were not (e.g., a Discharger who completes the required sampling of four QSEs during the reporting year, versus a Discharger who is only able to sample two QSEs during the reporting year), and (2) an explanation for items on the compliance checklist that were determined incomplete by the Discharger. Unlike the previous permit, the Annual Report does not require Dischargers to provide the details of each visual observation (such as name of observer, time of observation, observation summary, corrective actions, etc.) or provide the details of the Annual Comprehensive Site Evaluation. Dischargers, however, continue to be required to retain those records and have them available upon request. The Annual Report is further simplified through the immediate electronic reporting via SMARTS of sampling data and copies of the original laboratory reports instead of such information being included in the Annual Report.

## P. Conditional Exclusion - No Exposure Certification (NEC) Requirements

This General Permit's conditional exclusion requirements are similar to the requirements provided in 40 C.F.R. section 122.26(g)(3). Clarifications were added in this General Permit, however, to the types of "storm resistant shelters" and the periods when "temporary shelters" may be used in order to avert regulatory confusion. California does not have operating coal power plants, which are a major contributor to acid rain elsewhere in the United States. California does have nonpoint sources or atmospheric deposition that may locally impact the pH of the rain water, however this is

not categorized as acid rain as referred to by the U.S. EPA for the NEC coverage requirements. The No Exposure Guidance Document[15] developed by the U.S. EPA mentions acid rain as a potential source of contaminants to consider for NEC coverage. The acid rain leachate language was not included in this General Permit's Appendix 2 to clarify that Dischargers may qualify for NEC coverage, even if the facility has metal buildings or structures.

The Discharger shall certify and submit complete PRDs for NEC coverage via SMARTS. Based upon the State Water Board's experience with reissuing and implementing the 2009 Construction General Permit, the transition for existing Dischargers to register under this new General Permit is staff resource intensive. The State Water Board staff is available to assist Dischargers requiring assistance with enrolling under this General Permit, both for NOI coverage and NEC coverage. The State Water Board has also experienced that more time is needed for its staff to assist Dischargers registering for NEC coverage. To provide better customer service to all Dischargers, three months have been added to the NEC coverage PRD submittal schedule for new and existing Dischargers (Section II.B.4 of this General Permit, extending the NEC coverage registration date to October 1, 2015.

Dischargers must annually inspect their facility to ensure continued compliance with NEC requirements, and annually re-certify and submit an NEC via SMARTS. Based on its regulatory experience, the State Water Board has determined that a five-year NEC re-certification period is inadequate. A significant percentage of facilities may revise, expand, or relocate their operations in any given year. Furthermore, a significant percentage of facilities experience turnover of staff knowledgeable of the NEC requirements and limitations. Accordingly, the State Water Board believes that annual NEC evaluation and re-certification requirements are appropriate to continually assure adequate program compliance.

## Q. Special Requirements - Plastic Materials

Water Code section 13367 requires the Water Boards to implement measures that control discharges of preproduction plastic from point and nonpoint sources. The State Water Board intends to use this General Permit to regulate discharges of preproduction plastics from areas of facilities that are subject to this General Permit. A Regional Water Board may designate facilities, or areas of facilities, that are not otherwise subject to this General Permit, pursuant to Section XIX.F. For example, a Regional Water Board may designate Plastic Materials handling areas of a transportation facility that are not associated with vehicle maintenance as requiring coverage under this General Permit.

Preproduction plastics used by the plastic manufacturing industry are small in size and have the potential to mobilize in storm water. Preproduction plastic washed into storm water drains can move to waters of the United States where it contributes to the growing problem of plastic debris in inland and coastal waters. Water Code section 13367

[15] U.S. EPA. Guidance Manual for Conditional Exclusion from Storm Water Permitting Based On "No Exposure" of Industrial Activities to Storm Water. Web. June 2000. < http://www.epa.gov/npdes/pubs/noxguide.pdf>. [as of January 31, 2014].

outlines five mandatory BMPs that are required for all facilities that handle preproduction plastic. These mandatory BMPs are included in this General Permit.

The State Water Board has received comments regarding the Water Code requirements for Plastics Facilities to install a containment system for on-site storm drain locations that meet 1mm capture and 1-year 1-hour storm flow requirement standards. As a result, this General Permit includes the option under Water Code section 13367 that allows a plastics facility to propose an alternative BMP or suite of BMPs that can meet the same performance and flow requirements as a 1mm capture and 1-year 1-hour storm flow containment system standards. These alternative BMPs are to be submitted to the Regional Water Board for approval. This alternative is intended to allow the facility to develop BMPs that focus on pollution prevention measures that can perform as well as, or better than, the containment system otherwise required by the statute.

The State Water Board also includes two additional containment system alternatives in this General Permit that are considered to be equivalent to, or better than, the 1mm capture and 1-year 1-hour storm flow requirements:

- An alternative allowing plastic facilities to implement a suite of eight BMPs addressing the majority of potential sources of plastic discharges. This suite of BMPs is based on industry and U.S. EPA recommendations and Water Board experience with storm water inspections, violations, and enforcement cases throughout California.

- An alternative allowing a facility to operate in a manner such that all preproduction plastic materials are used indoors and pose no potential threat for discharge off-site. The facility is required to notify the Regional Water Board of the intent to seek this exemption and of any changes to the facility or operations that may disqualify the facility for the exemption. The exemption may be revoked by the Regional Water Board at any time.

Plastics facilities may use preproduction plastic materials that are less than 1mm in size, or produce materials, byproducts, or waste that is smaller than 1mm in size. These small size materials will pass through the 1mm capture containment system required by Water Code section 13367. Plastics facilities with sub-1mm materials must design a containment system to capture the smallest size material onsite with a 1-year 1-hour storm flow requirement, or propose alternative BMPs for Regional Water Board approval that meet the same requirements.

The remaining BMPs required by Water Code section 13367 are consistent with recommendations for handling and clean-up of preproduction plastics in the American Chemistry Council publication, *Operation Clean Sweep* and U.S. EPA's publication *Plastic Pellets in the Aquatic Environment: Sources and Recommendations*. The State Water Board believes that the entire approach in this General Permit for plastic materials is consistent with Water Code section 13367.

## R. Regional Water Board Authorities

The Regional Water Boards retain discretionary authority over many issues that may arise from industrial discharges within their respective regions. This General Permit

emphasizes the authority of the Regional Water Boards over specific requirements of this General Permit that do not meet region-specific water quality protection regulatory needs.

## S. Special Conditions: Requirements for Dischargers Claiming the "No Discharge" Option in the Notice of Non-Applicability

1. General

   Entities that operate facilities generating storm water associated with industrial activities that is not discharged to waters of the United States are not required to obtain General Permit coverage. Entities that have contacted the Water Boards to inquire what is necessary to avoid permit coverage have received inconsistent guidance. This has resulted in regulatory inconsistency and uncertainty as to whether they are in compliance if their industry operates without General Permit coverage. Depending upon how each Regional Water Board handles "No Discharge" claims, some facilities with advanced containment design may be required to obtain General Permit coverage while other facilities with less advanced containment design may be allowed to operate without General Permit coverage. Some stakeholders have complained that this type of regulatory inconsistency puts some facilities at an economically-competitive disadvantage given the costs associated with permit compliance.

   U.S. EPA regulations do not provide a design standard, definition, or guidance as to what constitutes "No Discharge." Unlike Conditional Exclusion requirements, U.S. EPA regulations do not require an entity to submit technical justification or certification that a facility does not discharge to waters of the United States (U.S.). Therefore entities have previously been allowed to self-determine that their facility does not discharge to water of the U.S. when using any containment design standard. The State Water Board does not have available information showing that most entities have adequately performed hydraulic calculations to determine the frequency of discharge corresponding to their containment controls or have had these hydraulic calculations reviewed or completed by a California licensed professional engineer. Although U.S. EPA makes clear that an unpermitted discharge to waters of the U.S. is a violation of the CWA, this leaves regulatory agencies with the very difficult task of knowing when any given facility discharges in order to carry-out enforcement actions.

   In 1998, the Water Code was amended to require entities who are requested by the Water Boards to obtain General Permit coverage, but that have a valid reason to not obtain General Permit coverage, to submit a Notice of Non-Applicability (NONA). (Wat. Code, § 13399.30, subd. (a)(2)). The NONA covers multiple reasons why an entity is not required to be permitted including (1) facility closure, (2) not the legal owner, (3) incorrect SIC code, (4) eligibility for the Conditional Exclusion (No Exposure Certification), and (5) the facility not discharging to water of the U.S. ("No Discharge"). The previous permit contained definitions, requirements, and guidance that entities may reference to determine whether they are eligible to select any of the first four NONA reasons for not obtaining General Permit coverage. However, neither the previous permit nor the Water Code provide definitions, requirements,

and guidance for entities to determine whether they are eligible to indicate "No Discharge" on the NONA as a reason for not obtaining General Permit coverage.

This General Permit addresses and resolves the issues discussed above by establishing consistent, statewide eligibility requirements in Section XX.C for entities submitting NONAs indicating "No Discharge." When requested by the Water Boards to obtain General Permit coverage, entities must meet these "No Discharge" eligibility requirements or obtain General Permit coverage. The Water Boards retain enforcement authority if a facility subsequently discharges.

2. "No Discharge" Eligibility Requirements

The entity must certify submit in SMARTS a NONA Technical Report signed (wet signature and license number) by a California licensed professional engineer that contains the analysis and details of the containment design supporting the "No Discharge" eligibility determination. Because containment design will require hydraulic calculations, soil permeability analysis, soil stability calculations, appropriate safety factor consideration, and the application of other general engineering principles, state law requires the technical report to be signed (wet signature and license number) by a California licensed professional engineer.

The State Water Board has selected a containment design target that, as properly applied will result in few, if any, discharges. The facility must either be:

a. Engineered and constructed to contain all storm water associated with industrial activities from discharging to waters of the United States. (The determination of what is a water of the United States can be complicated, and in certain circumstances, a discharge to groundwater that has a direct hydrologic connection to waters of the United States may constitute a discharge to a water of the United States.) Dischargers must base their information upon maximum historic precipitation event data (or series of events) from the nearest rain gauges as provided by the National Oceanic and Atmospheric Administration's (NOAA) website, or other nearby precipitation data available from other government agencies. At a minimum, Dischargers must ensure that the containment design addresses maximum 1-hour, 24-hour, weekly, monthly, and annual precipitation data for the duration of the exclusion.

   Design storm events are generally specified as a one-time expected hydraulic failure over a reoccurrence of years for a specified storm event. For example, if a design storm standard is a 100 year 24-hour event, then a facility's containment system designed to contain the maximum volume of water would be expected to fall in 24 hours once every 100 years. Design standards vary dependent upon the regulatory program and the level of protection needed. Since California has considerable variations in climate/topography/soil conditions across the state, the "No Discharge" NONA eligibility requirements have been created so that each facility's containment design can incorporate unique site specific circumstances to meet the requirement that discharges will not occur based upon past historical precipitation data. Facilities that are not designed to not meet the "No Discharge" eligibility requirements must obtain General Permit coverage.

b. Located in basins or other physical locations that are not hydrologically connected to waters of the United States.

The State Water Board considered allowing Entities to review United States Army Corp of Engineer maps to determine, without a California licensed professional engineer, whether their facility location is within a basin and/or other physical location that is not hydrologically connected to waters of the United States. The State Water Board believes that this determination can be difficult in some cases, or is likely to be performed incorrectly. In addition, there may be areas of the state that are not hydrologically connected to waters of the United States, but are not on United States Army Corps of Engineer maps. Therefore, all "No Discharge" Technical Reports must be signed (wet signature and license number) by a California licensed professional engineer.

3. Additional Considerations

The "No Discharge" determination does not cover storm water containment systems that transfer industrial pollutants to groundwater. Entities must determine whether designs that incorporate infiltration may discharge to and contaminate groundwater. If there is a threat to groundwater, Entities must contact the Regional Water Boards prior to construction of infiltration design elements.

Entities that have not eliminated all discharges that are subject to General Permit coverage (NOI Coverage or NEC Coverage) are ineligible to submit NONAs indicating "No Discharge."

# ATTACHMENT A

# FACILITIES COVERED BY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES (GENERAL PERMIT)

1. Facilities Subject To Storm Water Effluent Limitations Guidelines, New Source Performance Standards, or Toxic Pollutant Effluent Standards Found in 40 Code of Federal Regulations, Chapter I, Subchapter N (Subchapter N):

   Cement Manufacturing (40 C.F.R. Part 411); Feedlots (40 C.F.R. Part 412); Fertilizer Manufacturing (40 C.F.R. Part 418); Petroleum Refining (40 C.F.R. Part 419), Phosphate Manufacturing (40 C.F.R. Part 422), Steam Electric (40 C.F.R. Part 423), Coal Mining (40 C.F.R. Part 434), Mineral Mining and Processing (40 C.F.R. Part 436), Ore Mining and Dressing (40 C.F.R. Part 440), Asphalt Emulsion (40 C.F.R. Part 443), Landfills (40 C.F.R. Part 445), and Airport Deicing (40 C.F.R. Part 449).

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2. Manufacturing Facilities:

   Facilities with Standard Industrial Classifications (SICs) 20XX through 39XX, 4221 through 4225. (This category combines categories 2 and 10 of the previous general permit.)

3. Oil and Gas/Mining Facilities:

   Facilities classified as SICs 10XX through 14XX, including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 Code of Federal Regulations. 434.11(1) because the performance bond issued to the facility by the appropriate Surface Mining Control and Reclamation Acts authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with any overburden, raw material, intermediate products, finished products, by-products, or waste products located on the site of such operations. Inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator. Inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined material; or sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim.

4. Hazardous Waste Treatment, Storage, or Disposal Facilities:

   Hazardous waste treatment, storage, or disposal facilities, including any facility operating under interim status or a general permit under Subtitle C of the Federal Resource, Conservation, and Recovery Act.

5. Landfills, Land Application Sites, and Open Dumps:

   Landfills, land application sites, and open dumps that receive or have received industrial waste from any facility within any other category of this Attachment; including facilities subject to regulation under Subtitle D of the Federal Resource, Conservation, and Recovery Act, and facilities that have accepted wastes from construction activities (construction activities include any clearing, grading, or excavation that results in disturbance).

6. Recycling Facilities:

   Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093.

7. Steam Electric Power Generating Facilities:

   Any facility that generates steam for electric power through the combustion of coal, oil, wood, etc.

8. Transportation Facilities:

   Facilities with SICs 40XX through 45XX (except 4221-25) and 5171 with vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication) or other operations identified under this Permit as associated with industrial activity.

9. Sewage or Wastewater Treatment Works:

   Facilities used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge, that are located within the confines of the facility, with a design flow of one million gallons per day or more, or required to have an approved pretreatment program under 40 Code of Federal Regulations part 403. Not included are farm lands, domestic gardens, or lands used for sludge management where sludge is beneficially reused and are not physically located in the confines of the facility, or areas that are in compliance with Section 405 of the Clean Water Act.

# ATTACHMENT B

## ACRONYM LIST

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

| | |
|---|---|
| ASBS | Areas of Special Biological Significance |
| BAT | Best Available Technology Economically Achievable |
| BCT | Best Conventional Pollutant Control Technology |
| BMP | Best Management Practices |
| BOD | Biochemical Oxygen Demand |
| BPT | Best Practicable Control Technology Currently Available |
| CBPELSG | California Board for Professional Engineers, Land Surveyors and Geologists |
| DWQ | Division of Water Quality |
| ELGs | Effluent Limitations Guidelines and New Source Performance Standards |
| ERA | Exceedance Response Action |
| MS4 | Municipal Separate Storm Sewer System |
| MSGP | Multi Sector General Permit |
| NAL | Numeric Action Level |
| NAICS | North American Industrial Classification System |
| NEC | No Exposure Certification |
| NEL | Numeric Effluent Limitation |
| NOI | Notice of Intent |
| NONA | Notice of Non Applicability |
| NOT | Notice of Termination |
| NPDES | National Pollutant Discharge Elimination System |
| NSPS | New Source Performance Standards |
| NSWD | Non Storm Water Discharges |
| O&G | Oil and Grease |
| PRDs | Permit Registration Documents |
| QA/QC | Quality Assurance/Quality Control |
| QISP | Qualified Industrial Storm water Practitioner |
| QSE | Qualifying Storm Event |
| SIC | Standard Industrial Classification |
| SMARTS | Storm Water Multiple Application and Report Tracking System |
| SWPPP | Storm Water Pollution Prevention Plan |
| TBEL | Technology Based Effluent Limitation |
| TDS | Total Dissolved Solids |
| TMDL | Total Maximum Daily Load |
| TOC | Total Organic Carbon |
| TSS | Total Suspended Solids |
| U.S. EPA | United States Environmental Protection Agency |
| WDID | Waste Discharge Identification Number |
| WQBEL | Water Quality Based Effluent Limitation |

# ATTACHMENT C

# GLOSSARY

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

**Adoption Date** April 1, 2014

**Aerial Deposition**
Total suspended particulate matter found in the atmosphere as solid particles or liquid droplets. Chemical composition of particulates varies widely, depending on location and time of year. Sources of airborne particulates include but are not limited to: dust, emissions from industrial processes, combustion products from the burning of wood and coal, combustion products associated with motor vehicle or non-road engine exhausts, and reactions to gases in the atmosphere. Deposition is the act of these materials being added to a landform.

**Beneficial Uses**
As defined in the California Water Code, beneficial uses of the waters of the state that may be protected against quality degradation, include but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

**Best Available Technology Economically Achievable (BAT)**
As defined by United States Environmental Protection Agency (U.S. EPA), BAT is a technology-based standard established by the Clean Water Act (CWA) as the most appropriate means available on a national basis for controlling the direct discharge of toxic and nonconventional pollutants to navigable waters. The BAT effluent limitations guidelines, in general, represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

**Best Conventional Pollutant Control Technology (BCT)**
As defined by U.S. EPA, BCT is a technology-based standard for the discharge from existing industrial point sources of conventional pollutants including biochemical oxygen demand (BOD), total suspended sediment (TSS), fecal coliform, pH, oil and grease.

**Best Professional Judgment (BPJ)**
The method used by permit writers to develop technology-based NPDES permits conditions on a case-by-case basis using all reasonably available and relevant data.

## GLOSSARY

**Best Management Practices (BMPs)**
Scheduling of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

**Chain of Custody**
Form used to track sample handling as samples progress from sample collection to the laboratory. The chain of custody is also used to track the resulting analytical data from the laboratory to the client. Chain of custody forms can be obtained from an analytical laboratory upon request.

**Debris**
Litter, rubble, discarded refuse, and remains of destroyed inorganic anthropogenic waste.

**Detected Not Quantifiable**
A sample result that is between the Method Detection Limit (MDL) and the Minimum Level (ML).

**Discharger**
A person, company, agency, or other entity that is the operator of the industrial facility covered by this General Permit.

**Drainage Area**
The area of land that drains water, sediment, pollutants, and dissolved materials to a common discharge location.

**Effective Date**
The date, set by the State Water Resources Control Board (State Water Board), when at least one or more of the General Permit requirements take effect and the previous permit expires. This General Permit requires most of the requirements (such as SMARTs submittals, minimum BMPs, sampling and analysis requirements) to take effect on July 15, 2015.

**Effluent**
Any discharge of water either to the receiving water or beyond the property boundary controlled by the Discharger.

**Effluent Limitation**
Any numeric or narrative restriction imposed on quantities, discharge rates, and concentrations of pollutants that are discharged from point sources into waters of the United States, waters of the contiguous zone, or the ocean.

## GLOSSARY

**Erosion**
The process by which soil particles are detached and transported by the actions of wind, water or gravity.

**Erosion Control BMPs**
Vegetation, such as grasses and wildflowers, and other materials, such as straw, fiber, stabilizing emulsion, protective blankets, etc., placed to stabilize areas of disturbed soils, reduce loss of soil due to the action of water or wind, and prevent water pollution.

**Facility**
A collection of industrial processes discharging storm water associated with industrial activity within the property boundary or operational unit.

**Field Measurements**
Testing procedures performed in the field with portable field-testing kits or meters.

**Good Housekeeping BMPs**
BMPs designed to reduce or eliminate the addition of pollutants through analysis of pollutant sources, implementation of proper handling/disposal practices, employee education, and other actions.

**Industrial Materials**
Includes, but is not limited to: raw materials, recyclable materials, intermediate products, final products, by product, waste products, fuels, materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERLCA); any chemical the facility is required to report pursuant to Section 313 of Title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge and that are used, handled, stored, or disposed in relation to a facility's industrial activity.

**Method Detection Limit**
The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.

**Minimum Level**
The lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. It is equivalent to the concentration of the lowest calibration standard, assuming that all method-specified sample weights, volumes, and cleanup procedures have been employed.

**Monitoring Implementation Plan**
Planning document included in the Storm Water Pollution Prevention Plan (SWPPP). Dischargers are required to record information on the implementation of the monitoring requirements in this General Permit. The MIP should include relevant information on:

the Monthly Visual Observation schedule, Sampling Parameters, Representative Sampling Reduction, Sample Frequency Reduction, and Qualified Combined Samples.

**Monitoring Requirements**
Includes sampling and analysis activities as well as visual observations.

**Natural Background**
Pollutants including substances that are naturally occurring in soils or groundwater. Natural background pollutants do not include legacy pollutants from previous activity at a facility, or pollutants in run-on from neighboring sources which are not naturally occurring.

**New Discharge(r)**
A facility from which there is a discharge, that did not commence the discharge at a particular site prior to August 13, 1979, which is not a new source as defined in 40 Code of Federal Regulations 122.29, and which has never received a finally effective NPDES permit for discharges at that site. See 40 Code of Federal Regulations 122.2.

**Numeric Action Level (NAL) Exceedance**
Annual NAL exceedance - the Discharger shall determine the average concentration for each parameter using the results of all the sampling and analytical results for the entire facility for the reporting year (i.e., all "effluent" data) and compare this to the corresponding Annual NAL values in Table 2. For Dischargers using composite sampling or flow measurement in accordance with standard practices, the average concentrations shall be calculated in accordance with the U.S. EPA Guidance Manual for the Monitoring and Reporting Requirements of the NPDES Multi-Sector Storm Water General Permit.[1] An annual NAL exceedance occurs when the average of all the analytical results for a parameter from samples taken within a reporting year exceeds an annual NAL value for that parameter listed in Table 2 (or is outside the NAL pH range);

Instantaneous maximum NAL exceedance - the Discharger shall compare all sampling and analytical results from each distinct sample (individual or composite) to the corresponding Instantaneous maximum NAL values in Table 2. An instantaneous maximum NAL exceedance occurs when two or more analytical results from samples taken for any parameter within a reporting year exceed the instantaneous maximum NAL value (for TSS and O&G), or are outside of the instantaneous maximum NAL range (for pH).

**Non Detect**
Sample result is less than Method Detection Limit; Analyte being tested cannot be detected by the equipment or method.

[1] U.S. EPA. NPDES Storm Water Sampling Guidance Document. <http://www.epa.gov/npdes/pubs/owm0093.pdf >. [as of July 3, 2013]

**Non-Storm Water Discharges (NSWDs)**
Discharges that do not originate from precipitation events. Including but not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, vehicle wash water, sanitary wastes, concrete washout water, paint wash water, irrigation water, or pipe testing water.

**Numeric Action Level (NAL)**
Pollutant concentration levels used to evaluate if best management practices are effective and if additional measures are necessary to control pollutants. NALs are not effluent limits. The exceedance of an NAL is not a permit violation.

**Operator**
In the context of storm water associated with industrial activity, any party associated with an industrial facility that meets either of the following two criteria:

a. The party has operational control over the industrial SWPPP and SWPPP specifications, including the ability to make modifications to those plans and specifications

b. The party has day-to-day operational control of activities at the facility which are necessary to ensure compliance with a SWPPP for the facility or other permit conditions (e.g., authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions).

**pH**
Unit universally used to express the intensity of the acid or alkaline condition of a water sample. The pH of natural waters tends to range between 6.0 and 9.0, with neutral being 7.0.

**Plastic Materials**
Plastic Materials are virgin and recycled plastic resin pellets, powders, flakes, powdered additives, regrind, dust, and other similar types of preproduction plastics with the potential to discharge or migrate off-site.

**Qualified Industrial Storm Water Practitioner (QISP)**
Only required once a Discharger reaches Level 1 status, a QISP is the individual assigned to ensure compliance with this General Permit or to assist New Dischargers with determining coverage eligibility for discharges to an impaired water body. A QISP's responsibilities include implementing the SWPPP, performing the Annual Comprehensive Facility Compliance Evaluation (Annual Evaluation), assisting in the preparation of Annual Reports, performing ERAs, and training appropriate Pollution Prevention Team members. The individual must take the appropriate state approved or sponsored training to be qualified. Dischargers shall ensure that the designated QISP is geographically located in an area where they will be able to adequately perform the permit requirements at all of the facilities they represent.

**Qualifying Storm Event (QSE)**
A precipitation event that:

a. Produces a discharge for at least one drainage area; and
b. Is preceded by 48 hours with no discharge from any drainage area.

**Regional Water Board**
Includes the Executive Officer and delegated Regional Water Board staff.

**Runoff Control BMPs**
Measures used to divert run-on from offsite and runoff within the site.

**Run-on**
Discharges that originate offsite and flow onto the property of a separate facility or property or, discharges that originate onsite from areas not related to industrial activities and flow onto areas on the property with industrial activity.

**Scheduled Facility Operating Hours**
The time periods when the facility is staffed to conduct any function related to industrial activity, but excluding time periods where only routine maintenance, emergency response, security, and/or janitorial services are performed.

**Sediment**
Solid particulate matter, both mineral and organic, that is in suspension, is being transported, or has been moved from its origin by air, water, gravity, or ice and has come to rest on the earth's surface either above or below sea level.

**Sedimentation**
Process of deposition of suspended matter carried by water, wastewater, or other liquids that flow by gravity. Control of sedimentation is accomplished by reducing the velocity of the liquid below the point at which it can transport the suspended material.

**Sediment Control BMPs**
Practices that trap soil particles after they have been eroded by rain, flowing water, or wind. Includes those practices that intercept and slow or detain the flow of storm water to allow sediment to settle and be trapped (i.e., silt fence, sediment basin, fiber rolls, etc.).

**Sheet Flow**
Flow of water that occurs overland in areas where there are no defined channels and where the water spreads out over a large area at a uniform depth.

**Source**
Any facility or building, property, road, or area that causes or contributes to pollutants in storm water.

**Storm Water**
Storm water runoff, snowmelt runoff, and storm water surface runoff and drainage.

**Storm Water Discharge Associated With Industrial Activity**
The discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant as identified in Attachment A of this General Permit. The term does not include discharges from facilities or activities excluded from the NPDES program. The term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials; manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process wastewaters (as defined at 40 C.F.R. section 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. The term does not include discharges from facilities or activities excluded from the NPDES program under 40 C.F.R. section 122.

Material handling activities include the: storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product, or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are federally, State, or municipally owned or operated that meet the description of the facilities listed in this paragraph) include those facilities designated under 40 C.F.R. section122.26(a)(1)(v).

**Structural Controls**
Any structural facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution.

**Total Suspended Solids (TSS)**
The measure of the suspended solids in a water sample including inorganic substances such as soil particles, organic substances such as algae, aquatic plant/animal waste, and particles related to industrial/sewage waste, etc. The TSS test measures the concentration of suspended solids in water by measuring the dry weight of a solid material contained in a known volume of a sub-sample of a collected water sample. Results are reported in mg/L.

**Toxicity**
The adverse response(s) of organisms to chemicals or physical agents ranging from mortality to physiological responses, such as impaired reproduction or growth anomalies.

**Trade Secret**
Information, including a formula, pattern, compilation, program, device, method, technique, or process, that: (1) derives independent economic value, actual or potential, from not being generally known to the public or to other persons who can obtain economic value from its disclosure or use; and (2) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

**Turbidity**
The cloudiness of water quantified by the degree to which light traveling through a water column is scattered by the suspended organic and inorganic particles it contains. The turbidity test is reported in Nephelometric Turbidity Units (NTU) or Jackson Turbidity Units (JTU).

**Waters of the United States**
Generally refers to surface waters, as defined for the purposes of the federal Clean Water Act.

**Water Quality Objectives**
Defined in the California Water Code as limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

**Water Quality Standards**
Consists of beneficial uses, water quality objectives to protect those uses, an antidegradation policy, and policies for implementation. Water quality standards are established in Regional Water Quality Control Plans (Basin Plans) and statewide Water Quality Control Plans. U.S. EPA has also adopted water quality criteria (the same as objectives) for California in the National Toxics Rule and California Toxics Rule.

# ATTACHMENT D

## PERMIT REGISTRATION DOCUMENTS (PRDs)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

This Attachment provides an example of the information Dischargers are required to submit in the PRDs via the Storm Water Multiple Application and Report Tracking System (SMARTS). The actual PRD requirements are in Section II of this General Permit.

### A. Who Must Submit PRDs

All Dischargers that operate facilities as described in Attachment A of this General Permit are subject to either Notice of Intent (NOI) or No Exposure Certification (NEC) Coverage and shall comply with the PRD requirements in this General Permit.

### B. Who Is Not Required to Submit PRDs

Dischargers that operate facilities described below are not required to submit PRDs:

1. Facilities that are not described in Attachment A;

2. Facilities that are described in Attachment A but do not have discharges of storm water associated with industrial activity to waters of the United States; or,

3. Facilities that are already covered by an NPDES permit for discharges of storm water associated with industrial activity.

### C. Annual Fees for NOI and NEC Coverage

Annual Fees for NOI and NEC coverage are established through regulations adopted by the State Water Board and are subject to change (see California Code of Regulations, title 23, section 2200 et seq.).

### D. When and How to Apply

Dischargers proposing to conduct industrial activities subject to this General Permit must electronically certify and submit PRDs via the Storm Water Multiple Application

Reporting and Tracking System (SMARTS)[1] no less than seven (7) days prior to the commencement of industrial activity. Existing Dischargers must submit PRDs for NOI coverage by July 1, 2015 or for NEC coverage by October 1, 2015.

## E. PRD Requirements for NOI Coverage

1. Notice of Intent (NOI) and Signed Electronic Authorization Form.

2. Site Map (Section X.E of this General Permit).

3. Storm Water Pollution Prevention Plan (see Section X of this General Permit).

## F. Description of PRDs for NOI Coverage

1. The Notice of Intent (NOI) requires the following information:

   a. Operator/Owner Information

      Operator/Owner Company or Organization Name
      Contact First Name
      Contact Last Name
      Title
      Street Address
      Address Line 2
      City/State/Zip
      Phone (e.g. 999-999-9999)
      E-mail (e.g. abc@xyz.com)
      Federal Tax ID

   b. Facility Information

      Facility Name
      WDID Number (if applicable)
      Contact First Name
      Contact Last Name
      Title
      Street Address
      Address Line 2
      City
      County
      Phone (e.g. 999-999-9999)

[1] The State Water Board has developed the SMARTS online database system to handle registration and reporting under this General Permit. More information regarding SMARTS and access to the database is available online at <https://smarts.waterboards.ca.gov>. [as of June 26, 2013].

Emergency Phone (e.g. 999-999-9999)
E-mail (abc@xyz.com)
State/Zip CA
Total Site Size (Acres)
Latitude (Decimal degrees only, minimum 5 significant digits, e.g. 99.99999)
Longitude (Decimal degrees only, minimum 5 significant digits, e.g. 99.99999)
Total Percentage Site Imperviousness Area of Facility (Acres)
Total Areas of Industrial Activities and Materials Exposed to Precipitation
Primary SIC Code
Secondary SIC Code
Tertiary SIC Code
Regional Water Board

c. Billing Information

Billing Name
Contact First Name
Contact Last Name
Title
Street Address
Address Line 2
City/State/Zip
Phone (e.g. 999-999-9999)
E-mail (e.g. abc@xyz.com)

d. Receiving Water Information

Does your facility's storm water flow directly or indirectly into waters of the US such as river, lake, ocean, etc. (check box for directly or indirectly)

i. Indirectly to waters of the US

ii. Storm drain system - Enter owner's name:

iii. Directly to waters of the US (e.g., river, lake, creek, stream, bay, ocean, etc.)

iv. Name of the receiving water: _____

2. The Site Map(s) shall include the following Information:

   a. The facility boundary;

   b. Storm water drainage areas within the facility boundary;

   c. Portions of any drainage area impacted by discharges from surrounding areas and flow direction of each drainage area;

   d. On-facility surface water bodies;

   e. Areas of soil erosion;

   f. Location(s) of nearby water bodies (such as rivers, lakes, wetlands, etc.);

   g. Location(s) of municipal storm drain inlets that may receive the facility's industrial storm water discharges and authorized Non-Storm Water Discharges (NSWDs);

   h. Locations of storm water collection and conveyance systems and associated points of discharge, and direction of flow;

   i. Any structural control measures (that affect industrial storm water discharges, authorized NSWDs, and run-on);

   j. All impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures;

   k. Locations where materials are directly exposed to precipitation;

   l. Locations where significant spills or leaks identified (Section X.G.1.d of this General Permit) have occurred;

   m. Areas of industrial activity subject to this General Permit;

   n. All storage areas and storage tanks;

   o. Shipping and receiving areas;

   p. Fueling areas;

q. Vehicle and equipment storage/maintenance areas;

r. Material handling and processing areas;

s. Waste treatment and disposal areas;

t. Dust or particulate generating areas;

u. Cleaning and material reuse areas; and,

v. Any other areas of industrial activity which may have potential pollutant sources.

3. The Storm Water Pollution Prevention Plan (SWPPP) must be prepared in accordance with Section X of this General Permit.

4. A NOI Certification by the Discharger that all PRDs submitted are correct and true.

5. SMARTS Electronic Authorization Form (Signed by any user authorized to certify and submit data electronically).

**G. PRD Requirements for NEC Coverage**

1. No Exposure Certification and Signed Electronic Authorization Form.

2. No Exposure Certification Checklist Consistent with Requirements in Section XVII.F.2 of this General Permit.

3. Current Site Map Consistent with Requirements in Section X.E of this General Permit.

**H. Description of PRDs for NEC Coverage**

1. The No Exposure Certification requires the following information:

   a. Operator/Owner Information

      Operator/Owner Name
      Contact First Name
      Contact Last Name
      Title

Street Address
Address Line 2
City/State/Zip
Phone Ex (999-999-9999)
E-mail (abc@xyz.com)
Federal Tax ID

b. Facility Information

Facility Name
Contact First Name
Contact Last Name
Title
Street Address
Address Line 2
City
County
Phone Ex (999-999-9999)
Emergency Phone Ex (999-999-9999)
E-mail (abc@xyz.com)
State/Zip CA
Total Site Size (Acres)
Latitude (Decimal degrees only, minimum 5 significant digits, Ex 99.99999)
Longitude (Decimal degrees only, minimum 5 significant digits, Ex 99.99999)
Percent of Site Imperviousness (%)
Primary SIC Code
Secondary SIC Code
Tertiary SIC Code
Regional Water Board

c. Billing Information

Billing Name (if different than Operator/Owner)
Contact First Name
Contact Last Name
Title
Street Address
Address Line 2
City/State/Zip
Phone E.g. (999-999-9999)
E-mail (e.g. abc@xyz.com)

d. SMARTS Electronic Authorization Form - Signed by any user authorized to certify and submit data electronically.

e. Certification by the Discharger that all PRDs submitted are correct and true and that the conditions of no-exposure have been met.

2. The NEC Checklist (Section XVII.F.2 of this General Permit) must be prepared to demonstrate that, based upon a facility inspection and evaluation, none of the following industrial materials or activities are, or will be in the foreseeable future, exposed to precipitation:

   a. Activities such as using, storing, or cleaning industrial machinery or equipment, and areas with materials or residuals from these activities;

   b. Materials or residuals on the ground or in storm water inlets from spills/leaks;

   c. Materials or products from past industrial activity;

   d. Material handling equipment (except adequately maintained vehicles);

   e. Materials or products during loading/unloading or transporting activities;

   f. Materials or products stored outdoors (except final products intended for outside use, e.g., new cars, where exposure to storm water does not result in the discharge of pollutants);

   g. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;

   h. Materials or products handled/stored on roads or railways owned or maintained by the Discharger;

   i. Waste material (except waste in covered, non-leaking containers, e.g., dumpsters). Application or disposal of processed wastewater (unless already covered by an NPDES permit); and,

   j. Particulate matter or visible deposits of residuals from roof stacks/vents evident in the storm water outflow.

3. The Site Map(s) shall include the following information (see Section X.E of this General Permit):

   a. The facility boundary;

   b. Storm water drainage areas within the facility boundary;

   c. Portions of any drainage area impacted by discharges from surrounding areas and flow direction of each drainage area;

d. On-facility surface water bodies;

e. Areas of soil erosion;

f. Location(s) of nearby water bodies (such as rivers, lakes, wetlands, etc.);

g. Location(s) of municipal storm drain inlets that may receive the facility's industrial storm water discharges and authorized NSWDs;

h. Locations of storm water collection and conveyance systems and associated points of discharge, and direction of flow;

i. Any structural control measures (that affect industrial storm water discharges, authorized NSWDs, and run-on);

j. All impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures;

k. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified (Section X.G.1.d of this General Permit) have occurred;

l. Areas of industrial activity subject to this General Permit;

m. All storage areas and storage tanks;

n. Shipping and receiving areas;

o. Fueling areas;

p. Vehicle and equipment storage/maintenance areas;

q. Material handling and processing areas;

r. Waste treatment and disposal areas;

s. Dust or particulate generating areas;

t. Cleaning and material reuse areas; and,

u. Any other areas of industrial activity which may have potential pollutant sources.

# PERMIT REGISTRATION DOCUMENTS (PRDS)

## I. Obtaining Coverage

To obtain coverage under this General Permit PRDs must be included and completed. If any of the required items are missing, the PRD submittal is considered incomplete and will be rejected. Upon receipt of a complete PRD submittal, the State Water Board will process the application package in the order received and assign a (WDID) number.

## J. Additional Information

The Water Board may require the submittal of additional information in SMARTS if required to determine the appropriate fee for the facility as specified by the fee regulations.

## K. Questions

If you have any questions on completing the PRDs or about SMARTS, please email stormwater@waterboards.ca.gov or call (866) 563-3107.

# ATTACHMENT E

## LIST OF TOTAL MAXIMUM DAILY LOADS (TMDLS) APPLICABLE TO INDUSTRIAL STORM WATER DISCHARGERS

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

The following table contains a list of Regional Water Board adopted and/or U.S. EPA established/approved TMDLs, as of the adoption date of this General Permit, that are applicable to industrial storm water Dischargers. TMDLs adopted/established after the effective date of the General Permit may, at the Water Boards discretion, be included in this General Permit. This General Permit may be reopened to amend TMDL-specific permit requirements in this Attachment E, or to incorporate new TMDLs adopted during the term of this General Permit that include requirements applicable to Dischargers covered by this General Permit.

| Water Body | Pollutant |
|---|---|
| **San Francisco Bay Regional Water Quality Control Board** | |
| Napa River | Sediment |
| Sonoma Creek | Sediment |
| **Los Angeles Regional Water Quality Control Board** | |
| Santa Clara River Reach 3 | Chloride |
| Santa Clara River | Nutrients |
| Los Angeles River | Metals |
| Los Angeles River | Nutrients |
| San Gabriel River | Metals and Selenium |
| Santa Monica Bay | Nearshore Debris |
| Machado Lake | Nutrient |
| Harbor Beaches of Ventura | Bacteria |
| Ballona Creek | Metals |
| Ballona Creek Estuary | Toxic Pollutants |
| Los Angeles Harbor | Bacteria |
| Marina del Rey Back Basins | Bacteria |
| Santa Clara River | Bacteria |
| Walker Creek, | Mercury |
| Oxnard Drain No. 3 | Pesticides, PCBs[1] and Sediment Toxicity |
| Long Beach City Beaches and Los Angeles River Estuary | Indicator Bacteria |
| Los Angeles and Long Beach Harbors | Toxic and Metals |

[1] Polychlorinated biphenyls

## LIST OF TOTAL MAXIMUM DAILY LOADS (TMDLS) APPLICABLE TO INDUSTRIAL STORM WATER DISCHARGERS

| | |
|---|---|
| Los Angeles Area Lakes | Nitrogen, Phosphorus, Mercury, Trash, Organochlorine Pesticides and PCBs |
| Santa Monica Bay | DDTs and PCBs |
| Machado Lake | Toxics |
| Colorado Lagoon | Pesticides, Polycyclic aromatic hydrocarbons, PCBs, and Metals |
| Calleguas Creek Watershed | Salts |
| Calleguas Creek Watershed | Metals and Selenium |
| Ballona Creek, Ballona Estuary, and Sepulveda Channel | Bacteria |
| Marina Del Rey Harbor-Back Basins | Copper, Lead, Zinc, and Chlordane, and Total PCBs |
| Los Cerritos Channel | Metals |
| **Santa Ana Regional Water Quality Control Board** | |
| San Diego Creek and Newport Bay | Toxic Pollutants |
| **San Diego Regional Water Quality Control Board** | |
| Chollas Creek | Diazinon |
| Chollas Creek | Copper, Lead, and Zinc |
| Los Peñasquitos Lagoon | Sediment |
| Rainbow Creek | Total Nitrogen and Total Phosphorus |
| Shelter Island Yacht Basin | Dissolved Copper |
| Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in SD Bay | Indicator Bacteria |
| Twenty Beaches and Creeks | Indicator Bacteria |

## ATTACHMENT F

## EFFLUENT LIMITATION GUIDELINES (ELGs)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

The following Parts of federal regulations at 40 Code of Federal Regulations Chapter I Subchapter N (Subchapter N) contain ELGs approved by US EPA for specific categories of industrial storm water discharges:

| Point Source Category | ELGs[1] |
|---|---|
| Part 411 - Cement Manufacturing |  411.pdf |
| Part 418 - Fertilizer Manufacturing |  418.pdf |
| Part 419 - Petroleum Refining |  419.pdf |
| Part 422 - Phosphate Manufacturing |  422.pdf |
| Part 423 - Steam Electric Power Generating |  423.pdf |

[1] The applicable ELGs are attached to this Attachment F. To view the attachments from an electronic (pdf) version of this Attachment F, left-click on the paper clip icon to the left of this pdf file to make the attachment window appear, then double-click on the icons of the attached pdf files. The attachments are also available on the Industrial Storm Water program pages of the State Water Resources Control Board's website (www.waterboards.ca.gov).

## EFFLUENT LIMITATION GUIDELINES (ELGs)

| Point Source Category | ELGs[2] |
|---|---|
| Part 429 - Wetting of logs at wet deck storage areas |  429.pdf |
| Part 434 - Coal Mining |  434.pdf |
| Part 436 - Mineral Mining And Processing |  436.pdf |
| Part 440 - Ore Mining And Dressing |  440.pdf |
| Part 443 - Paving And Roofing Materials (Tars And Asphalt) |  443.pdf |
| Part 445 - Landfills |  445.pdf |
| Part 449 - Airport Deicing |  449.pdf |

2 The applicable ELGs are attached to this Attachment F. To view the attachments from an electronic (pdf) version of this Attachment F, left-click on the paper clip icon to the left of this pdf file to make the attachment window appear, then double-click on the icons of the attached pdf files. The attachments are also available on the Industrial Storm Water program pages of the State Water Resources Control Board's website (www.waterboards.ca.gov).

## New Source Performance Standards

New source performance standards (NSPS) represent the best available demonstrated control technology standards. US EPA has established NSPS guidelines for the industries found in the Table below. The intent of NSPS guidelines is to set effluent limitations that represent state-of-the-art treatment technology for new sources.[3]

Table 1 - Storm Water Specific NSPS Effluent Limitation Guidelines

| Regulated Discharge | 40 CFR Section | Multi Sector General Permit Sector | NSPS | Date New Source Data Established |
|---|---|---|---|---|
| Discharge resulting from spray down or intentional wetting of logs as wet deck storage areas | Part 429, Subpart I | A | Yes | 1/26/81 |
| Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished products, by-products or waste products (SIC 2874) | Part 418, Subpart A | C | Yes | 4/8/74 |
| Runoff from asphalt emulsion facilities | Part 443, Subpart A | D | Yes | 7/28/75 |
| Runoff from materials storage piles at cement manufacturing facilities | Part 411, Subpart C | E | Yes | 2/20/74 |
| Mine dewatering discharges at crushed stone, construction sand and gravel, or industrial sand mining facilities | Part 436, Subparts B, C, D | J | No | N/A |
| Runoff from hazardous waste and non-hazardous waste landfills | Part 445, Subparts A and B | K, L | Yes | 2/2/00 |
| Runoff from coal storage piles at steam electric generating facilities | Part 423 | O | Yes | 11/19/82 & 10/8/74 |
| Discharges from primary airports with over 1,000 annual jet departures that conduct deicing operations. | Part 449, Subpart A | S | Yes | NA |

[3] New source means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced: (1) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or (2) After proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal as defined in 40 C.F.R section 122.26.

## ATTACHMENT G

## REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

### A. Areas of Special Biological Significance (ASBS)

1. ASBS are defined in the California Ocean Plan as "those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable."

2. The California Ocean Plan prohibits the discharge of waste to ASBS.

3. The California Ocean Plan authorizes the State Water Board to grant an exception to Ocean Plan provisions where the board determines that the exception will not compromise protection of ocean waters for beneficial uses and the public interest will be served.

4. On March 20, 2012, the State Water Board adopted Resolution 2012-0012 (amended by Resolution 2012-0031 on June 19, 2012) which contained a general exception to the California Ocean Plan for discharges of storm water and non-point sources (ASBS Exception). This resolution also contains the Special Protections that are to be implemented for direct discharges to ASBS. Resolution 2012-0012 is hereby incorporated by reference and its requirements must be complied with by industrial storm water Dischargers discharging directly to ASBS.

5. This General Permit requires Dischargers who have been granted an Ocean Plan exception for discharges to ASBS to comply with the requirements contained in the Special Protections. These requirements are contained below.

### B. ASBS Non-Storm Water Discharges

1. The term "ASBS Non-Storm Water Discharges" means any waste discharges from a municipal separate storm sewer system (MS4) or other NPDES permitted storm drain system to an ASBS that are not comprised entirely of storm water.

2. Only the following ASBS Non-Storm Water Discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability or occur naturally:

a. Discharges associated with emergency fire fighting operations.

b. Foundation and footing drains.

c. Water from crawl space or basement pumps.

d. Hillside dewatering.

e. Naturally occurring groundwater seepage via a storm drain.

f. Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.

3. Authorized ASBS Non- Storm Water Discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in an ASBS.

4. At the San Clemente Island ASBS, discharges incidental to military training and research, development, test, and evaluation operations are allowed. Discharges incidental to underwater demolition and other in-water explosions are not allowed in the two military closure areas in the vicinity of Wilson Cove and Castle Rock. Discharges must not result in a violation of the water quality objectives, including the protection of the marine aquatic life beneficial use, anywhere in the ASBS.

5. At the San Nicolas Island and Begg Rock ASBS, discharges incidental to military research, development, testing, and evaluation of, and training with, guided missile and other weapons systems, fleet training exercises, small-scale amphibious warfare training, and special warfare training are allowed. Discharges incidental to underwater demolition and other in-water explosions are not allowed. Discharges must not result in a violation of the water quality objectives, including the protection of the marine aquatic life beneficial use, anywhere in the ASBS.

## C. ASBS Compliance Plan

1. State Water Board Resolution 2012-0012 grants an exception to the Ocean Plan's prohibition on discharges to ASBS (ASBS Exception) to applicants who were identified as Dischargers of industrial storm water to ASBS (ASBS Dischargers). Each ASBS Discharger shall specifically address the prohibition of ASBS Non-Storm Water Discharges and the requirement to maintain natural water quality for industrial storm water discharges to an ASBS in an ASBS Compliance Plan to be included in the ASBS Discharger's SWPPP. The ASBS Compliance Plan is subject to approval by the Executive Director of the State Water Board. The ASBS Compliance Plan shall include:

a. A map of surface drainage of storm water runoff, showing areas of sheet runoff and priority discharges, and a description of any structural Best Management Practices (BMPs) already employed and/or BMPs to be employed in the future. Priority discharges are those that pose the greatest water quality threat and which are identified as requiring installation of structural BMPs. The map shall also show the storm water conveyances in relation to other features such as service areas, sewage conveyances and treatment facilities, landslides, areas prone to erosion, and waste and hazardous material storage areas, if applicable. The SWPPP shall also include a procedure for updating the map and plan when changes are made to the storm water conveyance facilities.

b. A description of the measures by which all unauthorized ASBS Non-Storm Water Discharges (e.g., dry weather flows) has been eliminated, how these measures will be maintained over time, and how these measures are monitored and documented.

c. A description of how pollutant reductions in storm water runoff, that are necessary to comply with these special conditions, will be achieved through BMPs. Structural BMPs need not be installed if the Discharger can document to the satisfaction of the Executive Director that such installation would pose a threat to health or safety. BMPs to control storm water runoff discharges (at the end-of-pipe) during a design storm shall be designed to achieve on average the following target levels:

   1) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or

   2) A 90% reduction in pollutant loading during storm events, for the applicant's total discharges.

      The baseline date for the reduction is March 20, 2012 (the effective date of the ASBS Exception), except for those structural BMPs installed between January 1, 2005 and the adoption of these special protections. The reductions must be achieved and documented by March 20, 2018.

d. A description of how the ASBS Discharger will address erosion and the prevention of anthropogenic sedimentation in the ASBS. The natural habitat conditions in the ASBS shall not be altered as a result of anthropogenic sedimentation.

e. A description of the non-structural BMPs currently employed and planned in the future (including those for construction activities), and include an implementation schedule. The ASBS Compliance Plan shall also describe the structural BMPs, including any low impact development (LID) measures, currently employed and planned for higher threat discharges and include an

implementation schedule. To control storm water runoff discharges (at the end-of-pipe) during a design storm, ASBS Dischargers must first consider using LID practices to infiltrate, use, or evapotranspiration storm water runoff on-site. The BMPs and implementation schedule shall be designed to ensure that natural water quality conditions in the receiving water are achieved and maintained by either reducing flows from impervious surfaces or reducing pollutant loading, or some combination thereof.

## D. Reporting

If the results of the receiving water monitoring described in Section F. below (Sampling and Analysis Requirements) indicate that the storm water runoff is causing or contributing to an alteration of natural ocean water quality in the ASBS, the ASBS Discharger shall submit a report to the State Water Board within 30 days of receiving the results.

1. The report shall identify the constituents in storm water runoff that alter natural ocean water quality and the sources of these constituents.

2. The report shall describe BMPs that are currently being implemented, BMPs that are identified in the SWPPP for future implementation, and any additional BMPs that may be added to the SWPPP to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the BMPs.

3. Within 30 days of the approval of the report by the Executive Director, the ASBS Discharger shall revise its ASBS Compliance Plan to incorporate any new or modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required.

4. As long as the ASBS Discharger has complied with the procedures described above and is implementing the revised SWPPP, the Discharger does not have to repeat the same procedure for continuing or recurring exceedances of natural ocean water quality conditions due to the same constituent.

5. Compliance with this section does not excuse violations of any term, prohibition, or special condition contained in the Special Protections of the ASBS Exception.

## E. Compliance Schedule

1. As of March 20, 2012, all unauthorized ASBS Non-Storm Water Discharges (e.g., dry weather flow) were effectively prohibited.

2. By September 20, 2013, the Discharger shall submit a draft written ASBS Compliance Plan to the Executive Director that describes its strategy to comply with these special conditions, including the requirement to maintain natural water

quality in the affected ASBS. The ASBS Compliance Plan shall include a description of appropriate non-structural controls and a time schedule to implement structural controls (implementation schedule) to comply with these special conditions for inclusion in the Discharger's SWPPP.

3. By September 20, 2014, the Discharger shall submit the final ASBS Compliance Plan, including a description and final schedule for structural controls based on the results of runoff and receiving water monitoring.

4. By September 20, 2013, any non-structural controls that are necessary to comply with these special conditions shall be implemented.

5. By March 20, 2018, any structural controls identified in the ASBS Compliance Plan that are necessary to comply with these special conditions shall be operational.

6. By March 20, 2018, all Dischargers must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85th percentile threshold of reference water quality data and the pre-storm receiving water levels, then the Discharger must re-sample the receiving water, pre- and post-storm. If after re-sampling the post-storm levels are still higher than the 85th percentile threshold of reference water quality data, and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See Flowchart at the end of this Attachment.

7. The Executive Director may only authorize additional time to comply with the special conditions 5 and 6, above if good cause exists to do so. Good cause means a physical impossibility or lack of funding

   If a Discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the Discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in 5. or 6. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of these requirements. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the Discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The Discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

   The Discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

a. for municipalities, a demonstration of significant hardship to Discharger ratepayers, by showing the relationship of storm water fees to annual household income for residents within the Discharger's jurisdictional area, and the Discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate; or

b. for other governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

## F. Additional Requirements – Waterfront and Marine Operations

In addition to the above provisions, a Discharger with waterfront and marine operations shall comply with the following:

1. For discharges related to waterfront and marine operations, the Discharger shall develop a Waterfront and Marine Operations Management Plan (Waterfront Plan). This plan shall contain appropriate Management Measures/Practices to address nonpoint source pollutant discharges to the affected ASBS.

   a. The Waterfront Plan shall contain appropriate Management Measures/Practices for any waste discharges associated with the operation and maintenance of vessels, moorings, piers, launch ramps, and cleaning stations in order to ensure that beneficial uses are protected and natural water quality is maintained in the affected ASBS.

   b. For discharges from marinas and recreational boating activities, the Waterfront Plan shall include appropriate Management Measures, described in The Plan for California's Nonpoint Source Pollution Control Program, for marinas and recreational boating, or equivalent practices, to ensure that nonpoint source pollutant discharges do not alter natural water quality in the affected ASBS.

   c. The Waterfront Plan shall include Management Practices to address public education and outreach to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in these Special Protections. The management practices shall include appropriate signage, or similar measures, to inform the public of the ASBS restrictions and to identify the ASBS boundaries.

   d. The Waterfront Plan shall include Management Practices to address the prohibition against trash discharges to ASBS. The Management Practices shall include the provision of adequate trash receptacles for marine recreation areas, including parking areas, launch ramps, and docks. The plan shall also include appropriate Management Practices to ensure that the receptacles are

adequately maintained and secured in order to prevent trash discharges into the ASBS. Appropriate Management Practices include covering the trash receptacles to prevent trash from being windblown, staking or securing the trash receptacles so they don't tip over, and periodically emptying the receptacles to prevent overflow.

e. The Discharger shall submit its Waterfront Plan to the State Water Board Executive Director by September 20, 2012. The Waterfront Plan is subject to approval by the State Water Board Executive Director. The plan must be fully implemented within by September 20, 2013.

2. The discharge of chlorine, soaps, petroleum, other chemical contaminants, trash, fish offal, or human sewage to ASBS is prohibited. Sinks and fish cleaning stations are point source discharges of wastes and are prohibited from discharging into ASBS. Anthropogenic accumulations of discarded fouling organisms on the sea floor must be minimized.

3. Limited-term activities, such as the repair, renovation, or maintenance of waterfront facilities, including, but not limited to, piers, docks, moorings, and breakwaters, are authorized only in accordance with Chapter III.E.2 of the Ocean Plan.

4. If the Discharger anticipates that the Discharger will fail to fully implement the approved Waterfront Plan within the 18 month deadline, the Discharger shall submit a technical report as soon as practicable to the Executive Director. The technical report shall contain reasons for failing to meet the deadline and propose a revised schedule to fully implement the plan.

5. The State Water Board may, for good cause, authorize additional time to comply with the Waterfront Plan. Good cause means a physical impossibility or lack of funding.

   If a Discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the Discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in Section F.1.e above. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Attachment. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the Discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The Discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality. The Discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

a. a demonstration of significant hardship by showing that the Discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate.

b. for governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

## G. Sampling and Analysis Requirements

1. Monitoring is mandatory for all ASBS Dischargers to assure compliance with the Ocean Plan. Monitoring requirements include both: (1) Core Discharge Monitoring and (2) Ocean Receiving Water Monitoring (see Sections H. and I. below). The State and Regional Water Boards must approve sampling site locations and any adjustments to the monitoring programs. All ocean receiving water and reference area monitoring must be comparable with the Water Boards' Surface Water Ambient Monitoring Program (SWAMP).

2. Safety concerns: Sample locations and sampling periods must be determined considering safety issues. Sampling may be postponed upon notifying the Executive Director that hazardous conditions prevail.

3. Analytical Chemistry Methods: All constituents must be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, must be analyzed by the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

## H. Core Discharge Monitoring Program

1. General sampling requirements for timing and storm size:

   Runoff must be collected during a storm event that is greater than 0.1 inch and generates runoff, and at least 72 hours from the previously measurable storm event. Runoff samples shall be collected during the same storm and at approximately the same time when post-storm receiving water is sampled, and analyzed for the same constituents as receiving water and reference site samples as described in Section I. below.

2. Runoff flow measurements

   a. For industrial storm water outfalls in existence as of December 31, 2007, 18 inches (457mm) or greater in diameter/width (including multiple outfall pipes in combination having a width of 18 inches, runoff flows must be

measured or calculated, using a method acceptable to and approved by the Executive Director.

b. This will be reported annually for each precipitation season to the Executive Director.

3. Runoff samples – storm events

a. For outfalls equal to or greater than 18 inches (0.46m) in diameter or width: 1) samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, if within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination; and 2) samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.

b. For outfalls equal to or greater than 36 inches (0.91m) in diameter or width:

1) samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, if within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination; and

2) samples of storm water runoff shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals (provided at the end of this Attachment) for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates); and

3) samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.

4) if an ASBS Discharger has no outfall greater than 36 inches, then storm water runoff from the applicant's largest outfall shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals (provided at the end of this Attachment) for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates).

c. For an applicant not participating in a regional integrated monitoring program [see below in Section I.3.] in addition to the sampling requirements in Section H.3.a. and b. above, a minimum of the two largest outfalls or 20 percent of the

larger outfalls, whichever is greater, shall be sampled (flow weighted composite samples) at least three times annually during wet weather (storm event) and analyzed for all Ocean Plan Table A constituents, Table B constituents (Table A and B constituents are provided at the end of this Attachment) for marine aquatic life protection (except for toxicity, only chronic toxicity for three species shall be required), DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, and Ocean Plan indicator bacteria. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one (the largest) such discharge shall be sampled annually in each Region.

d. The Executive Director may reduce or suspend core monitoring once the storm runoff is fully characterized. This determination may be made at any point after the discharge is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

## I. Ocean Receiving Water and Reference Area Monitoring Program

1. In addition to performing the Core Discharge Monitoring Program in Section H. above, all ASBS Dischargers must perform ocean receiving water monitoring. In order to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS, ASBS Dischargers may choose either (1) an individual monitoring program, or (2) participation in a regional integrated monitoring program.

2. Individual Monitoring Program: The requirements listed below are for those ASBS Dischargers who elect to perform an individual monitoring program to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within the affected ASBS. In addition to Core Discharge Monitoring, the following additional monitoring requirements shall be met:

   a. Three times annually, during wet weather (storm events), the receiving water at the point of discharge from the outfalls described in Section H.3. above shall be sampled and analyzed for Ocean Plan Table A constituents, Table B constituents (Table A and B constituents are provided at the end if this Attachment) for marine aquatic life, DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, salinity, chronic toxicity (three species), and Ocean Plan indicator bacteria.

      The sample location for the ocean receiving water shall be in the surf zone at the point of discharges; this must be at the same location where storm water runoff is sampled. Receiving water shall be sampled prior to (pre-storm), and during (or immediately after) the same storm (post-storm). Post-storm sampling shall be during the same storm and at approximately the same time as when the runoff is sampled. Reference water quality shall also be

sampled three times annually and analyzed for the same constituents pre-storm and post-storm, during the same storm seasons when receiving water is sampled. Reference stations will be determined by the State Water Board's Division of Water Quality and the applicable Regional Water Board(s).

b. Sediment sampling shall occur at least three times during every five (5) year period. The subtidal sediment (sand or finer, if present) at the discharge shall be sampled and analyzed for Ocean Plan Table B constituents (provided at the end of this Attachment) for marine aquatic life, DDT, PCBs, PAHs, pyrethroids, and OP pesticides. For sediment toxicity testing, only an acute toxicity test using the amphipod Eohaustorius estuarius must be performed.

c. A quantitative survey of intertidal benthic marine life shall be performed at the discharge and at a reference site. The survey shall be performed at least once every five (5) year period. The survey design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The results of the survey shall be completed and submitted to the State Water Board and Regional Water Board at least six months prior to the end of the permit cycle.

d. Once during each five (5) year period, a bioaccumulation study shall be conducted to determine the concentrations of metals and synthetic organic pollutants at representative discharge sites and at representative reference sites. The study design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The bioaccumulation study may include California mussels (Mytilus californianus) and/or sand crabs (Emerita analoga or Blepharipoda occidentalis). Based on the study results, the Regional Water Board and the State Water Board's Division of Water Quality, may adjust the study design in subsequent permits, or add or modify additional test organisms (such as shore crabs or fish), or modify the study design appropriate for the area and best available sensitive measures of contaminant exposure.

e. Marine Debris: Representative quantitative observations for trash by type and source shall be performed along the coast of the ASBS within the influence of the ASBS Discharger's outfalls. The design, including locations and frequency, of the marine debris observations is subject to approval by the Regional Water Board and State Water Board's Division of Water Quality.

f. The monitoring requirements of the Individual Monitoring Program in this Section are minimum requirements. After a minimum of one (1) year of continuous water quality monitoring of the discharges and ocean receiving waters, the Executive Director of the State Water Board may require additional monitoring, or adjust, reduce or suspend receiving water and reference station monitoring. This determination may be made at any point

after the discharge and receiving water is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

3. Regional Integrated Monitoring Program: ASBS Dischargers may elect to participate in a regional integrated monitoring program, in lieu of an individual monitoring program, to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS. This regional approach shall characterize natural water quality, pre- and post-storm, in ocean reference areas near the mouths of identified open space watersheds and the effects of the discharges on natural water quality (physical, chemical, and toxicity) in the ASBS receiving waters, and should include benthic marine aquatic life and bioaccumulation components. The design of the ASBS stratum of a regional integrated monitoring program may deviate from the otherwise prescribed individual monitoring approach (in Section I.2.) if approved by the State Water Board's Division of Water Quality and the Regional Water Boards.

   a. Ocean reference areas shall be located at the drainages of flowing watersheds with minimal development (in no instance more than 10% development), and shall not be located in CWA Section 303(d) listed waterbodies or have tributaries that are 303(d) listed. Reference areas shall be free of wastewater discharges and anthropogenic non-storm water runoff. A minimum of low threat storm runoff discharges (e.g. stream highway overpasses and campgrounds) may be allowed on a case-by-case basis. Reference areas shall be located in the same region as the ASBS receiving water monitoring occurs. The reference areas for each Region are subject to approval by the participants in the regional integrated monitoring program, the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean reference water samples must be collected from each station, each from a separate storm during the same storm season that receiving water is sampled. A minimum of one reference location shall be sampled for each ASBS receiving water site sampled per responsible party. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

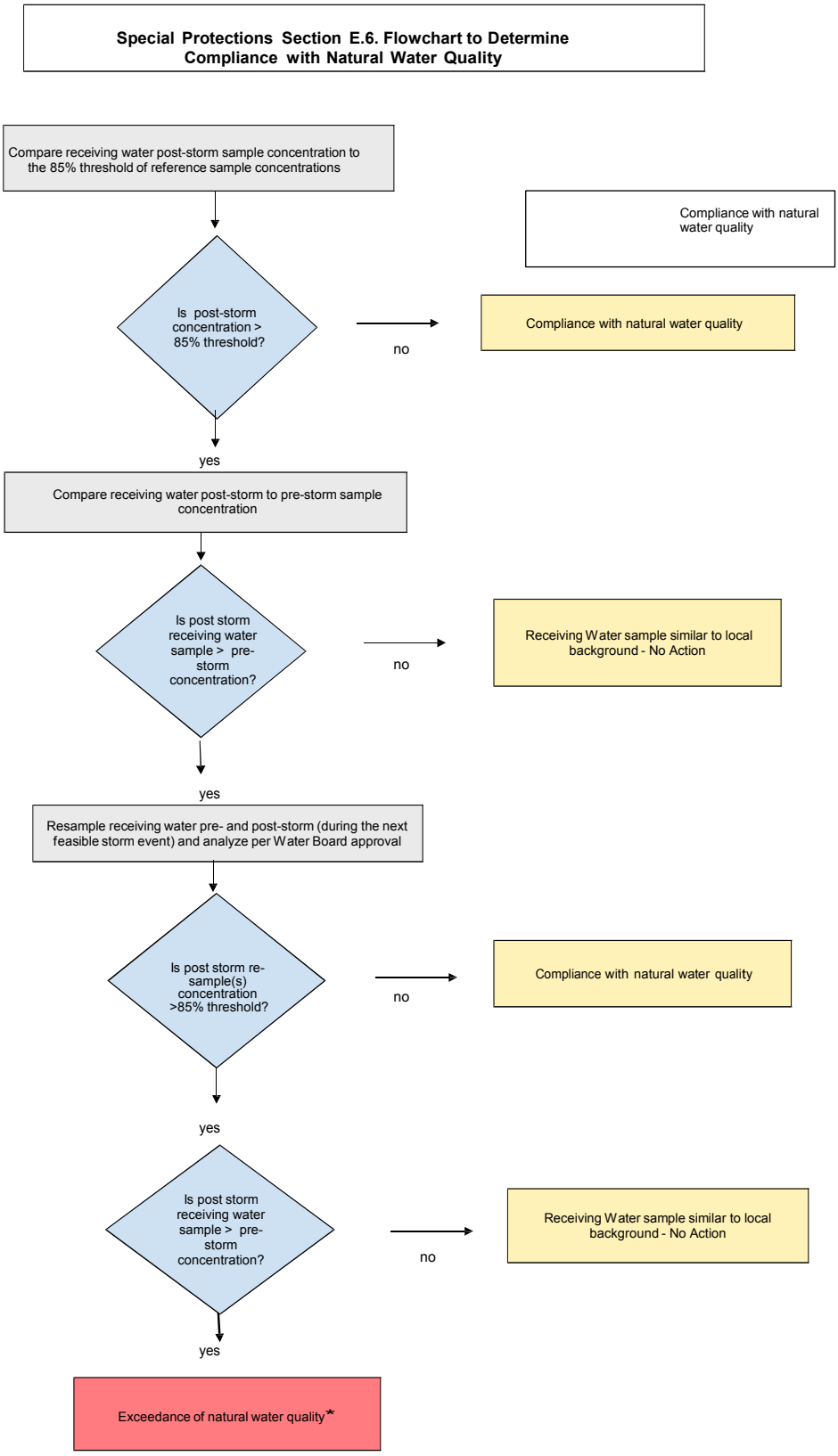
   b. ASBS ocean receiving water must be sampled in the surf zone at the location where the runoff makes contact with ocean water (i.e. at "point zero"). Ocean receiving water stations must be representative of worst-case discharge conditions (i.e. co-located at a large drain greater than 36 inches, or if drains greater than 36 inches are not present in the ASBS then the largest drain greater than18 inches.) Ocean receiving water stations are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean receiving water samples must be collected during each storm season from each station, each from a separate

storm. A minimum of one receiving water location shall be sampled in each ASBS per responsible party in that ASBS. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

c. Reference and receiving water sampling shall commence during the first full storm season following the adoption of these special conditions, and post-storm samples shall be collected during the same storm event when storm water runoff is sampled. Sampling shall occur in a minimum of two storm seasons. For those ASBS Dischargers that have already participated in the Southern California Bight 2008 ASBS regional monitoring effort, sampling may be limited to only one storm season.

d. Receiving water and reference samples shall be analyzed for the same constituents as storm water runoff samples. At a minimum, constituents to be sampled and analyzed in reference and discharge receiving waters must include oil and grease, total suspended solids, Ocean Plan Table B metals (provided at the end of this Attachment) for protection of marine life, Ocean Plan PAHs, pyrethroids, OP pesticides, ammonia, nitrate, phosphates, and critical life stage chronic toxicity for three species. In addition, within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination shall be analyzed.

# REQUIREMENTS FOR DISCHARGERS WHO HAVE BEEN GRANTED AN OCEAN PLAN EXCEPTION FOR DISCHARGES TO ASBS




* When an exceedance of natural water quality occurs, the Discharger must comply with Section D. Note, when sampling data is available, end-of-pipe effluent concentrations will be considered by the Water Boards in making this determination.

ASBS Monitoring

**TABLE A**
**Monitoring Constituent List**
**(excerpted from California Ocean Plan dated 2009)**

| Constituent | Units |
|---|---|
| Grease and Oil | mg/L |
| Suspended Solids | Mg/L |
| Settleable Solids | mL/L |
| Turbidity | NTU |
| PH | |

**TABLE B**
**Monitoring Constituent List**
**(Excerpted from California Ocean Plan dated 2009)**

| Constituent | Units |
|---|---|
| Arsenic | µg/L |
| Cadmium | µg/L |
| Chromium | µg/L |
| Copper | µg/L |
| Lead | µg/L |
| Mercury | µg/L |
| Nickel | µg/L |
| Selenium | µg/L |
| Silver | µg/L |
| Zinc | µg/L |
| Cyanide | µg/L |
| Total Chlorine Residual | µg/L |
| Ammonia (as N) | µg/L |
| Acute Toxicity | TUa |
| Chronic Toxicity | TUc |
| Phenolic Compounds (non-chlorinated) | µg/L |
| Chlorinated Phenolics | µg/L |
| Endosulfan | µg/L |
| Endrin | µg/L |
| HCH | µg/L |

Analytical Chemistry Methods: All constituents shall be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, shall be analyzed by the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

## ATTACHMENT H

## SAMPLE COLLECTION AND HANDLING INSTRUCTIONS

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

For more detailed guidance, Dischargers should refer to the U.S. EPA's "Industrial Stormwater Monitoring and Sampling Guide," dated March 2009, available at: http://www.epa.gov/npdes/pubs/msgp_monitoring_guide.pdf and the "NPDES Storm Water Sampling Guidance Document," dated July 1992, available at: http://www.epa.gov/npdes/pubs/owm0093.pdf .

1. Identify the sampling parameters required to be tested and the number of storm water discharge points that will be sampled. Request the analytical testing laboratory to provide the appropriate number and type of sample containers, sample container labels, blank chain of custody forms, and sample preservation instructions.

2. Determine how samples will be transported to the laboratory. The testing laboratory should receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory). The Discharger may either deliver the samples to the laboratory, arrange for the laboratory to pick up the samples, or overnight ship the samples to the laboratory. All sample analysis shall be done in accordance with 40 Code of Federal Regulations part 136. Samples for pH have a holding time of 15 minutes.[1]

3. Qualified Combined Samples shall be combined by the laboratory and not by the Discharger. Sample bottles must be appropriately labeled to instruct the laboratory on which samples to combine.

4. Unless the Discharger can provide flow weighted information, all combined samples shall be volume weighted.

5. For grab samples, use only the sample containers provided by the laboratory to collect and store samples. Use of any other type of containers may contaminate samples.

6. For automatic samplers that are not compatible with bottles provided by the laboratory, the Discharger is required to send the sample container included with the automatic sampler to the laboratory for analysis.

[1] 40 C.F.R. section 136.3, Table II - Required Containers, Preservation Techniques, and Holding Times.

7. The Discharger can only use automatic sampling device to sample parameters that the device is designed to. For pH, Dischargers can only use automatic sampling devices with the ability to read pH within 15 minutes of sample collection.

8. The Discharger is prohibited from using an automatic sampling device for Oil and Grease, unless the automatic sampling device is specifically designed to sample for Oil and Grease.

9. To prevent contamination, do not touch inside of sample container or cap or put anything into the sample containers before collecting storm water samples.

10. Do not overfill sample containers. Overfilling can change the analytical results.

11. Tightly screw on the cap of each sample container without stripping the threads of the cap.

12. Complete and attach a label for each sample container. The label shall identify the date and time of sample collection, the person taking the sample, and the sample collection location or discharge point. The label should also identify any sample containers that have been preserved.

13. Carefully pack sample containers into an ice chest or refrigerator to prevent breakage and maintain temperature during shipment. Remember to place frozen ice packs into shipping containers. Samples should be kept as close to 4 degrees Celsius (39 degrees Fahrenheit) as possible until arriving to the laboratory. Do not freeze samples.

14. Complete a Chain of Custody form for each set of samples. The Chain of Custody form shall include the Discharger's name, address, and phone number, identification of each sample container and sample collection point, person collecting the samples, the date and time each sample container was filled, and the analysis that is required for each sample container.

15. Upon shipping/delivering the sample containers, obtain both the signatures of the persons relinquishing and receiving the sample containers.

16. Dischargers shall designate and train personnel to collect, maintain, and ship samples in accordance with the sample protocols and laboratory practices.

17. Refer to Table 1 in the General Permit for test methods, detection limits, and reporting units.

18. All sampling and sample preservation shall be in accordance with 40 Code of Federal Regulations part 136 and the current edition of "Standard Methods for

the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including Discharger field instruments for measuring pH or specific conductance if identified as an additional sampling parameter) shall be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. All laboratory analyses shall be conducted according to approved test procedures under 40 Code of Federal Regulations part 136, unless other test procedures have been specified by the Regional Water Quality Control Board. All metals shall be reported as total metals. Dischargers may conduct their own field analysis of pH (or specific conductance if identified as an additional sampling parameter) if the Discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis. With the exception of field analysis conducted by Dischargers for pH (or specific conductance if identified as an additional sampling parameter), all analyses shall be sent to and conducted at a laboratory certified for such analyses by the California Department of Public Health. Dischargers are required to report to the Water Board any sampling data collected more frequently than required in this General Permit (Section XXI.J.2)

# APPENDIX 1

## STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

NATIONAL POLLUTION DISCHARGE ELIMINTATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

FACILITY NAME:_____

Waste Discharge Identification (WDID) #:_____

| | FACILITY CONTACT | Consultant/Qualified Industrial Storm Water Practitioner (QISP) |
|---|---|---|
| **Name** | | |
| **Title** | | |
| **Company** | | |
| **Street Address** | | |
| **City, State** | | |
| **Zip** | | |

| SWPPP (General Permit Section) | Not Applicable | SWPPP Page # or Reference Location | Date Implemented or Last Revised |
|---|---|---|---|
| Signed Certification (Section II.A) | | | |
| Pollution Prevention Team (Section X.D.1) | | | |
| Existing Facility Plans (Section X.D.2) | | | |
| **Site Map(s) (Section X.E)** | | | |
| Facility boundaries (Section X.E.3.a) | | | |
| Drainage areas (Section X.E.3.a) | | | |
| Direction of flow (Section X.E.3.a) | | | |
| On-facility water bodies (Section X.E.3.a) | | | |

# STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

| SWPPP (General Permit Section) | Not Applicable | SWPPP Page # or Reference Location | Date Implemented or Last Revised |
|---|---|---|---|
| Areas of soil erosion (Section X.E.3.a) | | | |
| Nearby water bodies (Section X.E.3.a) | | | |
| Municipal storm drain inlets (Section X.E.3.a) | | | |
| Points of discharge (Section X.E.3.b) | | | |
| Sampling Locations (Section X.E.3.b) | | | |
| Structural control measures (Section X.E.3.c) | | | |
| Impervious areas (Section X.E.3.d) | | | |
| Location of Directly Exposed Materials (Section X.E.3.e) | | | |
| Locations of significant spills and leaks (Section X.E.3.e) | | | |
| Areas of Industrial Activity (Section X.E.3.f) | | | |
| Areas of industrial activity (Section X.E.3.f) | | | |
| Storage areas/storage tanks (Section X.E.3.f) | | | |
| Shipping and receiving areas (Section X.E.3.f) | | | |
| Fueling areas (Section X.E.3.f) | | | |
| Vehicle and equipment storage/maintenance (Section X.E.3.f) | | | |
| Material handling/processing (Section X.E.3.f) | | | |
| Waste treatment/disposal (Section X.E.3.f) | | | |
| | | | |
| Dust or particulate generation (Section X.E.3.f) | | | |
| Cleaning and material reuse (Section X.E.3.f) | | | |

# STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

| SWPPP (General Permit Section) | Not Applicable | SWPPP Page # or Reference Location | Date Implemented or Last Revised |
|---|---|---|---|
| Other areas of industrial activities (Section X.E.3.f) | | | |
| **List of Industrial Materials (Section X.F)** | | | |
| **Storage location** | | | |
| Quantity | | | |
| Frequency | | | |
| **Receiving and shipping location** | | | |
| Quantity | | | |
| Frequency | | | |
| **Handling location** | | | |
| Quantity | | | |
| Frequency | | | |
| **Potential Pollution Sources (Section X.G)** | | | |
| **Description of Potential Pollution Sources (Section X.G.1)** | | | |
| Industrial processes (Section X.G.1.a) | | | |
| Material handling and storage areas (Section X.G.1.b) | | | |
| Dust & particulate generating activities (Section X.G.1.c) | | | |
| Significant spills and leaks (Section X.G.1.d) | | | |
| Non-storm water discharges (Section X.G.1.e) | | | |
| Erodible surfaces (Section X.G.1.f) | | | |
| **Assessment of Potential Pollutant Sources (Section X.G.2)** | | | |
| Narrative assessment of likely sources of pollutants (Section X.G.2.a) | | | |
| Narrative assessment of likely pollutants present in storm water discharges (Section X.G.2.a) | | | |
| Identification of additional BMPs Section X.G.2.b) | | | |

# STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

| SWPPP (General Permit Section) | Not Applicable | SWPPP Page # or Reference Location | Date Implemented or Last Revised |
|---|---|---|---|
| Identification of drainage areas with no exposure (Section X.G.2.c) | | | |
| Identification of additional parameters (Section X.G.2.d) | | | |
| **Storm Water Best Management Practices (Section X.H)** | | | |
| **Minimum BMPs (Section X.H.1)** | | | |
| Good housekeeping (Section X.H.1.a) | | | |
| Preventative maintenance (Section X.H.1.b) | | | |
| Spill response (Section X.H.1.c) | | | |
| Material handling and waste management (Section X.H.1.d) | | | |
| Erosion and sediment controls (Section X.H.1.e) | | | |
| Employee training program (Section X.H.1.f) | | | |
| Quality assurance and record keeping (Section X.H.1.g) | | | |
| **Advanced BMPs (Section X.H.2)** | | | |
| Implement advanced BMPs at the facility (Section X.H.2.a) | | | |
| Exposure Minimization BMPs (Section X.H.2.b.i) | | | |
| Storm Water containment and discharge reduction BMPS (Section X.H.2.b.ii) | | | |
| Treatment Control BMPs (Section X.H.2.b.iii) | | | |
| Other advance BMPs (Section X.H.2.b.iv) | | | |
| **Temporary Suspension of Activities (Section X.H.3)** | | | |
| BMPs necessary for stabilization of the facility (Section X.H.3) | | | |

# STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

| SWPPP (General Permit Section) | Not Applicable | SWPPP Page # or Reference Location | Date Implemented or Last Revised |
|---|---|---|---|
| **BMP Descriptions (Section X.H.4)** | | | |
| Pollutant that a BMP reduces or prevents (Section X.H.4.a.i) | | | |
| Frequency of BMP implementation (Section X.H.4.a.ii) | | | |
| Location of BMP (Section X.H.4.a.iii) | | | |
| Person implementing BMP (Section X.H.4.a.iv) | | | |
| Procedures/maintenance/ instructions for BMP implementation (Section X.H.4.a.v) | | | |
| Equipment and tools for BMP implementation (Section X.H.4.a.vi) | | | |
| BMPs needing more frequent inspections (Section X.H.4.a.vii) | | | |
| Minimum BMP/applicable advanced BMPs not implemented at the facility (Section X.H.4.b) | | | |
| BMPs implemented in lieu of minimum or applicable advanced BMPs (Section X.H.4.c) | | | |
| **BMP Summary Table (Section X.H.5)** | | | |
| **Monitoring Implementation Plan (Section X.I)** | | | |
| Team members assisting in developing the MIP (Section X.I.1) | | | |
| Summary of visual observation procedures, locations, and details (Section X.I.2) | | | |
| Justifications if applicable for: Alternative discharge locations, Representative Sampling Reduction or, Qualified Combined Samples (Section X.I.3) | | | |
| Procedures for field instrument calibration (Section X.I.4) | | | |

## STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST

| SWPPP (General Permit Section) | Not Applicable | SWPPP Page # or Reference Location | Date Implemented or Last Revised |
|---|---|---|---|
| Example of Chain of Custody (Section X.I.5) | | | |
| **Annual Comprehensive Facility Compliance Evaluation (Section XV)** | | | |
| Review of all visual inspection and monitoring records and sampling and analysis results conducted during the previous reporting year (Section XV.A) | | | |
| Visual inspection of all areas of industrial activity and associated potential pollutant sources (Section XV.B) | | | |
| Visual inspection of all drainage areas previously identified as having no-exposure to industrial activities and materials in accordance with the definitions in Section XVII (Section XV.C) | | | |
| Visual inspection of equipment needed to implement the BMPs (Section XV.D) | | | |
| Visual inspection of any structural and/or treatment control BMPs (Section XV.E) | | | |
| Review and assessment of all BMPs for each area of industrial activity and associated potential pollutant sources (Section XV.F) | | | |
| Assessment of other factors needed to complete the information described in Section XVI.B (Section XV.G) | | | |

# APPENDIX 2

# INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

## NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
## GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES

## (GENERAL PERMIT)

This Attachment provides general guidance instructions and guidance for obtaining NEC coverage. The actual NEC requirements are primarily contained in Section XVII of this General Permit.

### A. INSTRUCTIONS:

**Who May File for NEC Coverage**

Sections 301 and 402(p) of the Clean Water Act (CWA), and Sections 1311 and 1342(p) of 33 United States Code prohibit the discharge of storm water associated with industrial activity to waters of the United States without a National Pollutant Discharge Elimination System (NPDES) permit. However, NPDES permit coverage is "conditionally excluded" for discharges of storm water associated with industrial activities (industrial storm water discharges) if the Discharger can certify that a condition of "No Exposure" exists at the industrial facility. A condition of "No Exposure" means that a Discharger's industrial activities and materials are not exposed to storm water. Industrial storm water discharges from construction and land disturbance activities are ineligible for the NEC coverage. Dischargers who file valid NECs in accordance with these instructions are not required to implement Best Available Technology Economically Achievable /Best Conventional Pollutant Control Technology and comply with the Storm Water Pollution Prevention Plan (SWPPP) and monitoring requirements of this General Permit.

Obtaining and Maintaining NEC Coverage

A Discharger must electronically certify and submit NEC Permit Registration Documents (PRDs) via State Water Resources Control Board's (State Water Board's) Storm Water Multi-Application and Report Tracking System (SMARTS) to obtain NEC coverage. This conditional exclusion does not become effective until the PRDs are submitted and the annual fee is paid. Upon receipt of the annual fee, the Discharger will electronically receive an NEC acceptance notification via SMARTS, which will include a Waste Discharge Identification (WDID) number. A Discharger must maintain a condition of "No Exposure" at the facility for the conditional exclusion to remain applicable. The Discharger must annually electronically re-certify the NEC via SMARTS to confirm that the conditions of "no exposure" are being maintained. If conditions change resulting in the exposure of materials and activities to storm water, the Discharger must electronically certify and submit PRDs via SMARTS for Notice of Intent (NOI) coverage under the General Permit for Storm Water Discharges Associated with Industrial Activities (General Permit).

Fees

First time NEC coverage PRDs and the annual re-certification require a fee. Fees may be changed by State Water Board regulation, independent of this General Permit.

**How to Prepare and Submit PRDs for NEC Coverage**

A Discharger must electronically certify and submit PRDs for NEC coverage in accordance with the instructions provided at the State Water Board web site for SMARTS:

https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp

A Discharger with multiple facilities that satisfy the conditions of "No Exposure" must certify and submit PRDs for each facility. The Discharger is required to inspect and evaluate each individual facility to determine the condition of No-Exposure. The Discharger must retain an electronic or paper copy of the NEC coverage acceptance notification for their records.

The following information is required in the PRDs:

Discharger Information

1. The legal business name of the business entity, public organization, or any other entity that operates the facility described in the certification. The name of the operator may or may not be the same as the name of the facility. The operator is the legal entity that controls the facility operations, not the plant or site manager.

2. The mailing address of the facility operator, including the city, state, and zip code.

3. The facility operator contact person, telephone number and e-mail address.

## INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

Facility Information

4. The legal business name of the facility.

5. The total acreage of the facility associated with industrial activity. (Facility size in acres is calculated by taking the square feet and dividing by 43,560.)

6. The complete physical street address (e.g. the street address used for express deliveries), including the city, State, and zip code. Do not use a P.O. Box number. If a physical street address does not exist, describe the location or provide the latitude and longitude of a point within the facility boundary. Latitude and longitude are available from United States Geological Survey quadrangle or topographic maps, or may be found using a mapping site on the internet.

7. The facility contact person, telephone number, and e-mail address.

8. The 4-digit Standard Industrial Classification (SIC) code that represents the facility primary industrial activity. Provide a brief description of the primary industrial activity. If applicable, enter other significant SIC codes and descriptions. To obtain these codes, see the 1987 SIC Manual or the Occupational Health and Safety Administration's site:

   http://www.osha.gov/pls/imis/sicsearch.html

9. If the facility is currently covered under the General Permit, include the WDID number. The WDID number will be used at a later date to terminate the facility's coverage under the General Permit as necessary.

Facility Mailing or Billing Address

Completion of this item is required the facility mailing address or billing address differs from the physical facility address provided above. The Discharger must indicate which address the annual fee invoice must be sent to if the State Water Board is unable to transmit the invoice electronically.

**Site Maps**

Site maps must be prepared and submitted in accordance with the requirements in Section X.E of this General Permit.

**NEC Checklist**

The Discharger must evaluate the eleven major areas that storm water exposure may occur, per the listing at the end of this appendix. The Discharger must be able to certify that none of these major areas have potential for exposure. If the Discharger cannot certify that every one of the eleven major areas do not have exposure, a potential for exposure exists at the facility and the facility is not eligible for NEC coverage. The Discharger must obtain (or continue) NOI coverage under this General Permit if the facility is not eligible for NEC coverage. After obtaining NOI coverage, the Discharger may implement facility modifications to eliminate the potential for a discharge of storm water exposed to industrial activity, and then change their NOI coverage to NEC coverage by certifying the conditions of "No Exposure" are met.

**Certification**

Federal and state statutes provide for severe penalties for Dischargers that submit false information on the PRDs. Dischargers shall certify and submit PRDs via SMARTS for NEC coverage in accordance with Electronic Signature and Certification Requirements in Section XXI.K of this General Permit.

**B. GUIDANCE:**

Contact your local Regional Water Quality Control Board (Regional Water Board) office with questions regarding this guidance.

**1. Who is Eligible to Qualify for the No Exposure Certification (NEC) - Conditional Exclusion?**

All industrial categories listed in Attachment A of this General Permit (excluding construction) are eligible to apply for the NEC coverage.

**2. Limitations on Eligibility for NEC coverage**

In addition to construction projects not being eligible, the following situations limit the applicability of NEC coverage:

a. NEC coverage is available on a facility-wide basis only, not for individual drainage areas or discharge locations. Generally, if any exposed industrial materials or activities exist, or have a potential to exist, anywhere at a facility, NEC coverage is not applicable to the facility. If the Regional Water Board determines that a facility does have exposure or the facility's storm water discharges have a reasonable potential to cause or contribute to an exceedance of applicable water quality objectives/standards, the Regional Water Board can deny NEC coverage.

b. If changes at a facility result in potential exposure of industrial activities or materials, the facility is no longer eligible for NEC coverage. Dischargers

shall register for NOI coverage under this General Permit prior to a planned facility change that will cause exposure, or within seven (7) calendar days after unplanned exposure occurs. If an unplanned exposure occurs due to an emergency response or one-time event that is unlikely to re-occur, a Discharger may contact the Regional Water Board to discuss whether the requirement to obtain NOI coverage can be waived. Unless the Discharger receives a written waiver from the Regional Water Board, the Discharger shall electronically certify and submit PRDs to obtain NOI coverage.

c. Current contamination resulting from historic industrial practices at the facility (e.g., soil contamination, groundwater contamination, etc.) represents a condition of exposure to waters of the United State; therefore a facility with historic contamination is not eligible for NEC coverage.

**3. What is the Definition of No Exposure?**

a. No Exposure means all industrial materials and activities are protected by a storm-resistant shelter to prevent exposure to rain, snow, snowmelt and/or runoff.

b. Industrial materials and activities include, but are not limited to, material-handling equipment or activities; industrial machinery; raw materials, intermediate products, by-products, and final products; or waste products.

c. Material handling activities include storage, loading and unloading, transport, or conveyance of any raw material, intermediate product, by-product, final product, or waste product.

d. Final products intended to be used outdoors (e.g., automobiles) typically pose little risk of polluting storm water since not typically contaminated with pollutants that become mobilized by contact with storm water. Final products are exempt from the requirement for protection by a storm-resistant shelter to qualify for no exposure. Similarly, containers, racks, and other transport platforms (e.g., wooden pallets) used for the storage or conveyance of final products may also be stored outside if pollutant-free or pollutants do not mobilize via contact with storm water.

e. Storm-resistant shelters include: (1) completely roofed and walled buildings or structures, (2) structures with only a top cover (no side coverings) supported by permanent supports, provided material within the structure is not subject to wind dispersion (sawdust, powders, etc.) or being tracked out of the facility, and is not a source of pollutants in the industrial storm water discharges.

**4. Industrial Materials/Activities Not Requiring a Storm-Resistant Shelter**

The intent of the "No Exposure" exclusion is to maintain a condition of permanent "No Exposure". A storm-resistant shelter is not required for the following industrial materials and activities:

a. Drums, Barrels, Tanks, and Similar Containers that are sealed ("sealed" means banded or otherwise secured and without operational taps or valves), are not exposed provided those containers are not deteriorated, do not contain residual materials on the outside surfaces, and do not leak. Drums, barrels, etc., that are not opened while outdoors, or are not deteriorated or leaking, and that do not pose a risk of contaminating storm water runoff. Consider the following when making a "No Exposure" determination:

i. Materials shall not be added or withdrawn to/from containers while outdoors

ii. Simply moving containers while outside does not create exposure unless exposure occurs when pollutants are "tracked out" by the container handling equipment or vehicles.

iii. All outdoor containers shall be inspected to ensure they are not open, deteriorated, or leaking. When an outdoor container is observed as opened, deteriorated, or leaking, the container must immediately be closed, replaced, or sheltered. Frequent detection of open, deteriorated, or leaking containers, or failure to immediately close, replace, or shelter opened, deteriorated or leaking containers will cause a condition of exposure.

iv. Containers, racks, and other transport platforms (e.g., wooden pallets) used with drums, barrels, etc., can be stored outside providing they are contaminant-free and in good repair.

b. Above Ground Storage Tanks (ASTs) In addition to generally being considered as not exposed, ASTs may also be exempt from the prohibition against adding or withdrawing material to/from external containers. ASTs typically use transfer valves to dispense materials that support facility operations (e.g., heating oil, propane, butane, chemical feedstock) or fuel for delivery vehicles (gasoline, diesel, compressed natural gas). For operational

ASTs to qualify for "No Exposure", the following must be satisfied:

i. The tank(s) shall be physically separated from and not associated with vehicle maintenance operations.

ii. There shall be no leaks from piping, pumps, or other equipment that has the potential to come in contact with storm water.

iii. Wherever feasible, the tank(s) shall have secondary containment (e.g., an impervious dike, berm or concrete retaining structure) to prevent runoff in the event of a structural failure or leaking transfer valve. Note: any resulting unpermitted discharge is in violation of the CWA.

c. Lidded Dumpsters. Lidded dumpsters containing waste materials, providing the containers are completely covered and nothing can drain out holes in the bottom, spilled when loaded into the dumpster, or spilled in loading into a garbage truck. Industrial waste materials and trash that is stored uncovered is considered exposed.

d. Adequately maintained vehicles, such as trucks, automobiles, forklifts, trailers or other general-purpose vehicles found onsite - but not industrial machinery that are not leaking, are in good repair or are not otherwise a potential source of contaminants:

i. Vehicles passing between buildings may be exposed to storm water, however if the vehicles are adequately maintained, a condition of exposure may not exist. Similarly, non-leaking vehicles awaiting maintenance at vehicle maintenance facilities are not considered as potential exposure. However, vehicles that have been washed or rinsed that are not completely dry prior to outside exposure have the potential to cause a condition of exposure. Vehicles that track materials out of the facility are considered to be mobilizing pollutants. Vehicles that exit maintenance bays are also considered to cause exposure.

ii. The mere conveyance between buildings of materials / products that are otherwise not allowed to be stored outdoors, does not create a condition of exposure, provided the materials/products are adequately protected from storm water and do not have the potential to be released as a result of a leak or spill.

e. Final products built and intended for use outdoors (e.g., new cars), provided the final products have not deteriorated, are not contaminated, or are not otherwise potential sources of contaminants.

Types of final products not qualifying for a certification of "No Exposure":

i. Products that may be mobilized in storm water discharges (e.g., rock salt).

ii. Products, which may, when exposed, oxidize, deteriorate, leak, or otherwise be a potential source of contaminants (e.g., junk cars, stockpiled train rails).

iii. "Final" products that are, in actuality, "intermediate" products. Intermediate products are those used in the composition of yet another product (i.e., sheet metal, tubing, and paint used in making tractors).

iv. Even if the intermediate product is "final" for a manufacturer and destined for incorporation in a "final product intended for use outdoors," the product is not allowed to be exposed because they may be chemically treated or are insufficiently impervious to weathering.

f. Special Conditions for Construction Activities
Permanent, uninterrupted sheltering of industrial activities or materials may not always be possible during facility renovation or construction. When such circumstances exist, the Discharger is not required to obtain coverage under an NPDES permit as long as the following conditions are met:

i. Materials and activities are protected with temporary covers or shelters (i.e. tarpaulins);

ii. Temporary covers or shelters prevent the contact of storm water to materials and activities;

iii. Materials are subject to wind dispersion are not stored under temporary sheltering;

iv. Temporary shelters are only used when necessary during facility renovation or construction and until permanent storm-resistant shelters as described above are available; and,

v. Temporary shelters are only used for a single period of ninety days or less. (Facilities with construction and renovation projects that will need the use of temporary shelters beyond 90 days, or that will require multiple periods of ninety

days or less, are required to be covered by an NPDES permit.)

**5. Other Potential Sources of Contaminants**

a. Particulate Emissions from Roof Stacks and/or Vents: Deposits of particles or residuals from roof stacks/vents that have the potential to be mobilized by storm water runoff are considered exposed.

b. Pollutants Potentially Mobilized by Wind Windblown materials cause a condition of exposure. Materials sheltered from precipitation are be deemed exposed if the materials has a potential to be mobilized by wind.

**6. Certifying a Condition of "No Exposure"**

To obtain the NEC coverage, the Discharger must electronically certify and submit PRDs via SMARTS that the facility meets the definition of "No Exposure" and pay an annual fee. The Discharger must **submit PRDs for NEC coverage even if the Discharger was not previously required to file for NEC coverage under the previous General Permit**. These PRDs include a checklist requiring the Discharger to evaluate eleven major areas to determine whether there is exposure of industrial activities and materials at the facility. To qualify for NEC coverage the Discharger must satisfy all the NEC coverage conditions in this General Permit and certify that there is "No Exposure". The checklist: 1) aids the Discharger in determining if its facility is eligible for NEC coverage, and 2) furnishes the necessary documentation supporting relief from the General Permit's requirement of NOI coverage. Additionally, Dischargers with NEC coverage are not required to develop and implement SWPPPs or comply with the monitoring requirements.

If a Discharger cannot certify that there is "No Exposure" at the facility, the Discharger must make appropriate changes at the facility to eliminate exposure prior to registering for future NEC coverage. Facility changes must remove all potential for pollutant exposure to storm water.

An annual inspection and evaluation, re-certification and fee are required thereafter.

**7. Other NEC coverage Facts:**

a. NEC coverage is only valid if the condition of "No Exposure" exists and is reasonably expected to continue to exist. Dischargers shall electronically certify and submit PRDs for NOI coverage when the condition of "No Exposure" is no longer expected to exist.

b. Dischargers must file PRDs for NEC coverage for each qualifying facility.

c. An NEC must be submitted for each separate facility qualifying for the "No Exposure" conditional exclusion.

d. An NEC is non-transferable. If a new operator takes over facility operations, the new operator shall electronically certify and submit PRDs and applicable fees for new NEC coverage via SMARTS prior to the operations transfer. NEC coverage cannot be transferred from one physical location to another regardless of ownership.

**8. Operators May Be Required to Obtain NOI Coverage Based on the Protection Of Water Quality?**

Operators who certified that their facilities qualify for NEC coverage may, nonetheless, be required by the Regional Water Board to obtain NOI coverage if the Regional Water Board determines that the facility's discharge has the potential to cause or contribute to an exceedance of applicable water quality objectives/standards or determines that exposure exists at the facility. The Regional Water Board may request information and/or inspect the facility to assess potential water quality impacts and to determine if NOI coverage is required. The Discharger shall take appropriate actions to ensure compliance with the General Permit.

**9. Steps to Obtain NEC coverage**

This section will walk you through the process of obtaining NEC coverage.

**Step 1:** Determine if your facility is subject to this General Permit (refer to Attachment A of this General Permit). If yes, proceed to Step 2. If not, stop here.

If your facility is included in Attachment A and conducts industrial activities, you are required to **either** register for NOI coverage or NEC coverage.

**Step 2:** Determine if your regulated industrial activity meets the definition of "No Exposure" and qualifies for the exclusion from permitting. If yes, proceed to Step 3. If no, stop here and obtain NOI coverage. An

evaluation of the facility must be conducted by facility personnel familiar with the facility and its operations. Inspect all facility areas and potential pollutant sources to determine whether the facility satisfies the "No Exposure" conditions.

**Step 3:** Electronically certify and submit the PRDs for NEC coverage via SMARTS and mail the annual fee to the State Water Board at the following address:

SWRCB
Surface Water Permitting Section
PO Box 1977
Sacramento, CA 95812-1977

To maintain NEC coverage, the NEC must re-certify and pay a fee annually. This may only be done if the condition of "No Exposure" continues to exist at the facility.

**Step 4:** If requested, staff from the Water Boards, local Municipal Separate Storm Sewer System (MS4), or United States Environmental Protection Agency must be allowed to inspect your facility. All inspection reports will be made publicly available.

**Step 5:** Maintain a condition of "No Exposure".

- NEC coverage is not a blanket exemption. Therefore, if facility physical or operational changes occur which cause exposure of industrial activities or materials to storm water, the Discharger must then immediately comply with all the requirements of this General Permit, including obtaining NOI coverage as applicable.

- To maintain the condition of "No Exposure", the Discharger shall annually evaluate the facility to assure that the conditions of "No Exposure" still exist. More frequent evaluations may be necessary in circumstances when facility operations are rapidly changing.

- Failure to maintain the condition of "No Exposure" or otherwise obtain NOI coverage may lead to the unauthorized discharge of storm water associated with industrial activity to waters of the United States, resulting in penalties under the CWA and Water Code.

**C. Frequently Asked Questions:**

**Q1. Who is eligible for NEC Coverage?**

**A.** Any Discharger operating a facility described in Attachment A may register for NEC coverage if their facility has a condition of "No Exposure".

**Q2. How does an eligible Discharger file for NEC coverage and where is the annual fee sent?**

**A.** The PRDs for NEC coverage shall be electronically certified and submitted in accordance with the instructions provided in SMARTS at the State Water Board website at: https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp. The fee is currently $242, but may be changed by regulation. Once NEC coverage is accepted, an invoice will be electronically sent to the Discharger. The annual fee and invoice shall be sent to:

State Water Resources Control Board
Division of Water Quality
Attention: Industrial Storm Water Unit
P.O. Box 1977
Sacramento, CA 95812-1977

**Q3. If my facility's storm water discharges are covered by an individual permit, can I file for NEC coverage?**

**A.** Yes. Storm water discharges covered by an individual permit are eligible for NEC coverage if the conditions at the facility satisfy the definition of "No Exposure" and you obtain approval to terminate individual permit coverage from the local Regional Water Board prior to PRD submittal. Approval from the Regional Water Board is mandatory. Many individual permits, for example, contain numeric storm water effluent limitations ("antibacksliding" provisions may prevent these facilities from qualifying for the "No Exposure" conditional exclusion).

**Q4. My facility was originally excluded from the Phase I regulations because it was classified as a "light industrial facility". The facility has never had any exposure to storm water runoff. Do I now need to certify that the facility meets the No Exposure Exclusion from NPDES Storm Water Permitting?**

**A.** Yes. See answer provided to question number 9, "What is the exclusion "conditional" upon?"

**Q5. Do I have to file a Notice of Termination (NOT) and a register for NEC coverage if my facility has NOI coverage and qualifies for NEC coverage?**

**A.** No. You are only required to register for NEC coverage. You must provide the WDID# in your NEC coverage PRDs in order for the State Water Board to change permit coverage status.

**Q6. When and how often is a NEC coverage re-certification required?**

## INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

**A.** Re-certification of NEC coverage is required annually (assuming the facility maintains its "No Exposure" status). The State Water Board will electronically transmit an NEC re-certification and annual fee notification to each facility operator who has filed for NEC coverage.

New Dischargers must register for NEC coverage before the commencement of facility operations. Dischargers that fail to file for NEC coverage or apply for NOI coverage before the commencement of facility operations will be out of compliance and subject to enforcement.

Existing Dischargers have two options for submitting NECs:

1. Facility operators of "light industrial" facilities who have been operating under their original, no-certification-required permitting exemption must submit the NEC at any time prior to October 1, 2015. Dischargers who have not submitted an NEC or applied for permit coverage by this due date will be considered out of compliance and subject to Water Board enforcement.

2. Dischargers who have NOI coverage may register for NEC coverage at any time following completion of facility changes that result in the condition of "No Exposure".

**Q7. What happens if I know of changes that may cause exposure?**

**A.** If exposure has the potential to occur in the near future due to some anticipated change at the facility, the Discharger must obtain NOI coverage to avoid potential enforcement for violations of this General Permit.

**Q8. Is the NEC coverage transferable to a new Discharger?**

**A.** No. If a new operator takes over your facility, the new operator must register for new NEC coverage prior to the transfer. A new application fee is required.

**Q9. What is the exclusion "conditional" upon?**

**A.** The exclusion from permit coverage requirements is "conditional" upon the certification of the Discharger that the facility does not have exposure of materials or activities to storm water. PRDs for NEC coverage shall be electronically submitted to the State Water Board and will not be accepted if incomplete. The Regional Water Board may review the information, contact and/or inspect the facility, and invalidate the NEC and require the Discharger to obtain NOI coverage. PRDs are public documents and will be available for public review via SMARTS.

**Q10. Can secondary containment around an outdoor exposed area qualify for a condition of "No Exposure"?**

**A.** If secondary containment is engineered to always prevent a discharge of collected rainfall (based on the historical rainfall record) and a simultaneous spill of any other industrial materials or liquids, the "No Exposure" condition may be claimed. Note that there must be proper disposal of any water or liquids collected from the containment (i.e., discharged in compliance with another NPDES permit, treated and discharged to the sanitary sewer, or trucked offsite to an appropriate disposal/treatment facility).

**D. NEC Checklist**

An NEC Checklist must be prepared by the Discharger demonstrating that: (1) the facility has been evaluated, (2) none of the following materials or activities are, or will be in the foreseeable future, exposed to precipitation, and (3) all unauthorized NSWDs have been eliminated:

1. Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed;

2. Materials or residuals on the ground or in storm water inlets from spills/leaks;

3. Materials or products from past industrial activity;

4. Material handling equipment (except adequately maintained vehicles);

5. Materials or products during loading/unloading or transporting activities;

6. Materials or products stored outdoors (except final products intended for outside use, i.e., new cars, where exposure to storm water does not result in the discharge of pollutants);

7. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;

8. Materials or products handled/stored on roads or railways owned or maintained by the Discharger;

9. Waste material (except waste in covered, non-leaking containers, i.e., dumpsters);

## INSTRUCTIONS FOR NO EXPOSURE CERTIFICATION (NEC)

10. Application or disposal of processed wastewater (unless already covered by an NPDES permit); and

11. Particulate matter or visible deposits of residuals from roof stacks/vents evident in the storm water outflow.

# APPENDIX 3

## WATERBODIES WITH CLEAN WATER ACT SECTION 303(D) LISTED IMPAIRMENTS

NATIONAL POLLUTION DISCHARGE ELIMINTATION SYSTEM (NPDES)
GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES
(GENERAL PERMIT)

The 303(d) impairments below are sourced from the 2010 Integrated Report. The rows in red are impairments for which industrial storm water Dischargers subject to this General Permit are not required to analyze for additional parameters unless directed by the Regional Water Board, because these parameters are typically not associated with industrial storm water. Test methods with substantially similar or more stringent method detection limits may be used if approved by the staff of the State Water Board prior to sampling and analysis and upon approval, will be added into SMARTS. The rows that are not in red are impairments for which Dischargers in the 303(d) impaired watershed are required to analyze for additional parameters, if applicable, because these parameters are more likely to be associated with industrial storm water. See General Permit Section XI.B.6.e. In the event that any of the impairments in this appendix are subsequently delisted, the Dischargers with discharges to that watershed are no longer required to analyze for the additional parameters for those impairments, and the provisions for new Dischargers with discharges to 303(d) impaired water bodies contained in Section VII.B of this General Permit no longer apply for those impairments.

The Excel spreadsheet containing the water bodies with 303(d) impairments is an attachment to this Appendix 3. To view the attachment from an electronic (pdf) version of this Appendix 3, left-click on the paper clip icon to the left of this pdf file to make the attachment window appear, then double-click on the icon of an Excel spreadsheet. The Excel spreadsheet is also available on the Industrial Storm Water program pages of the State Water Resources Control Board's website (http://www.waterboards.ca.gov/).

# NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR WASTE DISCHARGE REQUIREMENTS (WDRs) FOR STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)

WATER QUALITY (WQ) ORDER 2013-0001-DWQ NPDES NO. CAS000004
AS AMENDED BY ORDER WQ 2015-0133-EXEC, ORDER WQ 2016-0069-EXEC,
WQ ORDER 2017-XXXX-DWQ, ORDER WQ 2018-0001-EXEC, AND
ORDER WQ 2018-0007-EXEC

| | |
|---|---|
| WQ Order 2013-0001-DWQ was adopted by the State Water Resources Control Board on: | February 5, 2013 |
| WQ Order 2013-0001-DWQ became effective on: | July 1, 2013 |
| The Executive Director of the State Water Resources Control Board issued Order WQ 2015-0133-EXEC on: | September 2, 2015 |
| The Executive Director of the State Water Resources Control Board issued Order WQ 2016-0069-EXEC on: | June 20, 2016 |
| WQ Order 2017-XXXX-DWQ, amending Order 2013-0001-DWQ, was adopted by the State Water Resources Control Board on: | December 19, 2017 |
| The Executive Director of the State Water Resources Control Board issued Order WQ 2018-0001-EXEC on: | January 24, 2018 |
| The Executive Director of the State Water Resources Control Board issued Order WQ 2018-0007-EXEC on: | March 13, 2018 |
| The amendments to WQ Order 2013-0001-DWQ contained in WQ Order 2017-XXXX-DWQ are effective on: | January 1, 2019 |

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board on February 5, 2013, and amended by the Executive Director of the State Water Resources Control Board on September 2, 2015, June 20, 2016, and January 24, 2018, and amended by the State Water Resources Control Board on December 19, 2017.

_____
Jeanine Townsend
Clerk to the Board

**STATE WATER RESOURCES CONTROL BOARD**
**WATER QUALITY ORDER NO. 2013-0001-DWQ**

**AS AMENDED BY**
**ORDER WQ 2015-0133-EXEC,**
**ORDER WQ 2016-0069-EXEC,**
**WQ ORDER 2017-XXXX-DWQ,**
**ORDER WQ 2018-0001-EXEC, AND**
**ORDER WQ 2018-0007-EXEC**

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)**
**GENERAL PERMIT NO. CAS000004**

**WASTE DISCHARGE REQUIREMENTS (WDRs)**
**FOR STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s) (GENERAL PERMIT)**

CONTENTS

**ATTACHMENTS**

Attachment A — Traditional Small MS4 List
Attachment B — Non-traditional Small MS4 List
Attachment C — ASBS Specific Provisions
Attachment D — ASBS Dischargers List
Attachment E — CBSM Requirements
Attachment F — Standard Provisions
Attachment G — TMDLs
Attachment H — Acronyms
Attachment I — Glossary
Designation Flow Chart
Monitoring Flow Chart

**FINDINGS**

**The State Water Resources Control Board (State Water Board) finds that:**

1. Storm water is a resource and an asset and should not be treated as a waste product. Managing rainwater and storm water at the source is a more effective and sustainable alternative to augmenting water supply, preventing impacts from flooding, mitigating storm water pollution, creating green space, and enhancing fish and wildlife habitat. California encourages alternative, innovative, multi-objective solutions to help use and protect this valuable resource, while at the same time controlling pollution due to urban runoff.
2. As human population increases, urban development creates new pollution sources and brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc. which can either be washed or directly dumped into the municipal separate storm sewer system (MS4). As a result, the runoff leaving the developed urban area is greater in pollutant load than the pre-development runoff from the same area. Also, when natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, walkways and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving developed urban area is significantly greater in runoff volume, velocity, peak flow rate, and duration than pre-development runoff from the same area. The increased volume, velocity, rate, and duration of runoff greatly accelerate the erosion of downstream natural channels. In addition, the greater the impervious cover the greater the significance of the degradation.
3. Pollutants of concern found in urban runoff include sediments, non-sediment solids, nutrients, pathogens, oxygen-demanding substances, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons (PAHs), trash, pesticides and herbicides.
4. Trash and litter are a pervasive problem in California. Controlling trash is a priority, because trash adversely affects our use of California's waterways. Trash impacts aquatic life in streams, rivers, and the ocean as well as terrestrial species in adjacent riparian and shore areas. Trash, particularly plastics, persists for years. It concentrates organic toxins, entangles and ensnares wildlife, and disrupts feeding when animals mistake plastic for food and ingest it. Additionally, trash creates aesthetic impacts, impairing our ability to enjoy our waterways.
5. The State Water Resources Control Board (State Board) is developing a statewide policy for trash control in California's waterways. The draft Trash Policy will identify trash as a separate pollutant and establish methods to control trash pollution in waterways, statewide. Following adoption of the draft Trash Policy, the State Water Board may re-open this Order to incorporate water body trash pollution control methods and introduce Trash Reduction Program requirements.
6. A higher percentage of impervious area in urban areas correlates to a greater pollutant loading, resulting in turbid water, nutrient enrichment, bacterial contamination, organic matter loads, toxic compounds, temperature increases, and increases in trash or debris.
7. Conventional landscaping features large lawns, non-native plants, abundant irrigation, and heavy use of fertilizers, herbicides, and pesticides. It frequently requires significant mowing, blowing, trimming, and removal of plants debris. Adopting more storm water-friendly

landscape practices reduces pollutants and also provides tangible water conservation, wildlife habitat, and energy saving benefits.

8. The State Water Board recognizes that this Order affects varied and diverse entities, including agencies that are required to carry out water conservation regulations, wastewater discharge regulations, and land use regulations that may implement, all or in part, provisions of this Order. The State Water Board seeks to minimize duplicate efforts and maximize resources to achieve the greatest water quality benefit; thus the State Water Board recognizes specified related regulations, cited in the body of this Order, as equivalent to implementing designated provisions of this Order.

9. When water quality impacts are considered during the planning stages of a project, new development and many redevelopment projects can more efficiently incorporate measures to protect water quality.

10. In California, urban storm water is listed as the primary source of impairment for ten percent of all rivers, ten percent of all lakes and reservoirs, and 17 percent of all estuaries (2010 Integrated Report). Although these numbers may seem low, urban areas cover just six percent of the land mass of California and so their influence is disproportionately large. Urbanization causes changes in the landscape, including increased loads of chemical pollutants, increased toxicity, changes to flow magnitude, frequency, and seasonality of various discharges, physical changes to stream, lake, or wetland habitats, changes in the energy dynamics of food webs, sunlight, and temperature; and biotic interactions between native and exotic species. In addition to surface water impacts, urbanization can alter the amount and quality of storm water that infiltrates and recharges groundwater aquifers.

11. Education and awareness programs help change human behavior with respect to reducing the amount of pollution generated from storm water sources within the Permittee's MS4 system. In addition to education, encouraging public participation in local storm water programs can lead to program improvement as well as enabling people to identify and report a pollution-causing activity, such as spotting an illicit discharge.

12. Field experience in conducting outfall surveys indicates that illicit discharges may be present at 2 to 5 percent of all outfalls at any given time. Given that pollutants are being introduced into the receiving water during dry weather, illicit discharges may have an amplified effect on water quality and biological diversity.[1] Therefore, implementation of an effective Illicit Discharge and Detection Elimination program in conjunction with focused wet weather monitoring, as necessary, is an essential component of an effective municipal storm water program.

13. In 1990, the U.S. Environmental Protection Agency (U.S. EPA) promulgated rules establishing Phase I of the National Pollutant Discharge Elimination System (NPDES) storm water program. The Phase I program for MS4s requires operators of "medium" and "large" MS4s, that is, those that generally serve populations of 100,000 or greater, to implement a storm water management program as a means to control polluted discharges from these MS4s.

14. A MS4 is a conveyance or system of conveyances that is: 1) owned by a state, city, town, village, or other public entity that discharges to waters of the United States; 2) designed or used to collect or convey storm water (including storm drains, pipes, ditches, etc.); 3) not a

[1] Urban Stormwater Management in the United States, National research Council, 2008

combined sewer; and 4) not part of a Publicly Owned Treatment Works or sewage treatment plant.

15. On December 8, 1999, U.S. EPA promulgated Phase II storm water regulations under authority of the Clean Water Act section 402(p)(6). The Phase II Storm Water requires State Water Board to issue NPDES storm water permits to operators of Small MS4s.

16. On April 30, 2003, the State Water Board adopted Water Quality Order No. 2003-0005-DWQ, NPDES General Permit CAS000004 WDRs for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (General Permit) to comply with Clean Water Act section 402(p)(6). (Available at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003_0005dwq.pdf).

17. Title 40 of the Code of Federal Regulations (40 C.F.R.) section 122.26(b)(16) defines Small MS4s as those not defined as "large" or "medium" MS4s under section 122.26(b)(4) or (b)(7) or designated under 40 Code of Federal Regulations section 122.26(a)(1)(v). The term Small MS4s includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. (40 C.F.R. §122.26(b)(16)(iii).) These latter subsets of Small MS4s are referred to herein as Non-traditional Small MS4s. Non-traditional Small MS4s discharge the same types of pollutants that are typically associated with urban runoff. Separate storm sewers in very discrete areas, such as individual buildings, are not defined as Small MS4s.

18. Of the Small MS4s defined by federal regulations, only "Regulated Small MS4s" (also referred to as "Permittees" herein) must obtain an NPDES permit. Small MS4s are designated as Regulated Small MS4s in this Order in accordance with the criteria described in Findings 19-25.[2]

19. Under 40 Code of Federal Regulations section 122.32(a)(1) all Small MS4s located within an "urbanized area" as determined by the latest Decennial Census by the Bureau of the Census (Urbanized Area) are automatically designated as Regulated Small MS4s.

20. Under 40 Code of Federal Regulations sections 122.32(a)(2) and 123.35(b) the State Water Board is directed to develop a process, as well as criteria, to designate Small MS4s located outside of an Urbanized Area as Regulated Small MS4s. These criteria are to evaluate whether a storm water discharge results in or has the potential to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts.

21. Under guidance provided in 40 Code of Federal Regulations secton 123.35(b)(1)(ii), for determining other significant water quality impacts, U.S. EPA recommends a balanced

[2] In addition to the designation criteria specified in this Order, the State Water Board may designate a Small MS4 as a Regulated Small MS4 in response to a petition received under 40 Code of Federal Regulations section 122.26(f). Any person may petition the State Water Board to require an NPDES permit for a discharge composed entirely of storm water that contributes to a violation of a water quality standard or is a significant contributor of pollutants to the waters of the United States. (Id.). The State Water Board must make a final determination on any petition within 180 days after receiving the petition. (40 C.F.R. §123.35(c).)

consideration of the following designation criteria on a watershed or other local basis: discharge to sensitive waters, high growth or growth potential, high population density, contiguity to an urbanized area, significant contributor of pollutants to waters of the U.S., and ineffective protection of water quality by other programs.

22. The State Water Board is required to apply the designation criteria at a minimum to all Small MS4s located outside of Urbanized Areas serving jurisdictions with a population density of at least 1,000 people per square mile and a population of at least 10,000. (40 C.F.R. §123.35(b)(2).) The State Water Board has discretion to apply the criteria to jurisdictions with smaller population or lower density. All such jurisdictions are then Regulated Small MS4s.

23. In developing the designation criteria, the State Water Board included factors indicative of the potential to result in exceedances of water quality standards and other significant water quality impacts. The following criteria are used to designate Small MS4s outside of Urbanized Areas as Regulated Small MS4s in this Order.

    a. The Small MS4 has high population *and* high population density – High population means a population of 10,000 or more. High population density means a density of 1,000 residents per square mile or greater. Also, to be considered in this definition is a high density created by a non-residential population, such as tourists or commuters.

    b. The Small MS4 discharges to Areas of Special Biological Significance (ASBS) as defined in the California Ocean Plan.

24. Designation of additional Small MS4s as Regulated Small MS4s may be made by the Regional Water Boards on a case by case basis. Case by case determinations of designation shall be based on the potential of a Small MS4's discharges to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts. Where such case by case designations have been recommended by the Regional Water Boards prior to adoption of this Order, the designated Small MS4s are listed on the relevant Attachments to the Order and the reasons for designation are laid out in the Fact Sheet. The Regional Water Boards may continue to make case by case determinations of designation during the permit term. Such designations must be approved by the Regional Water Board after public review and comment.

25. 40 Code of Federal Regulations section 123.35(b)(4) requires designation as a Regulated Small MS4 of any Small MS4 outside an Urbanized Area that contributes substantially to the pollutant loadings of a physically interconnected MS4 regulated by the NPDES storm water program. A Small MS4 is interconnected with a separately permitted MS4 if storm water that has entered the Small MS4 is allowed to flow directly into a permitted MS4. In general, if the Small MS4 discharges more than ten percent of its storm water to the permitted MS4, or its discharge makes up more than ten percent of the permitted MS4's total storm water volume, it is a significant contributor of pollutants to the permitted MS4. In specific cases, the MS4s involved or third parties may show that the ten percent threshold is inappropriate for the MS4 in question.

26. Regulated Small MS4s may seek a waiver from Phase II requirements if they meet criteria specified in 40 Code of Federal Regulations sections 122.32(c)-(e).[3] The State Water

[3] Waiver criteria also found at 40 C.F.R. 123.35(d).

Board has additionally provided for a waiver for those communities outside of urbanized areas with a population of 20,000 or less with an annual median household income (MHI) that is less than 80 percent of the statewide annual MHI. (Wat. Code, § 79505.5, subd. (a)).

27. Small MS4s face highly variable conditions both in terms of threats to water quality from their storm water discharges and resources available to manage those discharges. Therefore, one set of prescriptive requirements is not an appropriate regulatory approach for all Regulated Small MS4s. This Order distinguishes between New and Renewal Traditional Small MS4 Permittees. Additionally, this Order addresses differences between Traditional and Non-traditional Small MS4s by detailing Non- traditional Small MS4 specific provisions in Section F Non-Traditional Small MS4 Provisions. Provisions are tailored to address the diverse program structures of Non- traditional Small MS4s to allow for an appropriate regulatory approach.

28. There are variable levels of resources available to Regulated Small MS4s for public outreach and education and water quality monitoring. Recognizing this, the Order gives Permittees numerous compliance options in these two program areas. However, all Regulated Small MS4s that discharge to ASBS or impaired water bodies[4] must conduct monitoring as specified in Attachment C and Attachment G, respectively. All Regulated Small MS4s with a population of 50,000 or more must conduct monitoring specified in Sections E.13.d.1. or E.13.d.2. of the Order or as approved by the Executive Officer of the applicable Regional Board. Additionally, for the public outreach program, the Regional Water Boards may require the Regulated Small MS4s to utilize the approach of Community-Based Social Marketing.

29. Renewal Traditional Small MS4 Permittees shall comply with Section E. Certain provisions within Section E contain compliance dates that are past the effective date of this Order, in these cases, the Permittee shall implement its existing program until that date.

30. This Order modifies the existing General Permit, Order 2003-0005-DWQ by establishing the storm water management program requirements in the Order and defining the minimum acceptable elements of the municipal storm water management program. Minimum permit requirements are known at the time of permit issuance and not left to be determined later through Regional Water Board review and approval of Storm Water Management Plans (SWMPs).

31. The State Water Board recognizes the necessity of a storm water program guidance document specific to each Permittee to provide planning and guidance for each program area and to identify responsible implementing parties. Permittees must develop and implement a storm water program guidance document and must submit the document during the application process.

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[4] A waterbody that has been determined under state policy and federal law to not meet water quality standards. An impaired water is a water that has been listed on the California 303(d) list or has not yet been listed but otherwise meets the criteria for listing. A water is a portion of a surface water of the state, including ocean, estuary, lake, river, creek, or wetland. The water currently may not be meeting state water quality standards or may be determined to be threatened and have the potential to not meet standards in the future. The State of California's 303(d) list can be found at http://www.swrcb.ca.gov/quality.html.

32. The State Water Board recognizes that in some instances Renewal Permittees' SWMPs that were approved under the prior General Permit, Order 2003-0005-DWQ have incorporated BMPs designed to address locality-specific storm water issues and that in some cases these BMPs may, because of locality-specific factors, be more protective of water quality than the minimum requirements established by this Order. Renewal Permittees will additionally include in the guidance document the following: identification and brief description of each BMP and associated measurable goal included in the Permittee's previously approved SWMP under the prior General Permit, Order 2003-0005-DWQ, that constitutes a more specific local or tailored level of implementation that may be more protective of water quality than the minimum requirements of this Order; and identification of whether the Permittee proposes to maintain, reduce, or cease implementation for each more protective, locally- tailored BMP. In no instance may a BMP be reduced or ceased if it is required by the minimum standards set by this Order.

33. Minimum measures have been established in this Order to simplify assessment of compliance and allow the public to more easily assess each Permittee's compliance.

34. Each provision establishes the required task description, minimum implementation levels (i.e., escalating enforcement, reporting requirements for tracking projects, number of monitoring sites, etc.), and reporting elements to substantiate that the Permittee meets these implementation levels. Regional Water Board staff will be able to evaluate each individual Permittee's compliance through Annual Report review and the program evaluation (audit) process.

35. The provisions contained in this Order were derived from two main U.S. EPA documents: MS4 Program Evaluation Guide[5] and the MS4 Permit Improvement Guide[6] along with interviews and information gathered from a lengthy collaborative stakeholder process.

36. Consistent with Clean Water Act section 402(p)(3)(B)(iii), this Order requires controls to reduce pollutants from the MS4 to the maximum extent practicable (MEP). The MEP standard requires Permittees to apply Best Management Practices (BMPs) that are effective in reducing or eliminating the discharge of pollutants to the waters of the U.S. MEP emphasizes pollutant reduction and source control BMPs to prevent pollutants from entering storm water runoff. MEP may require treatment of the storm water runoff if it contains pollutants. The MEP standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. BMP development is a dynamic process and may require changes over time as the Permittees gain experience and/or the state of the science and art progresses. To do this, the Permittees must conduct and document evaluation and assessment of each relevant element of its program, and their program as a whole, and revise activities, control measures/BMPs, and measurable goals, as necessary to meet MEP. MEP is the cumulative result of implementing, evaluating, and creating corresponding changes to a variety of technically appropriate and economically feasible BMPs, ensuring that the most appropriate BMPs are implemented in the most effective manner.

37. The Order's Receiving Water Limitations language is consistent with State Water Board Order WQ 99-05 (*Orange County)* adopted by the State Water Board on June 17, 1999.

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[5] Municipal Separate Storm Sewer System (MS4) Program Evaluation Guidance, USEPA, EPA-833-R-07-003, January 1, 2007

[6] MS4 Permit Improvement Guide, USEPA, April 1, 2010

Receiving Water Limitations apply to all Permittees subject to this Order. The State Water Board held a workshop on November 20, 2012, to hear comments on the receiving water limitations provisions in MS4 permits. This Order has a reopener clause that will allow the State Water Board to reopen the Order if the Board directs changes to the Receiving Water Limitations language based on comments received. (State Water Board Order WQ 99-05 above is available at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/1999/wq1999_05.pdf).

38. Non-storm water discharges consist of all discharges from an MS4 that do not originate from precipitation events. This Order effectively prohibits non-storm water discharges through an MS4 into waters of the U.S. Certain categories of non-storm water discharges are conditionally exempt as specified at 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B)(1). Non-storm water discharges that are regulated by a separate NPDES permit are not subject to the discharge prohibition. Prohibited non-storm water discharges include conditionally exempt discharges that are found to be a significant source of pollutants to waters of the U.S.

39. Non-storm water discharges to ASBS are prohibited except as specified in the General Exception. Certain enumerated non-storm water discharges are allowed under the General Exception if essential for emergency response purposes, structural stability, slope stability, or if occur naturally. In addition, an NPDES permitting authority may authorize non-storm water discharges to an MS4 with a direct discharge to an ASBS to the extent the NPDES permitting authority finds that the discharge does not alter natural ocean water quality in the ASBS. This Order allows utility vault discharges to an MS4 with a direct discharge to an ASBS, provided the discharge is authorized by the General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Water, NPDES No. CAG 990002. The State Water Board is in the process of reissuing the General NPDES Permit for Utility Vaults. As part of the renewal, the State Water Board will require a study to characterize representative utility vault discharges to an MS4 with a direct discharge to an ASBS and will impose conditions on such discharges to ensure the discharges do not alter natural ocean water quality in the ASBS. Given the limited number and intermittent nature of utility vault discharges to MS4s that discharge directly to an ASBS, the State Water Board finds that discharges from utility vaults and underground structures to an MS4 with a direct discharge to an ASBS are not expected to result in a substantial alteration of natural ocean water quality in the ASBS in the interim period while the General NPDES Permit for Discharges from Utility Vaults is renewed and the study is completed. Other short-duration, intermittent non-storm water discharges related to LUPs (e.g. groundwater dewatering, potable water system flushing, hydrotest discharges) are regulated under NPDES permits issued by the Regional Water Boards. Although such discharges are not specifically enumerated in the General Exception as essential for emergency response purposes, structural stability, or slope stability, they may be required to ensure the safety and stability of the utility systems or for operations and maintenance and for extending these essential services. For this reason, and because the short-duration and intermittent nature of these discharges renders them unlikely to result in substantial alteration of natural ocean water quality in the ASBS, this Order permits such discharges to a segment of the MS4 with a direct discharge to an ASBS provided they are authorized by an NPDES permit issued by the State Water Board or relevant Regional Water Board. However, if a Regional Water Board determines a specific discharge from a utility vault or underground

structure does alter the natural ocean water quality in an ASBS, the Regional Water Board may prohibit the discharge as specified in this Order.

40. Total Maximum Daily Loads (TMDL) are numerical calculations of the maximum amount of a pollutant that a water body can assimilate and still meet water quality standards. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point sources (waste load allocations) and non-point sources (load allocations), background contribution, plus a margin of safety. Discharges from Small MS4s are point source discharges subject to TMDLs. TMDLs are a mechanism to achieve compliance with water quality standards (i.e. receiving water limitations in this Order) in impaired water bodies. Incorporation of TMDL-based requirements into the MS4 permit, consistent with applicable basin plans, allows the permittee greater flexibility in achieving the water quality standards in the receiving water by allowing additional time to meet the receiving water limitations. The TMDL-specific requirements of Attachment G are mandated by federal law and federal regulations. Clean Water Act Section 303(d) states that each state "shall" identify impaired waterbodies, "shall" prioritize such waters/watersheds for future development of TMDLs, and "shall" develop TMDLs for the appropriate pollutants in accordance with the prioritization. (33 U.S.C. § 1313(d).) The TMDLs must be approved by U.S. EPA. (Id.) The Code of Federal Regulations provides that, once U.S. EPA approves a TMDL for a waterbody, the effluent limitations in any NPDES permit "shall" be "consistent with the assumptions and requirements of any available wasteload allocations." (40 C.F.R. § 122.44(d)(1)(vii)(B).) Specific to Phase II MS4 permits, the Code of Federal Regulations states that "the permit will include… [m]ore stringent terms and conditions… based on an approved total maximum daily load…" (40 C.F.R. § 122.34(c)(1).) Federal law thus compels the State Water Board to include the TMDL-specific provisions of Attachment G in the Phase II MS4 Permit.

    This Order requires Permittees to comply with all applicable TMDL-based requirements listed in Attachment G. These requirements are consistent with the assumptions and requirements of the wasteload allocations established in the relevant TMDLs. (40 C.F.R. §122.44(d)(1)(vii)(B).) The requirements were developed by the State Water Board and the Regional Water Boards, in consultation with the permittees. The Fact Sheet incorporates a discussion establishing that the requirements are consistent with the assumptions and requirements of the wasteload allocations of the TMDLs.

    Past final TMDL wasteload allocation attainment deadlines are enforceable on the effective date of this Order on January 1, 2019. It is appropriate to set the effective date of the Order at January 1, 2019, one year following adoption, in order to allow permittees additional time to demonstrate attainment of the waste load allocations, request time schedule orders incorporating compliance schedules for the attainment of the waste load allocations, or request consideration by the Regional Water Board Executive Officer of whether the particular regulatory language of a given TMDL allows for an extension of a deadline for attainment of the wasteload allocation. Attachment G specifies BMP-based WQBELs and other permit requirements for attainment of the wasteload allocations even in cases where the final wasteload allocation deadline is past. These requirements are appropriate because the Order states that it is not the intention of the State Water Board or the Regional Water Boards to take enforcement action against a permittee where (1) a permittee has applied in good faith for a time schedule order and is implementing the requirements in Attachment G pending approval of the time schedule order or (2) the Regional Board has initiated proceedings to revise the implementation schedule or other

requirements of a TMDL and the permittee is implementing the requirements in Attachment G pending the outcome of the proceedings.

41. Degraded watershed processes lead to degraded water quality. To fully protect beneficial uses, post-construction runoff retention and hydromodification control criteria for individual projects must be derived with a knowledge of dominant watershed processes. Watershed management zones will be delineated by the State Board during this permit term. The Watershed management zones will be used to identify applicable areas and appropriate criteria for runoff retention and hydromodification control to be incorporated into the next permit. Regional Water Boards that approve watershed process-based criteria for post-construction during this permit term will be permitted to require Permittees to implement these criteria.

42. The post-construction requirements and design standards contained in this Order are consistent with State Water Board Order WQ 2000-11 (*Bellflower)*. (Available at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2000/wq2000_11.pdf).

43. State Water Board, California State Parks and the State Historic Preservation Officer may coordinate efforts to manage post-construction projects involving historic sites, structures or landscapes that cannot alter their original configuration in order to maintain their historic integrity.

44. Permittees will submit Annual Reports electronically using the State Water Board's Storm Water Multi-Application Reporting and Tracking System (SMARTS). The purpose of the Annual Report is to evaluate (1) the implementation of Permittees' storm water program; (2) the effectiveness of BMPs and Measurable Goals, (3) the Permittee's improvement opportunities to achieve MEP, and (4) any supplemental information required by a Regional Water Board in accordance with the Regional Water Board's specific requirements.

45. To apply for General Permit coverage authorizing storm water discharges to surface waters pursuant to this Order, the Permittees shall electronically file a Notice of Intent (NOI) using SMARTS and mail the appropriate permit fee to the State Water Board. The NOI represents the Permittee's commitment to comply with the BMPs specified in this Order to achieve compliance with the minimum control measures specified at 40 Code of Federal Regulations sections122.34 (b)(1) through (b)(6).

46. Under 40 Code of Federal Regulations section 122.35, a Separate Implementing Entity (SIE) can implement a storm water management program for another entity such as a municipality, agency, or special district. The SIE implements parts or all of a storm water program for a Permittee. Permittees relying on a SIE to implement their entire program must electronically file an NOI using SMARTS and mail appropriate fee to the State Water Board.

47. Each Permittee is individually responsible for adoption and enforcement of ordinances and/or policies, implementation of identified control measures/BMPs needed to prevent or reduce pollutants in storm water and operation and maintenance (O&M). Enforcement actions concerning this Order will be pursued only against the individual Permittee responsible for specific violations of this Order.

48. In accordance with 40 Code of Federal Regulations section122.28(b)(3), a Regional Water Board may issue an individual MS4 NPDES Permit to a Permittee otherwise subject to this

Order, or adopt an alternative general permit that covers storm water discharges regulated by this Order. In accordance with Code of Federal Regulations section 122.34(b)(3), a Regulated Small MS4 in the same urbanized area as a medium or large MS4 may jointly with the medium or large MS4 seek a modification of the other MS4s permit to be added as a limited co-permittee. The applicability of this Order is automatically terminated on the effective date of the individual permit or joint permit or the date of approval for coverage under the alternative general permit.

49. Certain BMPs implemented or required by Permittees for urban runoff management may create a habitat for vectors (e.g., mosquitoes and rodents) if not properly designed or maintained. Close collaboration and cooperation among the Permittees, local vector control agencies, Regional Water Board staff, and the California Department of Public Health is necessary to identify and implement appropriate vector control measures that minimize potential nuisances and public health impacts resulting from vector breeding.

50. 40 Code of Federal Regulations section 131.12 requires that state water quality standards include an anti-degradation policy consistent with the federal policy. The State Water Board established California's anti-degradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal anti-degradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Water Quality Control Plans (Basin Plans) implement, and incorporate by reference, both the State and federal anti- degradation policies. (The above State Water Board Resolution No. 68-16 is available at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/1968/rs68_016.pdf).

51. This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code § 21100, et seq.) in accordance with Water Code section13389. (*County of Los Angeles v. Cal. Water Boards*, (2006), 143 Cal.App.4th 985.)

52. Following public notice in accordance with State and federal laws and regulations, the State Water Board, in a public hearing on August 8, 2012, heard and considered all comments. The State Water Board has prepared written responses to all significant comments.

53. The State Water Board has considered the costs of complying with this Order and whether the required BMPs meet the minimum MEP Standard required by federal law. Further discussion of cost of compliance is included in the Fact Sheet.

54. This Order shall serve and become effective as an NPDES permit and the Permittees shall comply with all its requirements pursuant to the timeframes identified within the permit.

IT IS HEREBY ORDERED that operators of Small MS4s subject to this Order shall comply with the following:

## A. APPLICATION REQUIREMENTS FOR ALL SMALL MS4 PERMITTEES

Any Small MS4s designated under this Order that chooses to apply for an individual permit or request to join the permit of a Phase I Permittee must notify the Regional Water Board of its intent to do so by July 1, 2013. Census Designated Places (CDPs) listed on Attachment A that

are located within an existing NPDES permit area are not required to file for separate coverage and pay separate fees.

A.1. Small MS4 Permittees (Except for Department of Defense and Department of Corrections and Rehabilitation Permittees)

a. New Permittees shall electronically file an NOI via SMARTS and mail the appropriate fee to the State Water Board by July 1, 2013. Renewal Permittees shall electronically file an NOI via SMARTS and pay the appropriate application fee to the State Water Board. Any Renewal Permittees with paid 2013 application fee invoices shall receive a prorated refund. If the Permittee is designated as a Regulated Small MS4 by a Regional Water Board after adoption of this Order, the Permittee shall file the NOI and mail the appropriate fee within six months of the date of designation.

b. General Permit coverage will be in effect upon receipt of the following:

1) NOI via SMARTS
2) Appropriate Fee (in accordance with the most recent fee schedule[7])
3) Permit boundary map delineating permit jurisdiction: At a minimum the map shall include the following:

(a) Phase II MS4 permit boundary based on 2010 Census data. For cities, the permit area boundary is the city boundary. For Counties, permit boundaries must include urbanized areas and places identified in Attachment A located within their jurisdictions. The boundaries must be proposed in the permit boundary map and may be developed in conjunction with the applicable Regional Water Board
(b) City/County Boundaries
(c) Main Arterial Streets
(d) Highways
(e) Waterways
(f) Phase I MS4 Permit Boundary (if applicable)

4) Guidance document: The document shall at least include the following:

New Permittees:
(a) Overall program planning
(b) Identification of all permit requirements and responsible implementing parties

Renewal Permittees:
(a) Overall program planning
(b) Identification of all permit requirements and responsible implementing parties
(c) Identification and brief description of each BMP and associated measurable goal included in the Permittee's most current SWMP that constitutes a more specific local or tailored level of implementation that may be more protective of water quality than the minimum requirements of this Order.
(d) Identification of whether the Permittee will maintain, reduce, or cease

[7] California Code of Regulations. Title 23. Division 3. Chapter 9 Waste Discharge Reports and Requirements. Article 1 Fees.

implementation for each more protective, locally-tailored BMP.

(e) For any more protective, locally-tailored BMP and associated measurable goal for which the Renewal Permittee will reduce or cease implementation, the Renewal Permittee shall demonstrate to the Executive Officer of the relevant Regional Water Board that the reduction or cessation is in compliance with this Order and the maximum extent practicable standard, and will not result in increased pollutant discharges. The demonstration by the Permittee will be subject to public comment before any approval by the Executive Officer of reduction or cessation of BMPs In no instance may the Renewal Permittee reduce or cease a BMP if it is required by the minimum standards set by this Order.

The guidance document may be in spreadsheet, tabular or narrative format.

A.2. Department of Defense and Department of Corrections and Rehabilitation Permittees

a. Permittee shall electronically file an NOI via SMARTS and mail the appropriate fee to the State Water Board by July 1, 2013. If the Permittee is designated as a Regulated Small MS4 by a Regional Water Board after adoption of this Order, the Permittee shall file the NOI and mail the appropriate fee within six months of the date of designation.

b. General Permit coverage will be in effect upon receipt of the following:
   1) NOI via SMARTS
   2) Appropriate fee (in accordance with the most recent fee schedule[8])
   3) Permit boundary map as developed by the Permittee

Renewal MS4s must continue implementing their current storm water management programs until submittal of a NOI via SMARTS.

A.3. Waiver Certification

Regulated Small MS4s may seek a waiver from the General Permit requirements if they meet criteria specified in 40 C.F.R. §122.32(c)-(e) or additional criteria specified in A.3.b.(3) below.

In order for a Regional Water Board to waive requirements for a Regulated Small MS4, (1) the Regulated Small MS4 must certify that its discharges do not cause or contribute to, or have the potential to cause or contribute to, a water quality impairment, and (2) the Regulated Small MS4 must meet one of the waiver options in Section b below:

a. Waiver Certification Application Requirements - A Waiver Certification will only be in effect upon completion of the following:
   1) Annual Waiver Certification submitted via SMARTS.
   2) Annual Waiver Certification renewal fee of $200 plus any applicable surcharge.
   3) Letter via SMARTS from Regional Water Board or its Executive Officer waiving requirements.

[8] California Code of Regulations. Title 23. Division 3. Chapter 9 Waste Discharge Reports and Requirements. Article 1 Fees.

Requirements are automatically waived if the Regional Water Board does not respond within six months.

b. Waiver Criteria

(1) Option 1

(a) The jurisdiction served by the system is less than 1,000 people;

(b) The system is not contributing substantially (as defined in Finding 25) to the pollutant loadings of a physically interconnected regulated MS4; and

(c) If the small MS4 discharges any pollutants identified as a cause of impairment of any water body to which it discharges, storm water controls are not needed based on WLAs that are part of a U.S.EPA approved or established TMDL that addresses the pollutant(s) of concern.

(2) Option 2

(a) The jurisdiction served by the system is less than 10,000 people;

(b) The Regional Water Board has evaluated all waters of the U.S. that receive a discharge from the system;

(c) The Regional Water Board has determined that storm water BMPs are not needed based on WLAs that are part of a U.S. EPA approved or established TMDL that addresses the pollutant(s) of concern or an equivalent analysis; and

(d) The Regional Water Board has determined that future discharges from the Regulated Small MS4 do not have the potential to result in exceedances of water quality standards.

(3) Option 3 (applicable to Small MS4s outside an Urbanized Area only)

Small Disadvantaged Community – The Regulated Small MS4 certifies that it is a community with a population of 20,000 or less with an annual median household income (MHI) that is less than 80 percent of the statewide annual MHI. (Wat. Code, § 79505.5, subd.(a)).

If the Waiver Certification Application Requirements or conditions of any waiver option are not met by the Regulated Small MS4, then the Regulated Small MS4 must submit a NOI via SMARTS and appropriate fee for coverage under this General Permit or apply for an individual NPDES permit.

The State Water Board or a Regional Water Board can, at any time, require a previously waived Regulated Small MS4 to comply with this General Permit or an individual NPDES permit if circumstances change so that the conditions of the waiver are no longer met. Changed circumstances can also allow a Regulated Small MS4 to request a waiver at any time.

## B. DISCHARGE PROHIBITIONS

1. Discharges of waste from the MS4 that are prohibited by Statewide Water Quality Control Plans or applicable Regional Water Quality Control Plans (Basin Plans) are prohibited.

2. Discharges of storm water from the MS4 to waters of the U.S. in a manner causing or threatening to cause a condition of pollution or nuisance as defined in Water Code § 13050 are prohibited.

3. Discharges through the MS4 of material other than storm water to waters of the U.S. shall be effectively prohibited, except as allowed under this Provision or as otherwise authorized by a separate NPDES permit. The following non-storm water discharges are not prohibited provided any pollutant discharges are identified and appropriate control measures to minimize the impacts of such discharges, are developed and implemented under the Permittee's storm water program. This provision does not obviate the need to obtain any other appropriate permits for such discharges.

   a. water line flushing;
   b. individual residential car washing;
   c. diverted stream flows;
   d. rising ground waters;
   e. uncontaminated ground water infiltration (as defined at 40 C.F.R. §35.2005(20)) to separate storm sewers;
   f. uncontaminated pumped ground water;
   g. discharges from potable water sources;
   h. foundation drains;
   i. air conditioning condensation;
   j. springs;
   k. water from crawl space pumps;
   l. footing drains;
   m. flows from riparian habitats and wetlands;
   n. dechlorinated swimming pool discharges; and
   o. incidental runoff from landscaped areas (as defined and in accordance with Section B.4 of this Order).

   Discharges or flows from fire-fighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the U.S.

   If a Permittee or a Regional Water Board Executive Officer determines that any individual or class of non-storm water discharge(s) listed above may be a significant source of pollutants to waters of the U.S. or physically interconnected MS4, or poses a threat to water quality standards (beneficial uses), the Regional Water Board Executive Officer may require the appropriate Permittee to monitor and submit a report and to implement BMPs on the discharge.

4. Discharges in excess of an amount deemed to be incidental runoff shall be controlled. Regulated Small MS4s shall require parties responsible for such to implement Sections B.4.a-d below. Incidental runoff is defined as unintended amounts (volume) of runoff, such as unintended, minimal over-spray from sprinklers that escapes the area of intended use. Water leaving an intended use area is not considered incidental if it is part of the facility design, if it is due to excessive application, if it is due to intentional overflow or application, or if it is due to negligence.

Parties responsible for controlling runoff in excess of incidental runoff shall:

a. Detect leaks (for example, from broken sprinkler heads) and correct the leaks within 72 hours of learning of the leak;
b. Properly design and aim sprinkler heads;
c. Not irrigate during precipitation events; and
d. Manage pond containing recycled water such that no discharge occurs unless the discharge is a result of a 25-year, 24-hour storm event or greater, and the appropriate Regional Water Board is notified by email no later than 24 hours after the discharge. The notification is to include identifying information, including the Permittee's name and permit identification number.

Non-storm water runoff discharge that is not incidental is prohibited, unless otherwise specified in Section B.3 above.

Incidental runoff may be regulated by waste discharge requirements or, where necessary, waste discharge requirements that serve as a NPDES permit, including MS4 permits.

5. Discharge to Areas of Special Biological Significance (ASBS) is prohibited except in compliance with the ASBS Special Protection Provisions in Attachment C. Regulated Small MS4s that discharge to an ASBS are listed in Attachment D and are subject to the ASBS Special Protection Provisions.

## C. EFFLUENT LIMITATIONS

1. Permittees shall implement controls as required by this Order to reduce the discharge of pollutants from their MS4s to waters of the U. S. to the MEP. Permittees shall additionally reduce the discharge of pollutants (1) to achieve applicable TMDL waste load allocations in accordance with Sections E.15.a and F.5.i.1. of this Order and (2) to comply with the Special Protections for discharges to ASBS in accordance with Section E.4 of this Order.
2. Storm water discharges regulated by this Order shall not contain a hazardous substance in amounts equal to or in excess of a reportable quantity listed in 40 C.F.R. Part 117 or 40 C.F.R. Part 302.

## D. RECEIVING WATER LIMITATIONS

Discharges shall not cause or contribute to an exceedance of water quality standards contained in a Statewide Water Quality Control Plan, the California Toxics Rule (CTR), or in the applicable Regional Water Board Basin Plan.

The Permittee shall comply with Receiving Water Limitations through timely implementation of control measures/BMPs and other actions to reduce pollutants in the discharges and other requirements of this Order including any modifications. The storm water program shall be designed to achieve compliance with Receiving Water Limitations. If exceedance(s) of water quality objectives or water quality standards persist notwithstanding implementation of other storm water program requirements of this Order, the Permittee shall assure compliance with Receiving Water Limitations by complying with the following procedure:

1. Upon a determination by either the Permittee or the Regional Water Board that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Permittee shall promptly notify and thereafter submit a report to the Regional Water Board that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report shall include an implementation schedule. The Regional Board may require modifications to the report;
2. Submit any modifications to the report required by the Regional Water Board within 30 days of notification;
3. Implement the actions specified in the report in accordance with the approved schedule;
4. So long as the Permittee has complied with the procedure set forth above and is implementing the actions, the Permittee does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the State Water Board or the Regional Water Board to develop additional BMPs.

If a Permittee fully complies with the applicable requirements and deadlines in Attachment G for a specific pollutant and water body, including the requirement to demonstrate attainment of the applicable wasteload allocation in accordance with sections E.15.a or F.5.i.1 of this Order, the Permittee is deemed to be in compliance with this section's requirement that discharges not cause or contribute to an exceedance of water quality standards for that specific pollutant and water body.

## E. PROVISIONS FOR ALL TRADITIONAL SMALL MS4 PERMITTEES

### E.1. RENEWAL TRADITIONAL SMALL MS4 PERMITTEES

All Renewal Traditional Small MS4s Permittees shall comply with this Section. Where the requirements of a certain subsection provide a compliance date that is past the effective date of this Order, the Renewal Traditional Small MS4 shall implement its existing program until that date.

### E.2. NEW TRADITIONAL SMALL MS4 PERMITTEES

New Traditional Small MS4s shall comply with this Section.

### E.3. NON-TRADITIONAL SMALL MS4S PERMITTEES

**E.3.a.** All Renewal Non-Traditional Small MS4 Permittees shall comply with Section F of this Order. Where the requirements of a certain subsection provide a compliance date that is past the effective date of this Order, the Renewal Non-Traditional Small MS4 shall implement its existing program until that date.

**E.3.b.** New Non-Traditional Small MS4s Permittees shall comply with Section F of this Order.

### E.4. SMALL MS4 ASBS PERMITTEES

Both Traditional and Non-traditional Small MS4s Permittees that discharge to ASBS as listed on Attachment D shall comply with Attachment C in addition to all other applicable provisions of this Order.

## E.5. SEPARATE IMPLEMENTING ENTITY (SIE)

Permittees, both Traditional and Non-traditional Small MS4s, may rely on a SIE to satisfy one or more of the permit obligations, if the SIE can appropriately and adequately address the storm water issues of the Permittee. The SIE must agree to implement the BMPs, or components thereof, to achieve compliance with this Order. If the SIE fails to implement the BMPs, the Permittee remains responsible for compliance with this Order.

## E.6. PROGRAM MANAGEMENT ELEMENT

To effectively implement a coordinated storm water program, the Permittee shall have an overarching Program Management element in its storm water management program. The Program Management element shall include the following:

### E.6.a. Legal Authority

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall review and revise relevant ordinances or other regulatory mechanisms, or adopt any new ordinances or other regulatory mechanisms, to obtain adequate legal authority, to the extent allowable under state or local law, to control pollutant discharges into and from, as applicable, its MS4, and to meet the requirements of this Order.

(ii) **Implementation Level** –At a minimum, the Permittee shall have adequate legal authority to:

(a) Effectively prohibit non-storm water discharges through the MS4. Exceptions to this prohibition are NPDES-permitted discharges of non-storm water and non- storm water discharges in B.3 that are considered non-significant contributors of pollutants. Where the non-storm water discharge is to a segment of an MS4 that discharges directly to an ASBS, exceptions to the non-storm water prohibition are specified in Attachment C.

(b) Detect and eliminate illicit discharges and illegal connections to the MS4. Illicit connections include pipes, drains, open channels, or other conveyances that have the potential to allow an illicit discharge to enter the MS4. Illicit discharges include all non-storm water discharges not otherwise authorized in this Order, including discharges from organized car washes, mobile cleaning and pressure wash operations,

(c) Respond to the discharge of spills, and prohibit dumping or disposal of materials other than storm water into the MS4.

(d) Require parties responsible for runoff in excess of incidental runoff to implement Discharge Prohibition B.4.a-e.

(e) Require operators of construction sites, new or redeveloped land; and industrial and commercial facilities to minimize the discharge of pollutants to the MS4 through the installation, implementation, or maintenance of BMPs consistent with the California Storm Water Quality Association (CASQA) Best Management Practice Handbooks or equivalent.

(f) Require information deemed necessary to assess compliance with this Order. The Permittee shall only require information in compliance with the Homeland Security Act or any other federal law that concerns security in the United States. The Permittee shall also have the authority to review designs and proposals for new development and redevelopment to determine whether adequate BMPs will be

installed, implemented, and maintained during construction and after final stabilization (post-construction).

(g) Enter private property for the purpose of inspecting, at reasonable times, any facilities, equipment, practices, or operations for active or potential storm water discharges, or non-compliance with local ordinances/standards or requirements in this Order, as consistent with any applicable state and federal laws.

(h) Require that dischargers promptly cease and desist discharging and/or cleanup and abate a discharge, including the ability to:

1) Effectively require the discharger to abate and clean up their discharge, spill, or pollutant release within 72 hours of notification; high risk spill should be cleaned up as soon as possible.
2) Require abatement within 30 days of notification, for uncontrolled sources of pollutants that could pose an environmental threat;
3) Perform the clean-up and abatement work and bill the responsible party, if necessary;
4) Provide the option to order the cessation of activities until such problems are adequately addressed if a situation persists where pollutant-causing sources or activities are not abated;
5) Require a new timeframe and notify the appropriate Regional Water Board when all parties agree that clean-up activities cannot be completed within the original timeframe and notify the appropriate Regional Water Board in writing within five business days of the determination that the timeframe requires revision.

(i) When warranted, have the ability to:

1) Levy citations or administrative fines against responsible parties either immediately at the site, or within a few days.
2) Require recovery and remediation costs from responsible parties.

(j) Impose more substantial civil or criminal sanctions (including referral to a city or district attorney) and escalate corrective response, consistent with its Enforcement Response Plan developed pursuant to Section E.6.c., for persistent non-compliance, repeat or escalating violations, or incidents of major environmental harm.

**E.6.b. Certification**

(i) **Task Description –** Within the second year of the effective date of the permit, the Permittee shall certify by its Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative as described in 40 Code of Federal Regulations section 122.22(b) that the Permittee has and will maintain full legal authority to implement and enforce each of the requirements contained in this Order.

(ii) **Implementation Level** – The Permittee's certification statement shall include the following:

(a) Identification of all departments within the Permittee's jurisdiction that conduct storm water-related activities and their roles and responsibilities under this Order.

(b) Citation of storm water runoff related ordinances, identification of the topics each ordinance addresses;

(c) Identification of the local administrative and legal procedures and ordinances available to mandate compliance with storm water-related ordinances and therefore with the conditions of this Order.

(d) A description of how storm water related-ordinances are reviewed and implemented.

(e) A statement that the municipality will implement enforcement actions consistent with its Enforcement Response Plan developed pursuant to Section E.6.c.

(iii) **Reporting** – All Permittees shall submit in the second year online Annual Report, a statement signed by an authorized signatory certifying the Permittee has adequate legal authority to comply with all Order requirements.

**E.6.c. Enforcement Measures and Tracking**

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and implement an Enforcement Response Plan. The Enforcement Response Plan shall contain enforcement procedures and actions and identify the Permittee's responses to violations and describe how the Permittee will address repeat and continuing violations by implementing progressively stricter responses as needed to achieve compliance.

(ii) **Implementation Level -** The Enforcement Response Plan shall describe how the Permittee will use each of the following types of enforcement responses based on the type of violation:

(a) Verbal Warnings – Verbal warnings are primarily consultative in nature. At a minimum, verbal warnings shall specify the nature of the violation and required corrective action.

(b) Written Notices – Written notices shall include nature of the violation and the required corrective action, with deadlines for taking such action.

(c) Escalated Enforcement Measures – The Permittee shall establish legal authority to employ any combination of the enforcement actions below (or their functional equivalent), and to escalate enforcement responses where necessary to correct persistent non-compliance, repeat or escalating violations, or incidents of major environmental harm:

1) Citations (with Fines) – The Enforcement Response Plan shall describe when the Permittee will assess monetary fines, which may include civil and administrative penalties.
2) Stop Work Orders – The Enforcement Response Plan shall describe when the Permittee will issue stop work orders that require construction activities to be halted, except for those activities directed at cleaning up, abating discharge, and installing appropriate BMPs.
3) Withholding of Plan Approvals or Other Authorizations – Where a facility is in non-compliance, the Enforcement Response Plan shall describe how the Permittee's own approval or authorization processes that affect the facility's ability to discharge to the MS4 can be used to abate the violation.
4) Additional Measures – The Enforcement Response Plan may also describe other escalated measures the Permittee has under its local legal authorities. For example, the Permittee may need to improve erosion control measures and collect the funds to pay for work and materials from the responsible party by

either collecting against the project's bond or directly billing the responsible party.

(d) NPDES Permit Referrals–For those construction projects or industrial facilities subject to the State's Construction General Permit (CGP) or Industrial General Permit (IGP), the Permittee shall:

1) Refer non-filers (i.e., those facilities that cannot demonstrate that they obtained permit coverage) to the appropriate Regional Water Board within 30 days of making that determination, or file a complaint on the State Water Board's website: http://www.dtsc.ca.gov/database/CalEPA_Complaint/index.cfm. In making such referrals, at a minimum include the following documentation:

   a) Construction project or industrial facility location.

   b) Name of owner or operator.

   c) Estimated construction project size or type of industrial activity (including the Standard Industrial or the North American Industry Classification, if known).

   d) Records of communication with the owner or operator regarding filing requirements.

2) Refer ongoing violations to the appropriate Regional Water Board provided that the Permittee has made a good faith effort of progressive enforcement to achieve compliance with its own ordinances. At a minimum, the Permittee's good faith effort shall include documentation of two follow-up inspections and two warning letters or notices of violation. In making such referrals, the Permittee shall include, at a minimum, the following information:

   a) Construction project or industrial facility location;

   b) Name of owner or operator;

   c) Estimated construction project size or type of industrial activity (including Standard Industrial Classification or North American Industry Classification System if known);

   d) Records of communication with the owner or operator regarding the violation, including at least two follow-up inspections, two warning letters or notices of violation, and any response from the owner or operator;

   e) Enforcement Tracking –Track instances of non-compliance via hard-copy files or electronically. The enforcement tracking documentation shall include, at a minimum, the following:

      (1) Name of owner/operator.

      (2) Location of construction project or industrial facility.

      (3) Description of violation.

      (4) Required schedule for returning to compliance.

      (5) Description of enforcement response used, including escalated responses if repeat violations occur or violations are not resolved within the time specified in the enforcement action.

      (6) Accompanying documentation of enforcement response (e.g., notices of noncompliance, notices of violations, etc.)

(7) Any referrals to different departments or agencies; and

f) Recidivism Reduction – The Permittee shall identify chronic violators of any provision of this Order or of any related local ordinance or regulation and reduce the rate of noncompliance recidivism. The Permittee shall develop incentives, disincentives, or increase inspection frequency at the operator's sites to prevent chronic violations.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

## E.7. EDUCATION AND OUTREACH PROGRAM

Traditional Small MS4 Permittees may be required to implement Community-Based Social Marketing (CBSM) requirements as detailed in Attachment E upon determination by a Regional Board Executive Officer. The Regional Board Executive Officer shall notify Permittees within three months of the permit adoption date of their determination to require CBSM.[9] The notification shall include a statement of reasons why the Executive Officer finds that implementation of CBSM is appropriate. If the Permittee disagrees with the Executive Officer determination, the Permittee may bring the dispute to the State Water Board Executive Director or his designee as specified under the Dispute Resolution provision of this Order.

### E.7.a. Public Education and Outreach

Within the first year of the effective date of the permit, all Permittees shall comply with the requirements in this Section by selecting one or more of the following Public Education and Outreach options:

1) Contributing to a countywide storm water program, as determined appropriate by the Permittee members, so that the countywide storm water program conducts outreach and education on behalf of its members; or
2) Contributing to a regional outreach and education collaborative effort (a regional outreach and education collaborative effort occurs when all or a majority of the Permittees collaborate to conduct regional outreach and education. Regional outreach and education collaboration includes Permittees defining a uniform and consistent message, deciding how best to communicate the message, and how to facilitate behavioral changes, then collaboratively apply what is learned through local jurisdiction groups, pooling resources and skills.); or
3) Fulfilling outreach and education requirements within their jurisdictional boundaries on their own; or

[9] Getting in Step, A Guide to, Conducting Watershed Outreach Campaigns, 3rd Edition, November 2010, EPA 841-B-10-002, USEPA, Office of Water.

4) A combination of the previous options, so that all requirements are fulfilled.

**Reporting** – By the first year Annual Report, the Permittee shall submit information indicating which Public Education and Outreach option(s) it will use to comply with this Section. For each option involving a contribution to a countywide storm water program or regional outreach and education collaborative effort, the Permittee shall complete and have available in the first year Annual Report documentation, such as a written agreement, letter or similar document, which confirms the collaboration with other MS4s.

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop and implement a comprehensive storm water public education and outreach program. The public education and outreach program shall be designed to reduce pollutant discharges in storm water runoff and non-storm water discharges to the MS4 through increased storm water knowledge and awareness in target communities. The Public Education and Outreach Program shall be designed to measurably increase the knowledge and awareness of targeted audience regarding the municipal storm drain system, impacts of urban runoff and non-storm water discharges on receiving waters, and potential BMP solutions for the target audiences, thereby reducing pollutant releases to the MS4 and the environment.

(ii) **Implementation Level** –The Permittee shall, at a minimum:

(a) Develop and implement a public education strategy that establishes education tasks based on water quality problems, target audiences, and anticipated task effectiveness. The strategy must include identification of who is responsible for implementing specific tasks and a schedule for task implementation. The strategy must demonstrate how specific high priority storm water quality issues in the community or local pollutants of concern are addressed.

(b) Implement surveys at least twice during the permit term to gauge the level of awareness in target audiences and effectiveness of education tasks.

(c) Develop and convey a specific storm water message that focuses on the following:

1) Local pollutants of concern
2) Target audience
3) Regional water quality issues

(d) Develop and disseminate appropriate educational materials to target audiences and translate into applicable languages when appropriate (e.g. the materials can utilize various media such as printed materials, billboard and mass transit advertisements, signage at select locations, stenciling at storm drain inlets, radio advertisements, television advertisements, and websites);

(e) Utilize public input (e.g., the opportunity for public comment, or public meetings) in the development of the program;

(f) Distribute the educational materials, using whichever methods and procedures determined appropriate during development of the public education strategy;

(g) Convey messages to explain the benefits of water-efficient and storm water-friendly landscaping[10], using existing information if available;

[10] For example, Surfrider's Ocean Friendly Garden Program (http://www.surfrider.org/programs/ocean-friendly-gardens) and the Water Efficient Landscape Ordinance (WELO)

(h) Develop and convey messages specific to reducing illicit discharges with information about how the public can report incidents to the appropriate authorities. The Permittee must promote, publicize, and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s through a central contact point, including phone numbers for complaints and spill reporting, and publicize to both internal Permittee staff and the public. If 911 is selected, the Permittee must also create, maintain, and publicize a staffed, nonemergency phone number with voicemail, which is checked daily;

(i) Develop and convey messages specific to proper application of pesticides, herbicides, and fertilizers;

(j) Within the Permittee's jurisdiction, provide independent, parochial, and public schools with materials to effectively educate school –age children about storm water runoff and how they can help protect water quality habitat in their local watershed (s). The Permittee is encouraged to use environmental and place-based, experiential learning materials that are integrated into school curricula and school facility management[11]. In the case that an environmental and place-based, experiential learning local program does not exist, the Permittee may use California's Education and Environment Initiative Curriculum[12] or equivalent.

(k) Develop (or coordinate with existing, effective programs) and convey messages specific to reducing discharges from organized car washes, mobile cleaning and pressure washing operations, and landscape irrigation.

(l) Conduct storm water-friendly education for organized car wash participants and provide information pertaining to car wash discharge reduction. The Permittee may use the Sacramento Stormwater Quality Partnership's River Friendly Carwash Program[13], or equivalent, for guidance.

(m) Develop and convey messages specific to mobile cleaning and pressure wash businesses.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.7.b. Staff and Site Operator Training and Education**

**E.7.b.1. Illicit Discharge Detection and Elimination Training**

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and implement a training program for all Permittee staff who, as part of their normal job responsibilities, may be notified of, come into contact with,

[11] For example, Sacramento Splash Organization (www.sacsplash.org/), Effie Yeaw Nature Center (www.sacnaturecenter.net) or Yolo Basin Organization (yolobasin.org)

[12] http://www.californiaeei.org/

[13] http://www.beriverfriendly.net/riverfriendlycarwashing/

or otherwise observe an illicit discharge or illegal connection to the storm drain system.

(ii) **Implementation Level** – The training program shall include at a minimum:
(a) Identification of an illicit discharge or illegal connection.
(b) Proper procedures for reporting and responding to the illicit discharge or illegal connection.
(c) Follow-up training shall be provided as needed to address changes in procedures, techniques, or staffing.
(d) An annual assessment of their trained staff's knowledge of illicit discharge response and refresher training as needed.
(e) Training for new staff who, as part of their normal job responsibilities may be notified of, come into contact with, or otherwise observe an illicit discharge or illegal connection shall be trained no later than six months after the start of employment.
(f) Contact information, including the procedure for reporting an illicit discharge, shall be included in each of the Permittee's fleet vehicles that are used by field staff.
(g) Focused education on identified illicit discharges and associated illicit discharge locations.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a. for compliance directions.

**E.7.b.2. Construction Outreach and Education**

**(a) Permittee Staff Training**

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall ensure that all staff implementing the construction site storm water runoff control program are adequately trained.

(ii) **Implementation Level** – The Permittee may conduct in-house training or contract with consultants. Training shall be provided to the following staff positions of the MS4:
(a) Plan Reviewers and Permitting Staff - The Permittee shall ensure plan reviewers and permitting staff are qualified individuals, knowledgeable in the technical review of local erosion and sediment control plans, (including proper control measure selection, installation, implementation, and maintenance, as well as administrative requirements such as inspection reporting/tracking and the use of the Permittee's enforcement responses), and are certified pursuant to a State Water Board sponsored program as a Qualified Storm Water Pollution Prevention Plan (SWPPP) Developer (QSD), or a designated person on staff possesses the QSD credential.
(b) Erosion Sediment Control/Storm Water Inspectors - The Permittee shall ensure inspectors are qualified individuals, knowledgeable in inspection procedures, and are certified pursuant to a State Water Board sponsored program as either (1) a Qualified SWPPP Developer (QSD); (2) a Qualified SWPPP Practitioner (QSP); or

(3) a designated person on staff possesses each credential (QSD to supervise plan review, QSP to supervise inspection operations).

(c) Third-Party Plan Reviewers, Permitting Staff, and Inspectors - If the Permittee utilizes outside parties to review plans and/or conduct inspections, the Permittee shall ensure these staff are trained.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**(b) Construction Site Operator Education**

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and distribute educational materials to construction site operators.

(ii) **Implementation Level** – The Permittee shall do the following:

(a) Each year provide information on training opportunities for construction operators on BMP selection, installation, implementation, and maintenance as well as overall program compliance.

(b) Develop or utilize existing outreach tools (i.e. brochures, posters, etc.) aimed at educating construction operators on appropriate selection, installation, implementation, and maintenance of storm water BMPs, as well as overall program compliance.

(c) Distribute appropriate outreach materials to all construction operators who will be disturbing land within the MS4 boundary. The Permittee's contact information and website shall be included in these materials.

(d) Update the existing storm water website, as necessary, to include information on appropriate selection, installation, implementation, and maintenance of BMPs.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.7.b.3. Pollution Prevention and Good Housekeeping Staff Training**

The Permittee shall train employees on how to incorporate pollution prevention/good housekeeping techniques into Permittee operations.

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop a biennial employee training program for appropriate employees involved in implementing pollution prevention and good housekeeping practices as specified in Section E.11. Pollution Prevention/Good Housekeeping for Permittee Operations of this Order. The Permittee shall determine the need for interim

training during alternate years when training is not conducted, through an evaluation of employee Pollution Prevention/Good Housekeeping knowledge. All new hires whose jobs include implementation of pollution prevention and good housekeeping practices must receive this training within the first year of their hire date.

(ii) **Implementation Level** – The training program shall include the following:

(a) Biennial training for all employees implementing this program element. This biennial training shall include a general storm water education component, any new technologies, operations, or responsibilities that arise during the year, and the permit requirements that apply to the staff being trained. Employees shall receive clear guidance on appropriate storm water BMPs to use at municipal facilities and during typical O&M activities.

(b) A biennial assessment of trained staff's knowledge of pollution prevention and good housekeeping and shall revise the training as needed.

(c) A requirement that any contractors hired by the Permittee to perform O&M activities shall be contractually required to comply with all of the storm water BMPs, good housekeeping practices, and standard operating procedures described above.

(d) The Permittee shall provide oversight of contractor activities to ensure that contractors are using appropriate BMPs, good housekeeping practices and following standard operating procedures.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

## E.8. PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall involve the public in the development and implementation of activities related to the program. The public participation and involvement program shall encourage volunteerism, public comment and input on policy, and activism in the community. The Permittee shall also be involved in their Integrated Regional Water Management Plan (IRWMP) or other watershed-level planning effort, if applicable.

(ii) **Implementation Level** – At a minimum, the Permittee shall:

(a) Develop a public involvement and participation strategy that establishes who is responsible for specific tasks and goals.

(b) Consider development of a citizen advisory group (either a stand-alone group or utilize an existing group or process). The advisory group may consist of a balanced representation of all affected parties, including residents, business owners, and environmental organizations in the MS4 service area and/or affected watershed. The Permittee may invite the citizen advisory group to participate in the development and implementation of all parts of the community's storm water program.

(c) Create opportunities for citizens to participate in the implementation of BMPs through sponsoring activities (e.g., stream/beach/lake clean-ups, storm drain stenciling, volunteer monitoring and educational activities).

(d) Ensure the public can easily find information about the Permittee's storm water program.

(e) Actively engage in the Permittee's IRWMP or other watershed-level planning effort.

**(iii) Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long- term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

## E.9. ILLICIT DISCHARGE DETECTION AND ELIMINATION

The Permittee shall develop an Illicit Discharge Detection and Elimination program to detect, investigate, and eliminate illicit discharges, including illegal dumping, into its system, to the extent allowable under law.[14] The Permittee may utilize the CWP's guide on Illicit Discharge Detection and Elimination as guidance.

### E.9.a. Outfall Mapping

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall create and maintain an up-to-date and accurate outfall map[15]. The map may be in hard copy and/or electronic form or within a geographic information system (GIS) the development of the outfall map shall include a visual outfall inventory involving a site visit to each outfall. Renewal Permittees that have an existing up-to-date outfall map that includes the minimum requirements specified in Section E.9.a.(ii)(a-e) are not required to re-create the outfall map. This does not exempt Renewal Permittees with an existing outfall map from conducting the field sampling specified in Section E.9.c.

(ii) **Implementation Level** – The outfall map shall at a minimum show:
(a) The location of all outfalls[16] that are operated by the Permittee within the urbanized area, drainage areas, and land use(s) contributing to those outfalls that are

[14] The Permittee shall use the Center for Watershed Protection's (available at www.cwp.org) guide on Illicit Discharge Detection and Elimination (IDDE): A Guidance Manual for Program Development and Technical Assistance or equivalent when developing an IDDE program. IDDE program Guidance can also be found at: http://cfpub.epa.gov/npdes/stormwater/idde.cfm.

[15] The Permittee may utilize existing forms such as the CWP Outfall Reconnaissance Inventory/Sample Collection Field Sheet (http://cfpub.epa.gov/npdes/stormwater/idde.cfm) while conducting the mapping inventory and Field Sampling as specified below, in Section E.9.c.

[16] Submerged outfalls or other outfalls that may pose a threat to public safety and/or that are inaccessible are not required to be inventoried.

operated by the Permittee, and that discharge within the Permittee's jurisdiction to a receiving water. Each mapped outfall shall be located using coordinates obtained from a global positioning system (GPS) and given an individual alphanumeric identifier, which shall be noted on the map. Photographs or an electronic database shall be utilized to provide baseline information and track operation and maintenance needs over time.

(b) The location (and name, where known to the Permittee) of all water bodies receiving direct discharges from those outfall pipes.

(c) Priority areas, including, but not limited to the following:

1) Areas with older infrastructure that are more likely to have illegal connections and a history of sewer overflows or cross-connections
2) Industrial, commercial, or mixed use areas;
3) Areas with a history of past illicit discharges;
4) Areas with a history of illegal dumping;
5) Areas with onsite sewage disposal systems;
6) Areas upstream of sensitive water bodies;
7) Areas that drain to outfalls greater than 36 inches that directly discharge to the ocean; and
8) Other areas that are likely to have illicit discharges.

The priority area list shall be updated annually.

(d) Field sampling stations

(e) The permit boundary

Submerged outfalls or other outfalls that may pose a threat to public safety and/or that are inaccessible are not required to be inventoried.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.9.b. Illicit Discharge Source/Facility Inventory**

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall maintain an inventory of all industrial/commercial facilities/sources within the Permittee's jurisdiction (regardless of ownership) that could discharge pollutants in storm water to the MS4. The Permittee shall utilize the inventory to identify facilities for inspections of potential illicit discharges.

(ii) **Implementation Level** - The inventory shall include the following:

(a) Minimum information for each industrial facility/source:

- Facility name;
- Address;
- Nature of business or activity;
- Physical location (decimal latitude-longitude) of storm drain receiving discharge;

- Name of receiving water and if the facility/source is tributary to a Clean Water Act Section 303(d) listed water body segment or water body segment subject to a TMDL;
- Incorporation of facility information into GIS is optional.

(b) At a minimum, the following industrial and commercial facilities/sources shall be included in the inventory.

- Vehicle salvage yards
- Metal and other recycled materials collection facilities
- Waste transfer facilities
- Vehicle mechanical repair, maintenance or cleaning
- Building trade central facilities or yards
- Corporation yards
- Landscape nurseries and greenhouses
- Building material retailers and storage
- Plastic manufacturers
- Other facilities designated by the Permittees or Regional Water Boards to have reasonable potential to contribute to pollution of storm water runoff

(c) The Permittee shall determine if the facilities that are required to be covered under the Statewide Industrial General Permit have done so. Upon discovering any facilities requiring permit coverage but are not yet permitted, the Permittee shall notify the appropriate Regional Water Board, and include copies of the notification in the online Annual Report.

(d) The Permittee shall update the inventory annually. The update shall be accomplished through collection of new information obtained during inspections and contacts with commercial and industrial facility operators and owners, or through other readily available intra-agency informational databases (e.g., business licenses, pretreatment permits, sanitary sewer hook-up permits, and SMARTS database.

(e) The Permittee shall develop and implement procedures to proactively identify illicit discharges originating from priority areas identified in Section E.9.a.(ii).(c). The Permittee shall implement the procedures to assess priority areas for the presence of illicit discharges at least once over the length of the permit term. The procedures shall include field observations, field screening, inspections, and any other appropriate and effective survey methods. Alternatively, Permittees may establish a self-certification program where Permittees require reports from authorized parties demonstrating the prevention and elimination of illicit discharges at their facilities in priority areas at least once over the length of the permit term.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.9.c. Field Sampling to Detect Illicit Discharges**

(i) **Task Description** – Within the second year of the effective date of the permit (e.g. while conducting the outfall inventory under Section E.9.a.), the Permittee shall sample any outfalls that are flowing or ponding more than 72 hours after the last rain event. The Permittee shall also conduct dry weather sampling (more than 72 hours since the last rain event) of outfalls annually identified as priority areas.

(ii) **Implementation Level** – The Permittee shall:

(a) Conduct monitoring[17] for the following indicator parameters identified in Table 1 to help determine the source of the discharge. Alternatively, the Permittee may select parameters based on local knowledge of pollutants of concern in lieu of sampling for the parameters listed in Table 1. Modifications and associated justifications shall be identified within SMARTS prior to conducting field sampling as specified in Section E.9.c.(i).

[17] A description of indicator parameter sampling equipment is described in Chapter 12: Indicator Monitoring in the CWP IDDE: Guidance Manual found at: http://www.epa.gov/npdes/pubs/idde_manualwithappendices.pdf. Sampling may be conducted using field test kits.

**Table 1. Indicator Parameters**

**Note:** > = greater than
> 80% — Can almost always (>80% of samples) distinguish this discharge from clean flow types (e.g., tap water or natural water). For tap water, can distinguish from natural water.
> 50% — Can sometimes (>50% of samples) distinguish this discharge from clean flow types depending on regional characteristics, or can be helpful in combination with another parameter.
Poor — Poor indicator. Cannot reliably detect illicit discharges, or cannot detect tap water
Data sources: Pitt (

* Fluoride is a poor indicator when used as a single parameter, but when combined with additional parameters (such as detergents, ammonia and potassium), it can almost always distinguish between sewage and wash water.

| Parameter | Discharge Types It Can Detect | | | | Laboratory/Analytical Challenges |
|---|---|---|---|---|---|
| | Sewage | Washwater | Tap Water | Industrial or Commercial Liquid Wastes | |
| Ammonia | > 80% | > 50% | Poor | > 50% | Can change into other nitrogen forms as the flow travels to the outfall |
| Color | > 50% | > 50% | Poor | > 50% | |
| Conductivity | > 50% | > 50% | Poor | > 50% | Ineffective in saline waters |
| Detergents – Surfactants | > 80% | > 80% | Poor | > 50% | Reagent is a hazardous waste |
| Fluoride* | Poor | Poor | >80% | > 50% | Reagent is a hazardous waste Exception for communities that do not fluoridate their tap water |
| Hardness | > 50% | > 50% | >50% | > 50% | |
| pH | Poor | > 50% | Poor | > 50% | |
| Potassium | > 50% | Poor | Poor | > 80% | May need to use two separate analytical techniques, depending on the concentration |
| Turbidity | > 50% | >50% | Poor | > 50% | |

(b) Verify that indicator parameters, as specified in Table 2. Action Level Concentrations for Indicator Parameters are not exceeded. Alternatively, the Permittee may tailor Table 2 to align with parameters based on local knowledge of pollutants of concern. Modifications and associated justifications shall be

identified within SMARTS prior to conducting field sampling as specified in Section E.9.c.(i).

**Table 2. Action Level Concentrations for Indicator Parameters**

| Indicator Parameter | Action Level Concentration |
|---|---|
| Ammonia | ≥ 50 milligram per liter |
| Color | ≥ 500 units |
| Conductivity | ≥ 2,000 microsiemens per centimeter |
| Hardness | ≤ 10 milligram per liter as $CaCO_3$ or ≥ 2,000 milligram per liter as $CaCO_3$ |
| pH | ≤ 5 or ≥ 9 |
| Potassium | ≥ 20 milligram per liter |
| Turbidity | ≥ 1,000 Nephelometric Turbidity Units |

(c) Conduct follow up investigations per Section E.9.d. if the action level concentrations are exceeded.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.9.d. Illicit Discharge Detection and Elimination Source Investigations and Corrective Actions**

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop written procedures for conducting investigations into the source of all non-storm water discharges suspected to be illicit discharges, including approaches to requiring such discharges to be eliminated, and procedures to implement corrective actions (e.g., BMPs). These procedures shall be included as part of the Illicit Discharge Detection and Elimination program. The Permittee may leverage existing inspection procedures and personnel to conduct illicit discharge detection and elimination source investigations and corrective actions.

(ii) **Implementation Level -** At a minimum, the Permittee shall conduct an investigation(s) to identify and locate the source of any suspected illicit discharge within 72 hours of becoming aware of the suspected illicit discharge. For investigations that require more than 72 hours, the Permittee shall identify the actions being taken to identify and locate the source of the suspected illicit discharge.

(a) Non-storm water discharges suspected of being sanitary sewage and/or significantly contaminated shall be investigated within 24 hours.

(b) The Permittee shall prioritize investigations of suspected sanitary sewage and/or significantly contaminated discharges over investigations of non-storm water discharges suspected of being cooling water, wash water, or natural flows.

(c) Report immediately the occurrence of any flows believed to be an immediate threat to human health or the environment to local Health Department.

(d) Determine and document through its investigations the source of all non-storm water discharges. If the source of the non-storm water discharge is found to be a discharge authorized under this General Permit, or authorized under another NPDES permit, no further action is required.

(e) Corrective Action to Eliminate Illicit Discharge – Once the source of the illicit discharge has been determined, the Permittee shall immediately notify the responsible party of the problem, and require the responsible party to conduct all necessary corrective actions to eliminate the non- storm water discharge within 72 hours of notification. Upon being notified that the discharge has been eliminated, conduct a follow-up investigation and field screening to verify that the discharge has been eliminated using BMPs or some other corrective action. The Permittee shall document its follow-up investigation. The Permittee may seek recovery and remediation costs from responsible parties or require compensation for the cost of field screening and investigations. Resulting enforcement actions shall follow the program's Enforcement Response Plan as specified in E.6.c.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.9.e. Spill Response Plan**

(i) **Task Description** – Within the first year of the effective date of the permit, the Permittee shall develop and implement a spill response plan.

(ii) **Implementation Level** - At a minimum, the spill response plan will incorporate the information from Section E.9.c. and outline the following:

(a) Agency roles and responsibilities (e.g. County Department of Environmental Health, local police department, local fire department, etc.)
(b) The procedures for responding to complaints
(c) How investigations are to be conducted
(d) How clean up is initiated or conducted
(e) How reporting is completed and what information is required

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

## E.10. CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

The Permittee shall develop, implement, and enforce a program to prevent construction site discharges of pollutants and impacts on beneficial uses of receiving waters. The program shall include the development of an enforceable construction site storm water runoff control ordinance for all projects that disturb less than one acre of soil. The construction site storm water runoff control ordinance shall include, at a minimum, requirements for erosion and sediment controls, soil stabilization, dewatering, source controls, pollution prevention measures and prohibited discharges.

Projects that disturb one acre or more of soil or disturb less than one acre but are part of a larger common plan or development or sale are subject to the CGP in addition to the construction site storm water runoff control ordinance.

### E.10.a. Construction Site Inventory

(i) **Task Description -** Within the first year of the effective date of the permit, the Permittee shall maintain an inventory of all projects subject to the local construction site storm water runoff control ordinance within its jurisdiction.

(ii) **Implementation Level** –The Permittee shall maintain an inventory of all construction projects and continuously update as new projects are permitted and projects are completed. The inventory shall address all projects subject to the local construction site storm water runoff control ordinance. For projects subject to the CGP the Permittee may obtain the inventory from the SMARTS database and shall supplement as needed by the Permittee.

The inventory shall contain, at a minimum:
(a) Relevant contact information for each project (e.g., name, address, phone, email, etc. for the owner and contractor);
(b) The basic site information including location, status, size of the project and area of disturbance;
(c) The location of the project with respect to all waterbodies, waterbodies listed as impaired by sediment-related pollutants, and waterbodies listed as impaired for sediment or turbidity under the CWA Section 303(d) and approved by U.S. EPA;
(d) Project threat to water quality;
(e) Current construction phase;
(f) The required inspection frequency per the local construction site storm water runoff control ordinance;
(g) The project start and anticipated completion dates; and
(h) The date the Permittee approved the erosion and sediment control plan in accordance with this Section.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.10.b. Construction Plan Review and Approval Procedures**

(i) **Task Description** – Within the first year of the effective date of the permit, the Permittee shall develop procedures to review and approve relevant construction plan documents.

(ii) **Implementation Level** – The review procedures shall meet the following minimum requirements:

(a) Prior to issuing a grading or building permit, the Permittee shall require each operator of a construction activity within its jurisdiction to prepare and submit an erosion and sediment control plan for the Permittee's review and written approval. The Permittee shall not approve any erosion and sediment control plan unless it contains appropriate site-specific construction site BMPs that meet the minimum requirements of the Permittee's construction site storm water runoff control ordinance. If the erosion and sediment control plan is revised, the Permittee shall review and approve those revisions.

(b) Require that the erosion and sediment control plan include the rationale used for selecting BMPs including supporting soil loss calculations, if necessary.

(c) Require that the erosion and sediment control plan list applicable permits directly associated with the grading activity, including, but not limited to the State Water Board's CGP, State Water Board 401 Water Quality Certification, U.S. Army Corps 404 permit, and California Department of Fish and Game 1600 Agreement. Include as a condition of the grading permit that the operator submit evidence to the MS4 that all permits directly associated with the grading activity have been obtained prior to commencing the soil disturbing activities authorized by the grading permit.

(d) Conduct and document review of each erosion and sediment control plan using a checklist or similar process.

(e) The SWPPP developed pursuant to the CGP may substitute for the erosion and sediment control plan for projects where a SWPPP is developed. The Permittee is responsible for reviewing applicable portions of the SWPPP for compliance with the Permittee's construction site storm water runoff control ordinance and this Order.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.10.c. Construction Site Inspection and Enforcement**

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall use legal authority to implement procedures for inspecting public and private construction projects and conduct enforcement if necessary. The Permittee may leverage existing inspection procedures and personnel to conduct construction site inspections and enforcement.

(ii) **Implementation Level –** The inspection procedures shall be implemented to verify compliance with the Permittee's construction site storm water control ordinance. At a minimum, inspections must be conducted at priority construction sites (defined below) prior to land disturbance (during the rainy season), during active construction and following active construction. Construction site inspections shall include assessment of compliance with the Permittee's construction site storm water runoff control ordinance, and other applicable ordinances. A Permittee may propose, for Regional Water Board Executive Officer approval, an alternative approach for construction site oversight, provided the Permittee demonstrates the approach will be equally effective at reducing the discharge of pollutants from construction sites to the maximum extent practicable.

Prior to allowing an operator to commence land disturbance during the rainy season, the Permittee must perform an inspection, to ensure all necessary sediment controls are in place. During active construction, the Permittee shall conduct inspections, based on prioritization of construction sites. Active construction inspections shall include at a minimum: inspection of maintenance of BMPs, effectiveness of BMPs installed and verification that pollutants of concern are not discharged into receiving water bodies.

Prioritization criteria shall be based on project threat to water quality. Project threat to water quality includes soil erosion potential, site slope, projects size and type, sensitivity of receiving water bodies, proximity to receiving water bodies, non-storm water discharges, projects more than one acre that are not subject to the CGP (sites that have obtained an Erosivity Waiver) and past record of non-compliance by the operator of the construction site. Inspection frequencies shall be conducted based on the prioritization criteria described above.

At the conclusion of the project, the Permittee must inspect to ensure that all disturbed areas have been stabilized and that all temporary erosion and sediment control measures that are no longer needed have been removed as required by the local construction site storm water control ordinance.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

## E.11. POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR PERMITTEE OPERATIONS PROGRAM

The Permittee shall develop and implement a program to prevent or reduce the amount of pollutant runoff from Permittee operations. The Permittee shall implement appropriate BMPs for preventing or reducing the amount of storm water pollution generated by Permittee operations.

**E.11.a. Inventory of Permittee-Owned and Operated Facilities**

(i) **Task Description** - Within the second year of the effective date of the permit, the Permittee shall develop and maintain an inventory of Permittee-owned or operated facilities within their jurisdiction that are a threat to water quality, if applicable.

(ii) **Implementation Level** - The inventory shall include all Permittee-owned or operated facilities within their jurisdiction that are potential significant sources of pollution in storm water, including the following if applicable:

- Airports
- Animal control facilities
- Chemical storage facilities
- Composting facilities
- Equipment storage and maintenance facilities (including landscape-related operations)
- Fuel farms
- Hazardous waste disposal facilities
- Hazardous waste handling and transfer facilities
- Incinerators
- Landfills
- Materials storage yards
- Pesticide storage facilities
- Public buildings, including schools, libraries, police stations, fire stations, Permittee (municipal) buildings, restrooms, and similar buildings (i.e., buildings with a similar potential to be sources of storm water pollution as the examples provided)
- Public parking lots
- Public golf courses
- Public swimming pools
- Public parks
- Public works yards
- Public marinas
- Recycling facilities
- Salt or de-icing storage facilities
- Solid waste handling and transfer facilities
- Transportation hubs (e.g. bus transfer stations)
- Vehicle storage and maintenance areas
- Vehicle fueling facilities
- Other (as directed by appropriate Regional Water Board)

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.11.b. Map of Permittee-Owned or Operated Facilities**

(i) **Task Description –** Within the second year of the effective date of the permit, submit a map of the area within the permit boundary and identify where the inventoried Permittee-owned or operated facilities are located.

(ii) **Implementation Level** - The map identifying the location of the inventoried Permittee-owned or operated facilities shall identify the storm water drainage system (e.g., storm water outfalls or other mechanisms in which storm water leaves the site) corresponding to each of the facilities as well as the receiving waters to which these facilities discharge. The map shall also show the facility and the manager of each facility, including contact information.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.11.c. Facility Assessment**

(i) **Task Description** – Within the third year of the effective date of the permit, for all the inventoried Permittee-owned or operated facilities, the Permittee shall conduct a comprehensive inspection and assessment of pollutant discharge potential and identification of pollutant hotspots using the Center for Watershed Protection's (CWP) guide on Urban Subwatershed and Site Reconnaissance, or equivalent.[18]

(ii) **Implementation Levels** - Conduct an annual review and assessment of all municipally owned or operated facilities to determine their potential to impact surface waters. The assessment shall include the following:

(a) Identification of pollutant hotspots:

Based on the annual assessment, the Permittee shall identify those facilities that have a high potential to generate storm water and non- storm water pollutants as pollutant hotspots and assign them a high priority. Among the factors to be considered are the type and volume of pollutants stored at the site, the presence of improperly stored materials, activities that should not be performed outside (e.g., changing automotive fluids, vehicle washing), proximity to water bodies, poor housekeeping practices, and the discharge of pollutant(s) of concern to receiving water(s). Pollutant hotspots shall include, at a minimum, the Permittee's maintenance yards, hazardous waste facilities, fuel storage and/or dispensing locations, airports marinas, and any other facilities at which chemicals or other materials have a high potential to be discharged in storm water.

[18] The Permittee shall use the Center for Watershed Protection's Restoration Manual Series Guide on Urban Subwatershed and Site Reconnaissance: A User's Manual (available as a free download at www.cwp.org) or equivalent when identifying priority areas. Hotspots are specific operations in a subwatershed that may generate high storm water pollution.

(b) Documentation of the comprehensive assessment procedures and results:

The Permittee shall document the procedures it uses for conducting the comprehensive assessment along with a copy of any site evaluation checklists used to conduct the comprehensive assessment.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.11.d. Storm Water Pollution Prevention Plans**

(i) **Task Description** – Within the fourth year of the effective date of the permit, the Permittee shall develop and implement SWPPPs for pollutant hotspots. If a Permittee has an existing document such as Hazardous Materials Business Plan, Spill Prevention Plan, or other equivalent document the Permittee is not required to develop a SWPPP.

(ii) **Implementation Level** – The Permittee shall implement the following:

(a) The Permittee shall develop and implement a site-specific SWPPP that identifies existing storm water BMPs and a set of storm water BMPs to be installed, implemented, and maintained to minimize the discharge of pollutants to protect water quality. The Permittee may utilize the CWP guide on Urban Subwatershed and Site Reconnaissance, or equivalent, as guidance.

(b) The SWPPP(s) shall be kept on-site at each of the Permittee-owned or operated facilities' offices for which it was completed. The SWPPP shall be updated as necessary.

(c) At a minimum the SWPPP will address the following:

1) Facility specific information (location, owner, address, etc.)
2) Purpose of the document
3) Key staff/contacts at the facility
4) Site map with drainage identified
5) Identification of significant materials that are handled and stored at the facility that may be exposed to storm water
6) Description of potential pollutant sources
7) Facility BMPs
8) Spill control and cleanup – response to spills
9) Inspection schedule
10) Inspection procedures and checklist for inspections conducted to ensure proper selection, implementation, and maintenance of all BMPs

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.11.e. Inspections, Visual Monitoring and Remedial Action**

(i) **Task Description** – Within the fifth year of the effective date of the Permit, the Permittee shall conduct regular inspections of Permittee-owned and operated facilities.

(ii) **Implementation Level** – Inspections shall be conducted as follows:

(a) Quarterly visual hotspot inspections – Perform quarterly visual inspections, in accordance with the inspection procedures and inspection checklist developed for each Permittee-owned or operated hotspot, to ensure materials and equipment are clean and orderly; to minimize the potential for pollutant discharge; and to ensure effective selection, implementation, and maintenance of BMPs. The Permittee shall look for evidence of spills and immediately clean them up to prevent contact with precipitation or runoff. The quarterly inspections shall be tracked in a log for every facility, and records kept with the SWPPP (records may be kept electronically). The inspection report shall also include any identified deficiencies and the corrective actions taken to correct the deficiencies.

(b) Annual Hotspot comprehensive inspections – At least once per year, the Permittee shall conduct a comprehensive inspection of each hotspot facility, including all storm water BMPs, in accordance with the facility-specific inspection procedures and inspection checklist. The Permittee shall pay specific attention, without limiting its attention, to: waste storage areas, dumpsters, vehicle and equipment maintenance/fueling areas, material handling areas, and similar potential pollutant-generating areas. The annual inspection results shall be documented and records kept with the SWPPP. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct deficiencies.

(c) Quarterly Hotspot visual observation of storm water and non-storm water discharges – At least once per quarter visually observe discharge locations from hotspot facilities. Where discharges are observed identify any observed problems (e.g., color, foam, sheen, turbidity) associated with pollutant sources or BMPs shall be remedied as soon as practicable or before the next storm event, whichever is sooner. Visual observations shall be documented, and records kept with the SWPPP. This inspection shall be done in accordance with the developed standard operating procedures. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct the deficiencies.

(d) Non-Hotspot Inspection – At a minimum, inspect each inventoried municipal facility that is not a hotspot, once per permit term.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.11.f. Storm Drain System Assessment and Prioritization**

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop and implement procedures to assess and prioritize MS4 storm drain system maintenance, including but not limited to, catch basins, pipe and pump infrastructure, above-ground conveyances, including receiving water bodies within the Permittee's urbanized area and detention basins.

If flood conveyance maintenance is undertaken by another entity, the Permittee shall coordinate with the flood conveyance management entity by year three to assess and prioritize maintenance of the MS4 storm drain system.

(ii) **Implementation Level** – The Permittee shall:
Assess/prioritize storm drain system facilities for cleanout – Assign a priority to MS4 storm drain facilities within the Permittee's urbanized areas based on accumulation of sediment, trash and/or debris. In particular, assign high priority to catch basin meeting any of the following criteria:

1) Catch basins known to accumulate a significant amount of sediment, trash, and/or debris;
2) Catch basins collecting large volumes of runoff;
3) Catch basin collecting runoff from area that do not receive regular sweet sweeping;
4) Catch basins collecting runoff from drainage areas with exposed or disturbed soil; or
5) Catch basins that receive citizen complaints/reports.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.11.g. Maintenance of Storm Drain System**

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall begin maintenance of all high priority storm drain systems on an ongoing schedule.

(ii) **Implementation Level** – The Permittee shall begin maintenance of storm drain systems according to the procedures and priorities developed according to this Section. At a minimum the Permittee shall:

(a) Inspect storm drain systems – Based on the priorities assigned above in Section E.11.f.(ii)(a), develop and implement a strategy to inspect storm drain systems within the Permittee's jurisdiction. At a minimum, inspect all high priority catch basins and systems annually.

(b) Clean storm drains – Develop and implement a schedule to clean high priority catch basins and other systems. Cleaning frequencies shall be based on priority areas, with higher priority areas receiving more frequent maintenance.

(c) Labeling catch basins – Ensure that each catch basin in high foot traffic areas includes a legible storm water awareness message (e.g., a label, stencil, marker, or pre-cast message such as “drains to the creek” or “only rain in the drain”). Catch basins with illegible or missing labels shall be recorded and re- labeled within one month of inspection.

(d) Maintain surface drainage structures – High priority facilities, such as those with recurrent illegal dumping, shall be reviewed and maintained annually as needed. Non-priority facilities shall be reviewed as needed. Removal of trash and debris from high priority areas shall occur annually prior to the rainy season.

(e) Dispose of waste materials – Develop and implement a procedure to dewater and dispose of materials extracted from catch basins. This procedure shall ensure that water removed during the catch basin cleaning process and waste material will not reenter the MS4.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.11.h. Permittee Operations and Maintenance Activities (O&M)**

(i) **Task Description –** Within the third year of the effective date of the permit, the Permittee shall assess their O&M activities for potential to discharge pollutants in storm water and inspect all O&M BMPs on a quarterly basis.

(ii) **Implementation Level** - The Permittee shall:

(a) Develop and implement a program to assess O&M activities and subsequently develop applicable BMPs. The following Permittee O&M activities shall be included in the assessment for their potential to discharge pollutants in storm water:

1) Road and parking lot maintenance, including sidewalk repair, curb and gutter repair, pothole repair, pavement marking, sealing, and re-paving
2) Bridge maintenance, including re-chipping, grinding, saw cutting, and painting
3) Cold weather operations, including plowing, sanding, and application of deicing compounds and maintenance of snow disposal areas
4) Right-of-way maintenance, including mowing, herbicide and pesticide application, and planting vegetation
5) Storm water relevant Permittee-sponsored or sanctioned events such as large outdoor festivals, parades, or street fairs (e.g., Earth Day, Coastal Cleanup Day, Creek Week)
6) Green waste deposited in the street
7) Graffiti removal
8) Hydrant flushing

(b) Identify all materials that could be discharged from each of these O&M activities, and which materials contain pollutants. Typical pollutants associated with these activities include metals, chlorides, hydrocarbons (e.g. benzene, toluene,

ethylbenzene, and xylene), sediment, green waste, herbicide, pesticide, dried paint, and trash.

(c) Develop and implement a set of BMPs that, when applied during Permittee O&M activities, will reduce pollutants in storm water and non-storm water discharges. The Permittee shall use the CASQA Municipal Handbook or equivalent.

(d) Evaluate BMPs – All BMPs implemented during O&M activities shall be evaluated quarterly.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.11.i. Incorporation of Water Quality and Habitat Enhancement Features in New Flood Management Facilities**

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and implement a process for incorporating water quality and habitat enhancement features into new and rehabilitated flood management facilities.

(ii) **Implementation Level** – The Permittee shall develop and implement a process to incorporate water quality and habitat enhancement features in the design of all new and rehabilitated flood management projects that are associated with the MS4 or that discharge to the MS4.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.11.j. Landscape Design and Maintenance**

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall implement a landscape design and maintenance program to reduce the amount of water, pesticides, herbicides and fertilizers used during Permittee operations and activities[19].

(ii) **Implementation Tasks** – At a minimum, the Permittee shall:

(a) Evaluate pesticides, herbicides and fertilizers used and application activities performed and identify pollution prevention and source control opportunities.

(b) Implement practices that reduce the discharge of pesticides, herbicides and fertilizers. At a minimum the Permittee shall:

[19] Water Efficient Landscape Ordinance can be found at: http://www.water.ca.gov/wateruseefficiency/docs/MWELO09-10-09.pdf

1) Implement educational activities for municipal applicators and distributors.
2) Implement landscape management measures that rely on non-chemical solutions, including:
   a) Create drought-resistant soils by amending soils with compost;
   b) Create soil microbial community through the use of compost, compost tea, or inoculation;
   c) Use native and/or climate appropriate plants to reduce the amount of water, pesticides, herbicides and fertilizers used;
   d) Practice grasscycling on decorative turf landscapes to reduce water use and the need for fertilizers;
   e) Keeping grass clippings and leaves away from waterways and out of the street using mulching, composting, or landfilling;
   f) Preventing application of pesticides, herbicides and fertilizers during irrigation or within 48 hours of predicted rainfall with greater than 50% probability as predicted by National Oceanic and Atmospheric Administration (NOAA)[20];
   g) Limiting or replacing herbicide and pesticide use (e.g., conducting manual weed and insect removal);
   h) Prohibiting application of pesticides, herbicides and fertilizers as required by the regulations DPR 11-004 Prevention of Surface Water Contamination by Pesticides enacted by the Department of Pesticide Regulation;
   i) Reducing mowing of grass to allow for greater pollutant removal, but not jeopardizing public safety.
3) Collect and properly dispose of unused pesticides, herbicides, and fertilizers.
4) Minimize irrigation run-off by using an evapotranspiration-based irrigation schedule and rain sensors.

(c) Record the types and amounts of pesticides, herbicides and fertilizers used in the permit area.

(iii) **Reporting** - The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

## E.12. POST CONSTRUCTION STORM WATER MANAGEMENT PROGRAM

### E.12.a. Post-Construction Measures

Permittees shall regulate development to comply with the following Sections:

- E.12.b Site Design Measures
- E.12.c. Regulated Projects
- E.12.d. Source Control Measures

[20] https://www.weather.gov/forecast

- E.12.e. Low Impact Development (LID) Design Standards
- E.12.f. Hydromodification Measures
- E.12.g. Enforceable Mechanisms
- E.12.h. Operation and Maintenance of Storm Water Control Measures
- E.12.i. Post-Construction Best Management Practice Condition Assessment
- E.12.j. Planning and Development Review Process
- E.12.k. Post-Construction Storm Water Management Requirements Based on Assessment and Maintenance of Watershed Processes
- E.12.l. Alternative Post-Construction Storm Water Management Program

**E.12.b. Site Design Measures**

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall require implementation of site design measures for all projects that create and/or replace (including projects with no net increase in impervious footprint) between 2,500 square feet and 5,000 square feet of impervious surface, including detached single family homes that create and/or replace 2,500 square feet or more of impervious surface and are not part of a larger plan of development. Site design measures as specified in this section are not applicable to linear underground/overhead projects (LUPs).

(ii) **Implementation Level** - Projects shall implement one or more of the following site design measures to reduce project site runoff:

(a) Stream Setbacks and Buffers — a vegetated area including trees, shrubs, and herbaceous vegetation, that exists or is established to protect a stream system, lake reservoir, or coastal estuarine area;

(b) Soil Quality Improvement and Maintenance — improvement and maintenance soil through soil amendments and creation of microbial community;

(c) Tree Planting and Preservation — planting and preservation of healthy, established trees that include both evergreens and deciduous, as applicable;

(d) Rooftop and Impervious Area Disconnection — rerouting of rooftop drainage pipes to drain rainwater to rain barrels, cisterns, or permeable areas instead of the storm sewer;

(e) Porous Pavement — pavement that allows runoff to pass through it, thereby reducing the runoff from a site and surrounding areas and filtering pollutants;

(f) Green Roofs — a vegetative layer grown on a roof (rooftop garden);

(g) Vegetated Swales — a vegetated, open-channel management practice designed specifically to treat and attenuate storm water runoff;

(h) Rain Barrels and Cisterns — system that collects and stores storm water runoff from a roof or other impervious surface.

Project proponents shall use the State Water Board SMARTS Post-Construction Calculator[21], or equivalent to quantify the runoff reduction resulting from implementation of site design measures.

(iii) **Reporting** - The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.12.c. Regulated Projects**

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall implement standards to effectively reduce runoff and pollutants associated with runoff from Regulated Projects as defined below.

(ii) **Implementation Level** - The Permittee shall regulate all projects that create and/or replace 5,000 square feet or more of impervious surface (Regulated Projects). The Permittee shall require these Regulated Projects to implement measures for site design, source control, runoff reduction, storm water treatment and baseline hydromodification management as defined in this Order.

Regulated Projects do not include:

- Detached single family home projects that are not part of a larger plan of development;
- Interior remodels;
- Routine maintenance or repair such as: exterior wall surface replacement, pavement resurfacing within the existing footprint.
- LUPs - Unless the LUP has a discrete location that has 5,000 square feet or more of newly constructed contiguous impervious surface. When the LUP has a discrete location that has 5,000 sq-ft or more of new contiguous impervious surface, only that specific discrete location is subject to Section E.12.c.

Regulated Projects include development projects. Development includes new and redevelopment projects on public or private land that fall under the planning and permitting authority of a Permittee. Redevelopment is any land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred. Redevelopment does not include trenching, excavation and resurfacing associated with LUPs; pavement grinding and resurfacing of existing roadways; construction of new sidewalks, pedestrian ramps, or bike lanes on existing roadways; or routine replacement of damaged pavement such as pothole repair or replacement of short, non-contiguous sections of roadway. The following (a-c) describe specific Regulated Project requirements for redevelopment, road projects and LUPs:

[21] The State Water Board SMARTS Post-Construction Calculator can be found at: https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp

(a) Where a redevelopment project results in an increase of more than 50 percent of the impervious surface of a previously existing development, runoff from the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included to the extent feasible.

(b) Where a redevelopment project results in an increase of less than 50 percent of the impervious surface of a previously existing development, only runoff from the new and/or replaced impervious surface of the project must be included.

(c) Road Projects and LUPs - Any of the following types of road projects and LUPs that create 5,000 square feet or more of newly constructed contiguous impervious surface and that are public road projects and/or fall under the building and planning authority of a Permittee shall comply with Section E.12.e. Low Impact Development Standards except that treatment of runoff of the 85$^{th}$ percentile that cannot be infiltrated onsite shall follow U.S. EPA guidance regarding green infrastructure to the extent feasible. Types of projects include:

1) Construction of new streets or roads, including sidewalks and bicycle lanes built as part of the new streets or roads.
2) Widening of existing streets or roads with additional traffic lanes.
   a) Where the addition of traffic lanes results in an alteration of more than 50 percent of the impervious surface of an existing street or road, runoff from the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included in the treatment system design.
   b) Where the addition of traffic lanes results in an alteration of less than 50 percent (but 5,000 square feet or more) of the impervious surface of an existing street or road, only the runoff from new and/or replaced impervious surface of the project must be included in the treatment system design.
3) Construction of linear underground/overhead projects (LUPs)
4) Specific exclusions are:
   a) Sidewalks built as part of new streets or roads and built to direct storm water runoff to adjacent vegetated areas.
   b) Bicycle lanes that are built as part of new streets or roads that direct storm water runoff to adjacent vegetated areas.
   c) Impervious trails built to direct storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas, preferably away from creeks or towards the outboard side of levees.
   d) Sidewalks, bicycle lanes, or trails constructed with permeable surfaces.
   e) Trenching, excavation and resurfacing associated with LUPs; pavement grinding and resurfacing of existing roadways and parking lots; construction of new sidewalks, pedestrian ramps, or bike lanes on existing roadways; or routine replacement of damaged pavement such as pothole repair or replacement of short, non-contiguous sections of roadway.

Effective Date for Applicability of Low Impact Development Runoff Standards to Regulated Projects: By the second year of the effective date of the permit, the Permittee shall require these Post-Construction Standards be applied on applicable new and redevelopment Regulated Projects, both private development requiring municipal permits and public projects, to the extent allowable by applicable law. These include discretionary permit projects that have not been deemed complete for

processing and discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals. Discretionary projects that have been deemed complete prior to the second year of the effective date of this Order are not subject to the Post- Construction Standards herein. For the Permittee's Regulated Projects, the effective date shall be the date their governing body or designee approves initiation of the project design.

Permittee's Development Projects - The Permittee shall develop and implement an equivalent approach, to the approach used for private development projects, to apply the most current version of the low impact development runoff standards to applicable public development projects, to the extent allowable by applicable law.

**E.12.d. Source Control Measures**

(i) **Task Description** – Regulated Projects with pollutant-generating activities and sources shall be required to implement standard permanent and/or operation source control measures as applicable.

(ii) **Implementation Level** - Measures for the following pollutant generating activities and sources shall be designed consistent with recommendations from the CASQA Stormwater BMP Handbook for New Development and Redevelopment or equivalent manual, and include:

(a) Accidental spills or leaks
(b) Interior floor drains
(c) Parking/storage areas and maintenance
(d) Indoor and structural pest control
(e) Landscape/outdoor pesticide use
(f) Pools, spas, ponds, decorative fountains, and other water features
(g) Restaurants, grocery stores, and other food service operations
(h) Refuse areas
(i) Industrial processes
(j) Outdoor storage of equipment or materials
(k) Vehicle and equipment cleaning
(l) Vehicle and equipment repair and maintenance
(m) Fuel dispensing areas
(n) Loading docks
(o) Fire sprinkler test water
(p) Drain or wash water from boiler drain lines, condensate drain lines, rooftop equipment, drainage sumps, and other sources
(q) Unauthorized non-storm water discharges
(r) Building and grounds maintenance

**E.12.e. Low Impact Development (LID) Design Standards**

(i) **Task Description –** The Permittee shall require all Regulated Projects to implement low impact development (LID) standards designed to reduce runoff, treat storm water, and provide baseline hydromodification management to the extent feasible, to meet

the Numeric Sizing Criteria for Storm Water Retention and Treatment under Section E.12.e(ii)(c).

(ii) **Implementation Level –** The Permittee shall adopt and implement requirements and standards to ensure design and construction of development projects achieve the following LID Design Standards.

(a) **Site Assessment**

At the earliest planning stages, the Permittee shall require Regulated Projects to assess and evaluate how site conditions, such as soils, vegetation, and flow paths, will influence the placement of buildings and paved surfaces. The evaluation will be used to meet the goals of capturing and treating runoff and assuring these goals are incorporated into the project design. The Permittee may adopt or reference an existing LID site assessment methodology.[22] Permittees shall require Regulated Projects to consider optimizing the site layout through the following methods:

1) Define the development envelope and protected areas, identifying areas that are most suitable for development and areas to be left undisturbed.
2) Concentrate development on portions of the site with less permeable soils and preserve areas that can promote infiltration.
3) Limit overall impervious coverage of the site with paving and roofs.
4) Set back development from creeks, wetlands, and riparian habitats.
5) Preserve significant trees.
6) Conform the site layout along natural landforms.
7) Avoid excessive grading and disturbance of vegetation and soils.
8) Replicate the site's natural drainage patterns.
9) Detain and retain runoff throughout the site.

(b) **Drainage Management Areas**

The Permittee shall require each Regulated Project to provide a map or diagram dividing the developed portions of the project site into discrete Drainage Management Areas (DMAs), and to manage runoff from each DMA using Site Design Measures, Source Controls and/or Storm Water Treatment and Baseline Hydromodification Measures.

(c) **Numeric Sizing Criteria for Storm Water Retention and Treatment**

The Permittees shall require facilities designed to evapotranspire, infiltrate, harvest/use, and biotreat storm water to meet at least one of the following hydraulic sizing design criteria:

1) Volumetric Criteria:

a) The maximized capture storm water volume for the tributary area, on the basis of historical rainfall records, determined using the formula and volume capture coefficients in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998) pages 175-178 (that is, approximately the 85th percentile 24-hour storm runoff event); or

[22] Low Impact Development Manual for Southern California (Low Impact Development Center – See CASQA's LID website at: https://www.casqa.org/resources/lid/socal-lid-manual.

b) The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology in Section 5 of the CASQA's Stormwater Best Management Practice Handbook, New Development and Redevelopment (2003), using local rainfall data.

2) Flow-based Criteria:

a) The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or

b) The flow of runoff produced from a rain event equal to at least 2 times the 85th percentile hourly rainfall intensity as determined from local rainfall records.

(d) **Site Design Measures**

The Permittee shall implement Site Design Measures (as defined in Section E.12.b. Site Design Measures and Section E.12.e(ii)(a) Site Assessment), site layout and design measures, based on the objective of achieving infiltration, evapotranspiration and/or harvesting/reuse of the 85th percentile 24-hour storm runoff event. Site design measures shall be used to reduce the amount of runoff, to the extent technically feasible, for which retention and runoff is required. Any remaining runoff from impervious DMAs may then be directed to one or more bioretention facilities as specified in Section E.12.e.(ii)(f), below.

(e) **Source Controls**

The Permittee shall implement Source Controls as defined in Section E.12.d. Source Control Measures.

(f) **Storm Water Treatment Measures and Baseline Hydromodification Management Measures**

After implementation of Site Design Measures, remaining runoff from impervious DMAs must be directed to one or more facilities designed to infiltrate, evapotranspire, and/or bioretain the amount of runoff specified in Section E.12.e(ii)(c) Numeric Sizing Criteria for Storm Water Retention and Treatment. The facilities must be demonstrated to be at least as effective as a bioretention system with the following design parameters:

1) Maximum surface loading rate of 5 inches per hour, based on the flow rates calculated. A sizing factor of 4% of tributary impervious area may be used.

2) Minimum surface reservoir volume equal to surface area times a depth of 6 inches.

3) Minimum planting medium depth of 18 inches. The planting medium must sustain a minimum infiltration rate of 5 inches per hour throughout the life of the project and must maximize runoff retention and pollutant removal. A mixture of sand (60%-70%) meeting the specifications of American Society for Testing and Materials (ASTM) C33 and compost (30%-40%) may be used.

4) Subsurface drainage/storage (gravel) layer with an area equal to the surface area and having a minimum depth of 12 inches.

5) Underdrain with discharge elevation at top of gravel layer.

6) No compaction of soils beneath the facility, or ripping/loosening of soils if compacted.

7) No liners or other barriers interfering with infiltration.
8) Appropriate plant palette for the specified soil mix and maximum available water use.

(g) **Alternative Designs —** Facilities, or a combination of facilities, of a different design than in Section E.12.e.(ii)(f) may be permitted if all of the following measures of equivalent effectiveness are demonstrated:

1) Equal or greater amount of runoff infiltrated or evapotranspired;
2) Equal or lower pollutant concentrations in runoff that is discharged after biotreatment;
3) Equal or greater protection against shock loadings and spills;
4) Equal or greater accessibility and ease of inspection and maintenance.

(h) **Allowed Variations for Special Site Conditions** - The bioretention system design parameters in Section E.12.e.(ii)(f) may be adjusted for the following special site conditions:

1) Facilities located within 10 feet of structures or other potential geotechnical hazards established by the geotechnical expert for the project may incorporate an impervious cutoff wall between the bioretention facility and the structure or other geotechnical hazard.
2) Facilities with documented high concentrations of pollutants in underlying soil or groundwater, facilities located where infiltration could contribute to a geotechnical hazard, and facilities located on elevated plazas or other structures may incorporate an impervious liner and may locate the underdrain discharge at the bottom of the subsurface drainage/storage layer (this configuration is commonly known as a “flow-through planter”).
3) Facilities located in areas of high groundwater, highly infiltrative soils or where connection of underdrain to a surface drain or to a subsurface storm drain are infeasible, may omit the underdrain.
4) Facilities serving high-risk areas such as fueling stations, truck stops, auto repairs, and heavy industrial sites may be required to provide additional treatment to address pollutants of concern unless these high- risk areas are isolated from storm water runoff or bioretention areas with little chance of spill migration.

(i) **Exceptions to Requirements for Bioretention Facilities -** Contingent on a demonstration that use of bioretention or a facility of equivalent effectiveness is infeasible, other types of biotreatment or media filters (such as tree-box- type biofilters or in-vault media filters) may be used for the following categories of Regulated Projects:

1) Projects creating or replacing an acre or less of impervious area, and located in a designated pedestrian-oriented commercial district (i.e., smart growth projects), and having at least 85% of the entire project site covered by permanent structures;
2) Facilities receiving runoff solely from existing (pre-project) impervious areas; and

3) Historic sites, structures or landscapes that cannot alter their original configuration in order to maintain their historic integrity.

By the second year of the effective date of the permit, each Permittee shall adopt or reference appropriate performance criteria for such biotreatment and media filters.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.12.f. Hydromodification Management**

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and implement Hydromodification Management procedures. Hydromodification management projects are Regulated Projects that create and/or replace one acre or more of impervious surface. A project that does not increase impervious surface area over the pre-project condition is not a hydromodification management project.

(ii) **Implementation Level** - The Permittee shall implement the following Hydromodification Standard:

(a) Post-project runoff shall not exceed estimated pre-project flow rate for the 2-year, 24-hour storm in the following geomorphic provinces (Figure 1):

- Coast Ranges
- Klamath Mountains
- Cascade Range
- Modoc Plateau
- Basin and Range
- Sierra Nevada
- Great Valley

(b) Post-project runoff shall not exceed estimated pre-project flow rate for the 10-year, 24-hour storm in the following geomorphic provinces (Figure 1):

- Transverse Ranges
- Peninsular Ranges
- Mojave Desert
- Colorado Desert


**Figure 1 — California Geomorphic Provinces**

Alternatively, the Permittee may use a geomorphically based hydromodification standard or set of standards and analysis procedures designed to ensure that Regulated Projects do not cause a decrease in lateral (bank) and vertical (channel bed) stability in receiving stream channels. The alternative hydromodification standard or set of standards and analysis procedures must be reviewed and approved by the Regional Board Executive Officer.

(iii) **Reporting** –The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long- term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.12.g. Enforceable Mechanisms**

(i) **Task Description** - Within the third year of the effective date of the permit, the Permittee shall develop and/or modify enforceable mechanisms that will effectively implement the requirements in Section E.12.b through f (if necessary).

(ii) **Implementation Level** - The Permittee shall develop and/or modify enforceable mechanisms that will effectively implement the requirements in Section E.12.b through E.12.f and may include municipal codes, regulations, standards, and specifications. The Permittee shall:

(a) Conduct an analysis of all applicable codes, regulations, standards, and/or specifications to identify modifications and/or additions necessary to fill gaps and remove impediments to effective implementation of project-scale development requirements.

(b) Approve new and/or modified enforceable mechanisms that effectively resolve regulatory conflicts and implement the requirements in Sections E.12.b through E.12.f (if necessary)

(c) Apply new and/or modified enforceable mechanisms to all applicable new and redevelopment projects. Develop and make available specific guidance for LID BMP design

(d) Complete a Tracking Report indicating the Permittee’s accomplishments in education and outreach supporting implementation of LID requirements for new and redevelopment projects.

**E.12.h. Operation and Maintenance of Post-Construction Storm Water Management Measures**

(i) **Task Description** –Within the second year of the effective date of the permit, the Permittee shall implement an O&M Verification Program for storm water treatment and baseline hydromodification management structural control measures defined in Section E.12.e(ii)(f). Storm Water Treatment Measures and Baseline Hydromodification Management Measures on all Regulated Projects.

(ii) **Implementation Level** – At a minimum, the O&M Verification Program shall include the following elements:

(a) All Regulated Projects shall at a minimum, require at least one of the following from all project proponents and their successors in control of the Project or successors in fee title:

1) The project proponent’s signed statement accepting responsibility for the O&M of structural control measure(s) until such responsibility is legally transferred to another entity;

2) Written conditions in the sales or lease agreements or deed for the project that requires the buyer or lessee to assume responsibility for the O&M of the installed treatment system(s) and hydromodification control(s) (if any) until such responsibility is legally transferred to another entity;
3) Written text in project deeds, or conditions, covenants and restrictions for multi-unit residential projects that require the homeowners association or, if there is no association, each individual owner to assume responsibility for the O&M of the installed treatment system(s) and hydromodification control(s) (if any) until such responsibility is legally transferred to another entity; or
4) Any other legally enforceable agreement or mechanism, such as recordation in the property deed, that assigns the O&M responsibility for the installed treatment system(s) and hydromodification control(s) (if any) to the project owner(s) or the Permittee.

(b) Coordination with the appropriate mosquito[23] and vector control agency with jurisdiction to establish a protocol for notification of installed treatment systems and hydromodification management controls. On an annual basis, before the wet season, prepare a list of newly installed (installed within the reporting period) storm water treatment systems and hydromodification management controls to the local mosquito and vector control agency and the appropriate Regional Water Board. The Permittee may submit the list of Regulated Projects as described in Section E.12.h.(ii)(e). This list shall include the facility locations and a description of the storm water treatment measures and hydromodification management controls installed.

(c) Conditions of approval or other legally enforceable agreements or mechanisms for all Regulated Projects that require the granting of site access to all representatives of the Permittee for the sole purpose of performing O&M inspections of the installed treatment system(s) and hydromodification control(s) (if any).

(d) A written implementation plan that describes O&M (including inspection) of all Regional Projects and regional controls that are Permittee-owned and/or operated.

(e) A database or equivalent tabular format of all Regulated Projects (public and private) that have installed treatment systems. This database or equivalent tabular format shall include the following information for each Regulated Project:
1) Name and address of the Regulated Project;
2) Specific description of the location (or a map showing the location) of the installed treatment system(s) and hydromodification control(s) (if any);
3) Date(s) that the treatment system(s) and hydromodification controls (if any) is/are installed;
4) Description of the type and size of the treatment system(s) and hydromodification control(s) (if any) installed;
5) Responsible operator(s) of each treatment system and hydromodification control (if any);

[23] California Department of Public Health. (2012). Best Management Practices for Mosquito Control in California. Retrieved on July 20, 2012 from http://www.westnile.ca.gov/resources.php

6) Dates and findings of inspections (routine and follow-up) of the treatment system(s) and hydromodification control(s) (if any) by the Permittee; and

7) Any problems and corrective or enforcement actions taken.

8) Maintenance Approvals: The Permittee shall ensure that systems and hydromodification controls installed at Regulated Projects are properly operated and maintained for the life of the projects. In cases where the responsible party for a treatment system or hydromodification control has worked diligently and in good faith with the appropriate state and federal agencies and the Permittee to obtain approvals necessary to complete maintenance activities for the treatment system or hydromodification management control, but these approvals are not granted, the Permittee shall be deemed to be in compliance with this Provision.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long- term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

**E.12.i. Post-Construction Best Management Practice Condition Assessment**

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall inventory and assess the maintenance condition of structural post-construction BMPs (including BMPs used for flood control) within the Permittee's jurisdiction.

(ii) **Implementation Level** – The Permittee shall develop and implement a plan to inventory, map, and determine the relative maintenance condition of structural post-construction BMPs. Maintenance condition shall be determined through a self-certification program where Permittees require annual reports from authorized parties demonstrating proper maintenance and operations. The plan shall include:

(a) An inventory and map of existing structural post-construction BMPs, in GIS if available.

(b) Assessments of the self-certification program annual reports. Assessment shall include a ranking of structural BMPs and verification that BMPs are operating to remove pollutants as designed. Regional BMPs should receive higher priority than lot-scale BMPs, and BMPs designed to remove pollutants for which receiving water is impaired should receive priority attention over other BMPs.

(c) Appropriate escalating enforcement based on the Permittee Enforcement Response Plan to ensure proper maintenance of BMPs and submittal of self-certification annual reports.

(d) Self-Certification Annual Reports. At a minimum, the self-certification annual reports shall include:

1) Field observations to determine the effectiveness of the structural post construction BMPs in removing pollutants of concern from storm water runoff and/or reducing hydromodification impacts as designed.

2) Long-term plan for conducting regular maintenance of BMPs, including the frequency of such maintenance.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long- term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

### E.12.j. Planning and Development Review Process

(i) **Task Description** – The Permittee shall review their planning and permitting process to assess any gaps or impediments impacting effective implementation of these post-construction requirements specified in Section E.12, and where these are found to exist, seek solutions to promote implementation of these requirements within the context of public safety and community goals for land use. The Permittee shall prioritize review of the landscape code (code detailing landscaping requirements and considerations which should be implemented to protect environmental quality) to correct gaps and impediments impacting effective implementation of post-construction requirements.

(ii) **Implementation Level** – During years 1–3, the Permittee shall conduct the review using an existing guide or template already developed for MS4s (such as the Municipal Regulatory Update Assistance Program (MRUAP)[24] conducted by AHBL, Inc. for the Low Impact Development Initiative (LIDI) on the Central Coast). By the fourth year of the effective date of the permit, any changes to the planning and permitting process will be completed to effectively administer these provisions. Priority shall be placed on review of the landscape code, with the following implementation level.

(a) Within the first year of the effective date of this permit, the Permittee shall conduct an analysis of the landscape code to correct gaps and impediments impacting effective implementation of post-construction requirements.

(b) Within the second year of the effective date of the permit, the Permittee shall complete any changes to the landscape code to effectively administer post-construction requirements.

(iii) **Reporting** – By the second year Annual Report and annually thereafter, complete and have available a summary of the review process, and any proposed or completed changes to the Permittee's program.

### E.12.k. Post-Construction Storm Water Management Requirements Based on Assessment and Maintenance of Watershed Processes

Small MS4s subject to Section E of this Order, in place of complying with the requirements set forth in Section E.12, except for Sections E.12.j. Planning and Development Review Process and E.12.e(ii)(e) Source Control Requirements, shall comply with post-construction storm water management requirements based on a

[24] http://www.casqa.org/LIDDemo/LIDTraining/tabid/246/Default.aspx

watershed-process approach developed by Regional Water Board that include the following:

- Completion of a comprehensive assessment of dominant watershed processes affected by urban storm water
- LID site design and runoff reduction measures, numeric runoff treatment and retention controls, and hydromodification controls that will maintain watershed processes and protect water quality and beneficial uses.
- A process by which Regional Board staff will actively engage Permittees to adaptively manage requirements as determined by the assessment of watershed processes.
- An annual reporting program that involves Regional Board staff and State Board staff to inform statewide watershed process based criteria.

The regional watershed-process based approach must be approved by the Regional Water Board following a public process.

### E.12.I. Alternative Post-Construction Storm Water Management Program

A Permittee may propose alternative post-construction measures in lieu of some or all of Section E.12. requirements for multiple benefit projects. Multiple-benefit projects include projects that may address any of the following, in addition to water quality: water supply, flood control, habitat enhancement, open space preservation, recreation, climate change. Multiple-benefit projects may be applied at various scales including project site, municipal or sub-watershed level. Multiple-benefit projects may include, but are not limited to, projects developed under Watershed Improvement Plans (Water Code §16100 et seq.), IRWMP implementation and green infrastructure projects. Multiple benefit projects must be equally or more protective of water quality than Section E.12. requirements.

The Regional Water Board or the Executive Officer, may approve alternative post-construction measures for multiple-benefit projects, as described above, after an opportunity for public comment, if the Regional Water Board or Executive Officer finds that the alternative measures are consistent with the MEP standard.

## E.13. WATER QUALITY MONITORING

Traditional Small MS4 Permittees that are required to conduct monitoring of discharges to ASBS, TMDL, or 303(d) impaired water bodies, as described in Sections E.13.(a)–(c), are not required to perform additional monitoring as specified in Sections E.13.d.1. and E.13.d.2.

Permittees are encouraged to participate in a regional monitoring program in order to cost- effectively combine resources and water quality information. Regional monitoring is the collaboration of local and regional monitoring programs that are designed to create a more comprehensive picture of water quality conditions within a watershed.

The following management questions may be used to assist in guiding the development of a regional monitoring program, as applicable[25]:

1) Are water quality standards being met in receiving waters?
2) What is the extent and magnitude of the current or potential receiving water problems[26]?
3) What is the relative urban runoff contribution to the receiving water problem(s)?
4) What are the sources to urban runoff that contribute to the receiving water problem(s)?
5) Are conditions in receiving waters getting better or worse?

Regional monitoring programs shall be reviewed and approved by the Executive Officer of the applicable Regional Water Board[27].

Where a regional monitoring group has initiated plans, before the effective date of this Order, to conduct monitoring that achieves Section E.13. compliance, the Permittee may request the Executive Officer of the applicable Regional Board tailor compliance dates to synchronize with such efforts. Additionally, existing regional water monitoring efforts shall be reviewed and approved by a Regional Water Board Executive Officer.

Where a Permittee receives grant funding to conduct monitoring that achieves Section E.13. compliance, the Permittee may request the Regional Water Board Executive Officer tailor compliance dates to synchronize with such efforts.

### E.13.a. ASBS Monitoring

All Permittees that discharge to an ASBS and are covered by an Ocean Plan exception shall comply with the monitoring requirements described in the terms, prohibitions and special conditions in Attachment C.

### E.13.b. TMDL Monitoring

Permittees shall implement any monitoring requirements assigned to them in Attachment G. The Regional Water Board Executive Officer may require additional monitoring, per Water Code § 13383.

[25] The five core management questions are based on the Stormwater Monitoring Coalition's Model Monitoring Technical Committee Technical Report # 419: Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California.

[26] Water quality problems include exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts.

[27] The regional monitoring programs may deviate from the specific requirements in Section E.13.a. to the extent approved by the Executive Officer, except that the regional monitoring program shall be SWAMP comparable and that all data shall be placed in the California Environmental Data Exchange Network (CEDEN).

### E.13.c. 303(d) Monitoring

All Permittees that discharge to waterbodies listed as impaired on the 303(d) list[28] where urban runoff is listed as the source, shall consult with the Regional Water Board within one year of the effective date of the permit to assess whether monitoring is necessary and if so, determine the monitoring study design and a monitoring implementation schedule. Permittees shall implement monitoring of 303(d) impaired water bodies as specified by the Regional Water Board Executive Officer.

### E.13.d. Receiving Water Monitoring and Special Studies

Traditional Small MS4 Permittees with a population greater than 50,000 listed in Attachment A that are not already conducting ASBS, TMDL or 303(d) monitoring efforts shall participate in one of the following monitoring programs, subject to Regional Water Board Executive Officer approval:

E.13.d.1. Receiving Water Monitoring

E.13.d.2. Special Studies

### E.13.d.1. Receiving Water Monitoring

(i) **Task Description –** Within the second year of the effective date of the permit, the Permittee shall develop and implement a receiving water monitoring program to Monitor receiving water quality at upstream location in an area undergoing development and evaluate changes in receiving water quality over time, and Monitor receiving water quality at a downstream location in an urban area and evaluate changes in receiving water quality over time. Permittees may, to the extent allowed by law, establish a monitoring fund into which all new development contributes on a proportional basis (% development fee, size/number of lots, etc.). Monitoring funding may be overseen by municipalities or coalition of municipalities.

(ii) **Implementation Level –** By the first year of the permit, the Permittee shall select one urban/rural interface monitoring site to monitor receiving water quality at an upstream location in an area undergoing development and evaluate changes in receiving water quality over time, and; one (1) urban area monitoring site to monitor receiving water quality at a downstream location in an urban area and evaluate changes in receiving water quality over time. Site selection shall include the following:

(a) Urban/Rural Interface. Identify one characteristic waterway at the top, or upstream, of a HUC 12 level watershed planned for development in the near future that traverses an urban/rural interface, using the 2010 Census Data and urban area maps, and establish a permanent monitoring location at the identified urban/rural interface[29]. Monitoring at the urban/rural interface shall address the question: Does receiving water quality change as LID BMPs are integrated into new development?

(b) Urban Downstream. Identify one characteristic waterway at the bottom, or downstream, of the same HUC 12 watershed as the urban/rural interface

[28] http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml.

[29] The urban/rural interface is identified as the geographical location at which urban land use and rural land use interact.

monitoring location and within an urbanized area and establish a permanent monitoring location at the identified urbanized area waterway. Monitoring at the urban area site shall address the question: Does receiving water quality improve as a result of efforts to control the sources of pollution and educate the public?

By the second year of the permit term and after establishment of site selection, the Permittee shall monitor the urban/rural interface site to address the hypothesis that receiving water quality will remain the same as new development proceeds, and the urban area site to address the hypothesis that receiving water quality will improve over time as storm water and other water quality programmatic efforts are implemented. Monitoring shall be implemented in accordance with Table 3: Receiving Water Monitoring Parameters and Protocols.

**Table 3: Receiving Water Monitoring Parameters and Protocol**

**Information on Receiving Water Monitoring Parameters and Protocol for Table 3 includes:**

**Urban/Rural Interface:**

Objective: Monitor receiving water quality at upstream location in an area undergoing development. Evaluate changes in receiving water quality over time.

Question: Does receiving water quality change as LID BMPs are integrated into new development?

Hypothesis: Receiving water quality will remain the same as new development proceeds.

**Urban Downstream:**

Objective: Monitor receiving water quality at a downstream location in an urban area. Evaluate changes in receiving water quality over time.

Question: Does receiving water quality improve as a result of efforts to control the sources of pollution and educate the public?

Hypothesis: Receiving water quality will improve over time as storm water and other water quality programmatic efforts are implemented.

* Pyrethroid monitoring is required at the urban/rural interface site only.

** Currently, pyrethroids are the pesticide of greatest concern and abundance in urban/suburban waterways. However, new regulations enacted by the Dept. of Pesticide Regulation restrict how pyrethroids may be applied. Initial models by UC Davis researchers suggest that this could result in a runoff reduction of 80-90%, depending on the amount of impervious cover in the watershed. In the future, other pesticides may become more of a threat to aquatic life in urban waterways. One pesticide that is being used with greater frequency is fipronil, a phenylpyrazole insecticide, that is more water soluble than pyrethroids. In order to use the resources of the permittees most efficiently, the State Water Resource Control Board reserves the right to modify the terms and conditions of the permit based on new information on pesticide use and toxicity. This could include substituting another pesticide for monitoring or eliminating this endpoint.

| Parameter | Endpoint | Beneficial Used Protected | Justification | Protocol |
|---|---|---|---|---|
| **Water Quality** | Pyrethroids* (sediment) | Aquatic Life | Pyrethroids** among the most ubiquitous urban contaminant in storm water. Highly toxic to aquatic life. | Method with detection limit of 1 pptr (5 pptr for permethrin only) such as the GC-MS-MS method of Water Pollution Control Lab. Yearly in spring at urban/rural interface only. Refer to pending SWAMP guidelines. |

| Parameter | Endpoint | Beneficial Used Protected | Justification | Protocol |
|---|---|---|---|---|
| **Water Quality** | Dissolved oxygen (DO) | Aquatic life, recreation | DO reports on presence of excessive nutrients (Nitrogen, Phosphorus) and effects of organic matter loading into a waterbody. High DO during day, low DO at night suggests algae overgrowth. | Option 1: One week of evening grab samples (a minimum of 2 hours after dusk or 2 hours before sunrise) in spring (as soon as safe to get into waterway), summer, & fall. OR Option 2: Continuous sampling. 1 week in spring summer, fall. In rivers or lakes, 2 samplers to obtain depth-integrated values. |
| **Water Quality** | Temperature | Aquatic life | Aquatic life can survive within a temperature window, exceedances lethal. If loggers are deployed, DO probes often also measure temperature. | Option 1: Daytime measurement between noon – 5 pm, at the same time of day, for 2 weeks in the spring, summer, and fall. Option 2: Continuous sample. Same as for dissolved oxygen. |
| **Water Quality** | Bacteria | Recreation | Increase cell count linked to poor management practices, high bacteria levels limit recreational use of waterways. | Once yearly in later summer or fall. Collect 1 sample weekly x 4 weeks. Calculate geometric mean. Measure E. coli. |

| Parameter | Endpoint | Beneficial Used Protected | Justification | Protocol |
|---|---|---|---|---|
| **Water Quality** | Nutrients | Aquatic life Recreation Other | Excess nutrients can cause eutrophication of waterways leading to low dissolved oxygen which harms aquatic life. Algal overgrowth can also impair flows, adversely affect aesthetics, limiting recreation. | Benthic algal biomass and % cover (benthic chlorophyll a) from sediment in wadeable and non- wadeable streams or planktonic algal biomass (water column chlorophyll) from non-wadeable rivers and lakes. 3 times per year at beginning, middle, and end of growing season. Use SWAMP protocol. |
| **Physical Habitat** | PHAB assessment | Aquatic life | Expect to see few changes in habitat with effective LID implementation | Once yearly in spring. Use SWAMP protocol. |
| **Physical Habitat** | Channel cross sections | Aquatic life | Reports on stability of creek/river channel | Once yearly in spring. |
| **Physical Habitat** | Flow | Aquatic life | Expect minimal changes in flow rate if Low Impact Development practices minimizes changes in hydrograph usually seen with urbanization | Option 1: Pressure transducer. Use channel cross sections put in same time as DO probe. Measure spring, summer, and fall. Option 2: Install stage gage, develop rating curve. Evaluate spring, summer, and fall for 2 weeks. |
| **Physical Habitat** | Photo documentation | Overall conditions | Pictures and flood prone area will aid in the interpretation of the data | Once yearly in spring. |

| Parameter | Endpoint | Beneficial Used Protected | Justification | Protocol |
|---|---|---|---|---|
| **Aquatic Life** | Bioassessment | Aquatic life | Benthic macroinvertebrates (BMIs) integrate the sum of all conditions. Use early measurements as the baseline. In some cases, expect improved BMIs, depending on previous use of land. | In spring as soon as safe to enter water, use SWAMP protocol |

(iii) **Reporting –** By the second year Annual Report, the Permittee shall complete and have available a report (50 page maximum) that includes a summary of baseline data collections and discussion of monitoring program results;

By the fifth year Annual Report, the Permittee shall complete and have available a report (50 page maximum) that includes a comparison of data collection to baseline data, and discussion of monitoring program results.

At a minimum, the second and fifth year Annual Reports shall include the following information:

(a) The purpose of the monitoring, brief contextual background and a brief description of the study design and rationale.

(b) Sampling site(s) locations, including latitude and longitude coordinates, water body name and water body segment if applicable. Sampling design, including sampling protocol, time of year, sampling frequency and length of sampling.

(c) Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable.

(d) Results of data collection, including concentration detected, measurement units, and detection limits if applicable.

(e) Quantifiable assessment, analysis and interpretation of data for each monitoring parameter.

(f) Comparison to reference sites (if applicable), guidelines or targets

(g) Discussion of whether data collected addresses the objective(s) or question(s) of study design

(h) Quantifiable discussion of program/study pollutant reduction effectiveness.

Where applicable, the Permittee shall prepare, maintain, and implement a Quality Assurance Project Plan (QAPP) in accordance with the Surface Water Ambient Monitoring Program. All monitoring samples shall be collected and analyzed according to the Program QAPP developed for the purpose of compliance with this Order. SWAMP Quality Assurance Program Plan (2008) is available at: http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/qaprp082209.pdf.

A formatted Microsoft Word document that includes guidelines and boilerplate language for developing the permit QAPP is available at: http://www.waterboards.ca.gov/water_issues/programs/swamp/tools.shtml#qa.

Water quality data shall be uploaded to SMARTS and must conform to California Environmental Data Exchange Network (CEDEN) Minimum Data Templates format. CEDEN Minimum Data Templates are also available at: http://ceden.org/.

**E.13.d.2. Special Studies**

(i) **Task Description –** Within the first year of the effective date of the permit, the Permittee, as an alternative to Section E.13.d.1. Receiving Water Monitoring may develop and implement a special study monitoring program to assess and evaluate the effectiveness of water quality projects or storm water program elements designed to

reduce specific water quality pollutants that are causing or contributing to beneficial use impairment. The special studies must demonstrate the nexus between storm water program implementation, water quality protection and pollutant reduction effectiveness and may include, but are not limited to:

(a) Assessment of effectiveness of habitat enhancement efforts and assessment of effectiveness of stream restoration projects (i.e., stream channel restoration as related to implementation of hydromodification standards);

(b) Assessment of effectiveness of low impact development pilot projects, and assessment of storm water program components through pollutant load reduction quantification and/or discharge water quality monitoring (i.e., reduction of impervious surface related to implementation of Post- Construction Storm Water Management Program).

(ii) **Implementation Level** – By the first year of the permit, the Permittee shall develop and implement a special study plan and shall submit to an applicable Regional Board for review and approval. Within the second year of the effective date of the permit, the Permittee shall begin implementation of the approved special study plan. The study plan shall include, at a minimum:

(a) Purpose/objective of the monitoring (sampling rationale), including reasoning to implement a special study in lieu of the Receiving Water Monitoring described in Section E.13.d.1.

(b) Brief project background information and overall study design (i.e., surrounding land uses, reference monitoring data, if applicable, and site conditions)

(c) Parameters that are being measured, how parameters are measured and rationale for parameter selection.

(d) Frequency that parameters are being measured (sampling frequency)

(e) Sampling site location

(f) Description of how the data will be managed, analyzed (including statistical analysis) and reported

(g) Expected results based on study plan design and hypothesis

(iii) **Reporting –** By the second year Annual Report, the Permittee shall complete and have available a report (50 pages maximum) that includes a summary of baseline data collections and discussion of monitoring program results.

By the fifth year Annual Report, the Permittee shall complete and have available a report (50 pages maximum) that includes a comparison of data collection to baseline data, and discussion of monitoring program results.

At a minimum, the second and fifth year Annual Reports shall include the following information:

(a) The purpose of the monitoring, contextual background and a description of the study design and rationale.

(b) Sampling site(s) locations, including latitude and longitude coordinates, water body name and water body segment if applicable. Sampling design, including sampling protocol, time of year, sampling frequency and length of sampling.

(c) Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable.

(d) Results of data collection, including concentration detected, measurement units, and detection limits if applicable.

(e) Quantifiable assessment analysis and interpretation of data for each monitoring parameter or other data type.

(f) Comparison to reference sites (if applicable), guidelines or targets

(g) Discussion of whether data collected addresses the objective(s) or question(s) in the study plan

(h) Quantifiable discussion of program/study pollutant reduction effectiveness.

Where applicable, the Permittee shall prepare, maintain, and implement a QAPP in accordance with SWAMP. All monitoring samples shall be collected and analyzed according to the Program QAPP developed for the purpose of compliance with this Order. SWAMP Quality Assurance Program Plan (2008) is available at: http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/qaprp082209.pdf.

A formatted Microsoft Word document that includes guidelines and boilerplate language for developing the permit QAPP is available at: http://www.waterboards.ca.gov/water_issues/programs/swamp/tools.shtml#qa.

Water quality data shall be uploaded to the Storm Water Multi-Application Reporting and Tracking System (SMARTS) and must conform to "CEDEN Minimum Data Templates" format. CEDEN Minimum Data Templates are also available at: http://ceden.org/

## E.14. PROGRAM EFFECTIVENESS ASSESSMENT AND IMPROVEMENT

### E.14.a. Program Effectiveness Assessment and improvement Plan

(i) **Task Description -** The Permittee shall develop and implement a Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. The Program Effectiveness Assessment and Improvement Plan will assist the Permittee to document compliance with permit conditions and to adaptively manage its storm water program and make necessary modifications to the program to improve program effectiveness at reducing pollutants of concern, achieving the MEP standard, and protecting water quality. The Program Effectiveness Assessment and Improvement Plan shall identify the strategy used to gauge the effectiveness of prioritized BMPs and program implementation as a whole. Prioritized BMPs include BMPs implemented based on pollutants of concern. Where pollutants of concern are unidentified, prioritized BMPs are based on common urban pollutants (i.e., sediment, bacteria, trash, nutrients). The annual effectiveness assessments will help identify potential modifications to the program to ensure long-term effectiveness.

(ii) **Implementation Level** - The Program Effectiveness Assessment and Improvement Plan may be modeled upon the most recent version (if applicable) Municipal Storm Water Program Effectiveness Assessment Guidance (CASQA, May 2007) or equivalent.

(a) The Program Effectiveness Assessment and Improvement Plan shall include the following elements, at a minimum as applicable:

1) Identification of overall program goals including pollutants of concern and prioritized BMPs
2) Documentation of the level of implementation of storm water program elements
3) Identification and targeting of target audience(s)
4) Assessment of BMP performance at achieving outcome levels
5) Assessment of pollutant source reductions achieved by individual BMPs
6) Quantification of pollutant loads and pollutant load reductions achieved by the program as a whole
7) MS4 discharge quality, where available, including analysis of the data
8) Receiving water quality data, including analysis of the data
9) Identification of long-term effectiveness assessment, to be implemented beyond the permit term

(b) The Program Effectiveness Assessment and Improvement Plan shall assess BMP and program effectiveness in terms of the following Outcome Levels:

1) Storm water program activities
2) Awareness
3) Behavior
4) Pollutant load reductions
5) MS4 discharge quality (where assessment is supported by MS4 discharge quality data)
6) Receiving water conditions

(c) The Program Effectiveness Assessment and Improvement Plan shall identify assessment methods for privately owned BMPs.

(d) The Program Effectiveness Assessment and Improvement Plan shall identify assessment methods the Permittee will use to quantitatively assess BMP performance at reducing pollutant loads wherever feasible, using the following or equivalent methods:

1) Direct quantitative measurement of pollutant load removal for BMPs that lend themselves to such measurement (e.g., measuring sediment collected through street-sweeping activities);
2) Science-based estimates of pollutant load removal for BMPs where direct measurement of pollutant removal is overly challenging (e.g., removal of heavy metals through a bioswale);
3) Direct quantitative measurement of behaviors that serve as proxies of pollutant removal or reduction (e.g., the percentage of construction sites demonstrated by inspection to be in compliance with permit conditions); or
4) Visual comparison (e.g., using photographs to compare the amount of trash in a creek between one year and the next).

(e) The Program Effectiveness Assessment and Improvement Plan shall ask and answer the following Management Questions for prioritized BMPs for which answers to management questions can be based on quantitative data appropriate to the question being answered.

1) Were prioritized BMPs or group of BMPs implemented in accordance with the permit requirements? The Permittee shall develop quantitative data using the following or equivalent methods:
   a) Confirmation – Documenting whether an activity or task has been completed, expressed as positive or negative outcome (i.e., yes or no)
   b) Tabulation – Simple accounting expressed in absolute (e.g., number of people participating), or relative terms (e.g. percent increase in recycled household hazardous waste)
2) To what extent did prioritized BMPs or group of BMPs change the target audience's behavior? The Permittee shall develop quantitative data using the following or equivalent methods:
   a) Surveys or interviews to discern knowledge, attitudes, awareness, behavior of specific population, etc.
   b) Interviews of site personnel to discern awareness and behavior
   c) Inspections or site visits to directly observe or assess a practice.
3) To what extent did prioritized BMPs or group of BMPs reduce pollutant loads from their sources to the storm drain system?

(f) The Program Effectiveness Assessment and Improvement Plan shall include water quality monitoring data, where available, to answer the following long-term management questions, effectiveness of BMPs and the overall storm water program will be assessed in future permit terms.
1) To what extent did implementation of the BMP, group of BMPs, or storm water program enhance or change the urban runoff and discharge quality?
2) To what extent did implementation of the BMP, group of BMPs, or storm water program enhance or change receiving water quality?
3) Did exceedance(s) of water quality objectives or water quality standards persist notwithstanding implementation of the storm water program?

The Program Effectiveness Assessment and Improvement Plan shall include documentation of the effectiveness of BMPs implemented to reduce the discharge of pollutants to the MS4 to the MEP and protect water quality.

(iii) **Reporting** – By the second year Annual Report complete and submit the Program Effectiveness Assessment and Improvement Plan. The Plan shall include the strategy the Permittee will use to assess the effectiveness of the program, the specific measures the Permittee will use to assess the effectiveness of BMPs and/or groups of BMPs, and how the Permittee will use the information obtained through effectiveness assessment to modify individual BMPs and the program as a whole to increase short and long-term effectiveness. In subsequent Annual Reports, describe implementation of the Program Effectiveness Assessment and Improvement Plan, summarize data obtained through effectiveness assessment measures and the short and long-term progress of the storm water program, and provide an analysis of the data to improve program effectiveness, to achieve the MEP standard, protect water quality, and to document the Permittee's compliance with permit conditions. Permittees that have a Program Effectiveness Assessment and Improvement Plans, or equivalent, approved by the applicable Regional Board, or that have a schedule approved by the applicable Regional Board to develop and implement such a Plan, shall adhere to the Plan and/or

schedule approved by the Regional Board unless otherwise directed by the Regional Board. By the fifth-year annual report, complete and submit an analysis of the effectiveness of modifications made at improving BMP and/or program effectiveness.

**E.14.b. Storm Water Program Modifications**

(i) **Task Description** –The Permittee shall modify BMPs and/or the program as a whole to improve compliance with permit conditions and improve program effectiveness at reducing pollutant loads, achieving the MEP standard, and protecting water quality. The Permittee shall use information gained through effectiveness assessment and MS4 discharge and receiving water monitoring to identify priority areas for program improvement. In addition, the Permittee shall identify and make modifications to BMPs, including new BMPs or modification to existing BMPs, to improve effectiveness in each priority area. The Permittee shall consult with the applicable Regional Water Board in setting expectations for the scope, timing, and frequency of BMP modifications.

(ii) **Implementation Level** – Within the fifth year of the effective date of the permit, the Permittee shall identify and summarize BMP and/or program modifications identified in priority program areas. Modifications shall include:

(a) Improving upon BMPs that are underperforming

(b) Continuing and expanding upon BMPs that proved to be effective, including identifying new BMPs or modifications to existing BMPs designed to increase pollutant load reductions;

(c) Discontinuing BMPs that may no longer be productive and replacing with more effective BMPs; and

(d) Shifting priorities to make more effective use of resources

(iii) **Reporting –** By the fifth year Annual Report, complete and submit the list of BMP and/or program modifications, as specified in E.14.c(ii), the Permittee will make for priority program areas, including identification of priority program areas and the schedule the Permittee will follow to complete identified modifications during the next permit term. The modifications shall be aimed at the goal of reducing pollutant loads, achieving the MEP standard and protecting water quality.

## E.15. TOTAL MAXIMUM DAILY LOADS COMPLIANCE REQUIREMENTS

Attachment G contains a list of TMDL-specific, BMP-based water quality based effluent limitations (WQBELs) and other permit requirements, applicable to identified permittees, consistent with the assumptions and requirements of the applicable wasteload allocations of the TMDLs.

**E.15.a.** Permittees shall comply with the requirement in Section C.1 to reduce the discharge of pollutants to achieve applicable TMDL wasteload allocations as follows:

(i) Prior to the deadline to attain the final wasteload allocation, a permittee is deemed in compliance with the requirement in Section C.1 to *reduce the discharge of pollutants to achieve applicable TMDL wasteload allocations*, if the permittee is timely implementing all BMP-based WQBELs and other requirements specified in

Attachment G for that TMDL. The permittee may alternatively make a demonstration in accordance with section E.15.a.ii. below.

(ii) On or after the deadline to attain the final wasteload allocation, a permittee is deemed in compliance with the requirement in Section C.1 to *reduce the discharge of pollutants to achieve applicable TMDL wasteload allocations* if the permittee meets one or more of the criteria in subsections (a)-(g) below. For purposes of this section only, the wasteload allocations specified in the applicable TMDLs (as identified in the Fact Sheet) are incorporated by reference.

(a) Receiving water monitoring and analysis by the permittee or other responsible parties under the TMDL, as approved by the Regional Water Board or its designee, demonstrates attainment of the applicable receiving water limitation in the waterbody as determined at the TMDL monitoring attainment locations or as determined at or immediately downstream of the permittee's discharge; or

(b) Receiving water monitoring does not demonstrate attainment of the applicable receiving water limitation in the waterbody, but the permittee demonstrates, through an approach approved by the Regional Water Board or its designee, that exceedances of the receiving water limitations for the receiving water are due to loads from other sources and pollutant loads from the permittee are not causing or contributing to the exceedances; or

(c) Where the wasteload allocation is expressed as a concentration, sampling of the permittee's discharge, as approved by the Regional Water Board or its designee, indicates that the discharge has attained the applicable wasteload; or

(d) Where a mass-based wasteload has been allocated to an individual or jointly to a group or is expressed as a percent reduction in load, the permittee demonstrates, through an approach approved by the Regional Water Board or its designee, that the permittee's discharge is attaining the individual or joint allocation or the percent reduction; or

(e) Where a wasteload allocation is expressed as the number of allowable exceedance days, the permittee demonstrates, through an approach approved by the Regional Water Board or its designee, that the permittee's discharge conforms to the allowable exceedance days; or

(f) The permittee demonstrates, in a manner approved by the Regional Water Board or its designee, that no discharges, either directly or indirectly, from the permittee's MS4 to the applicable water body occurred during the relevant time period; or

(g) The permittee demonstrates the attainment of the wasteload allocation through other factors as described by the specific TMDL(s)[30] and as approved by the Regional Water Board or its designee.

[30] As an example, the TMDL for Sacramento and San Joaquin Delta - Diazinon and Chlorpyrifos states "In determining compliance with the wasteload allocations, the Regional Water Board will consider any data or information submitted by the discharger regarding diazinon and chlorpyrifos inputs from sources outside of the jurisdiction of the permitted discharger, including any diazinon and chlorpyrifos present in precipitation and other available relevant information, and any applicable provisions In the discharger's NPDES

(iii) Pursuant to Section D, a permittee deemed in compliance with Section C.1 in accordance with subsections i) and ii) of this section is also deemed in compliance with the Section D requirement to *not cause or contribute to an exceedance of water quality standards* for the specific pollutants and water bodies addressed.

**E.15.b.** In some cases, Attachment G includes dates that fall outside the term of this Order. Attainment dates for BMP-based WQBELs and other permit requirements that exceed the term of this Order are included for reference, and become enforceable in the event that this Order is administratively extended.

Wasteload allocation attainment dates that have already passed are enforceable on the effective date of this Order and have been assigned a due date of January 1, 2019.

(i) If the Regional Water Board Executive Officer makes a determination, on a case by case basis, that the language of a particular TMDL allows flexibility to extend a final deadline to attain a wasteload allocation, the State Water Board Executive Director may amend Attachment G to provide an extended deadline following public notice and comment.

Where a final deadline to attain a wasteload allocation is past and the permittee has not demonstrated compliance as specified in Section E.15.a.(ii) above, the permittee may seek a time schedule order pursuant to Water Code section 13300 from the Regional Water Board. Permittees may either individually request a time schedule order or may jointly request a time schedule order with all Permittees subject to the TMDL in Attachment G. Permittees may also request time schedule orders where the permittee has not timely complied with a BMP-based WQBEL or other permit requirement in Attachment G.
A request to the applicable Regional Water Board for a time schedule order shall include the following information:

(a) Any available data demonstrating the current quality of the MS4 discharge(s) in terms of the applicable wasteload allocation units (i.e. concentration and/or load) of the target pollutant(s) to the receiving waters subject to the TMDL;

(b) A description and chronology of structural controls and source control efforts carried out by the permittee since the effective date of the TMDL to reduce the pollutant load in the MS4 discharges to the receiving waters subject to the TMDL;

(c) Justification of the need for additional time to achieve the requirements;

(d) The specific actions the Permittee will take in order to meet the TMDL requirements and a time schedule of interim and final deadlines proposed to implement those actions. The actions will reflect the requirements specified for the TMDL in Attachment G; and

(e) A demonstration that the time schedule requested is as short as possible, taking into account the technological, operational, and economic factors that affect the design, development, and implementation of the control measures that are necessary to comply with the TMDL requirements.

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permit requiring the discharger to reduce the discharge of pollutants to the maximum extent possible." Resolution No. R5-2006-0061, Attachment 1, #11 Page 4.

(ii) It is not the intention of the State Water Board or the Regional Water Boards to bring an enforcement action for non-attainment of the wasteload allocation where:

(a) A permittee is in compliance with a time schedule order's implementation requirements and compliance schedule;

(b) A permittee has in good faith requested a time schedule order from the Regional Water Board and is in compliance with all BMP-based WQBELs and other permit requirements of Attachment G, except the requirement to attain the applicable wasteload allocation by the final attainment deadline;

(c) A Regional Water Board has initiated proceedings to revise the TMDL to provide additional time for attainment or to modify TMDL wasteload allocations and the permittee is in compliance with all BMP-based WQBELs and other permit requirements in Attachment G, except the requirement to attain the applicable wasteload allocation by the final attainment deadline.

**E.15.c.** The State Water Board may revise this Order through a reopener to incorporate any modifications or revisions to the TMDLs in Attachment G, or to incorporate any new TMDLs adopted during the term of this Order that assign a wasteload allocation to a Regulated Small MS4 or that identify a Regulated Small MS4 as a responsible party. In revising Attachment G, the State Water Board will allow adequate notice and public review.

**E.15.d.** The Permittee shall complete and report the status of their implementation of the specific TMDL implementation requirements that have been incorporated into the permit with each Annual Report via SMARTS. Reporting on TMDL implementation shall include the following information:

(i) A description of BMPs implemented, including types, number, and locations; and

(ii) All supplemental information and reports required under the specific TMDL implementation requirements in Attachment G; and

(iii) An assessment of the effectiveness of implemented BMPs in progressing towards attainment of wasteload allocations within the TMDLs' specified timeframes; and

(iv) All monitoring data, including a statistical analysis of the data to assess progress towards attainment of wasteload allocations within the TMDLs' specified timeframes; and

(v) Based on results of the effectiveness assessment and monitoring, a description of the additional BMPs that will be implemented to attain wasteload allocations within the TMDLs specified timeframes.

**E.15.e.** The Permittee shall comply with implementation requirements specified in Category 4b demonstrations associated with Clean Water Act Sections 303d, 306b, and 314 Integrated Reporting and Listing Decisions. Implementation requirements described in Category 4b demonstrations are effective upon Regional Water Board approval of that region's Integrated Reporting and Listing Decisions and associated Category 4b demonstrations. The most recent Integrated Reporting and Listing Decisions and associated Category 4b demonstrations are available at: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml

### E.16. ANNUAL REPORTING PROGRAM

**E.16.a.** **By October 15 of each year**, the Permittee shall use State Water Board SMARTS to submit a summary of the past year activities for each program element and certify compliance with all requirements of this permit. If a Permittee is unable to certify compliance with a requirement, the Permittee must submit in SMARTS the reason for failure to comply, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance.

**E.16.b.** Permittees shall complete and retain all Annual Report information on the previous fiscal year beginning July 1 and ending June 30. The Annual Reporting requirements are set forth in Provisions E. The Permittee shall retain documentation as necessary to support their Annual Report. The Permittee shall make this supporting information available during normal business hours, unless agreed to by the applicable Regional Water Board's Executive Officer.

**E.16.c.** The Permittee shall submit when requested by the Executive Officer of the applicable Regional Water Board a detailed written online annual report or in-person presentation of the annual report that addresses the activities described in Provision E. The detailed Annual Report must clearly refer to the permit requirements and describe in quantifiable terms, the status of activities undertaken to comply with each requirement.

**E.16.d.** Permittees involved in regional programs may coordinate with the members to identify reporting responsibility. The one report submitted on behalf of Permittees involved in a regional program must include a summary of the past year activities for each program element and certification of compliance with all requirements of this Order for each of the Permittees in the regional program.

## F. NON-TRADITIONAL SMALL MS4 PERMITTEE PROVISIONS

### F.1. Non-Traditional Small MS4 Categories

The Non-Traditional Small MS4s identified in Attachment B or by a Regional Water Board Executive Officer shall comply with the specific provisions in this Section. For military installations, this permit applies to areas, where the activities and population density resemble that of a traditional small MS4, as defined in the permit boundary map in Section A.2.b.(3). For Department of Corrections and Rehabilitation Permittees, this permit

applies to facilities that are in active operation (i.e., does not apply to closed facilities lacking management oversight).

**F.2. Security Concerns**

Department of Defense, Department of Corrections and Rehabilitation Permittees, ports and transportation agencies are exempt from Annual Reporting of any provision in this section that could pose a security risk and/or compromise facility security.

**F.3. Maximize Efficiency**

Permittees may incorporate the required storm water provisions into already existing programs and leverage existing staff to implement BMPs during its day to day business and operations.

**F.4. Equivalent or Existing Document**

A Permittee may utilize an equivalent or existing document such as a Standard Operations and Procedures manual, Operation and Maintenance Plan, or Spill Response Plan if that document includes the necessary information required to comply with the provisions of this section.

**F.5. PROVISIONS**

**F.5.a. PROGRAM MANAGEMENT ELEMENT**

**F.5.a.1. Legal Authority**

(i) **Task Description** - Permittee shall have adequate legal authority to meet the requirements of this Order

(ii) **Implementation Level** – Within the second year of the effective date of the permit, the Permittee shall review, revise or adopt new relevant policies, contractual provisions, base orders, resolutions or other regulatory mechanisms, to the extent allowable under state or local law, to ensure it has at a minimum the legal authority to:

(a) Effectively prohibit non-storm water discharges through the MS4. Exceptions to this prohibition are NPDES-permitted discharges of non-storm water and non- storm water discharges from B.3 that are considered non-significant contributors of pollutants. Where the non-storm water discharge is to a segment of an MS4 that discharges directly to an ASBS, exceptions to the non-storm water prohibition are specified in Attachment C.

(b) Detect and eliminate illicit discharges and illegal connections to the MS4. Illicit connections include pipes, drains, open channels, or other conveyances that have the potential to allow an illicit discharge to enter the MS4. Illicit discharges include all non-storm water discharges not otherwise authorized in this Order, including, but not limited to discharges from mobile cleaning and pressure washing operations.

(c) Respond to spills, and prohibit dumping or disposal of materials other than storm water into the MS4.

(d) Require vendors, contractors and operators of commercial facilities to minimize the discharge of pollutants to the MS4 through the installation, implementation, and maintenance of BMPs consistent with the CASQA Best Management Practice Handbooks or equivalent.

(e) Ensure construction site or industrial facility operators provide a Waste Discharge Identification Number for coverage under the CGP and IGP and comply with the appropriate permit.
(f) Review designs and proposals for new development and redevelopment to determine whether adequate BMPs will be installed, implemented, and maintained during construction and after final stabilization (post-construction).
(g) Promptly cease and desist discharges and/or cleanup and abate a discharge, including the ability to:
1) Effectively require the discharger to abate and clean up their discharge, spill, or pollutant release within 72 hours of notification;
2) Require abatement, within 30 days of notification, for uncontrolled sources of pollutants that could pose an environmental threat;
3) Perform the cleanup and abatement work and bill the responsible party, if necessary;
4) Provide the option to order the cessation of activities until such problems are adequately addressed if a situation persists where pollutant-causing sources or activities are not abated;
5) Require a new timeframe and notify the appropriate Regional Water Board when all parties agree that clean-up activities cannot be completed within the original timeframe and notify the appropriate Regional Water Board in writing within five business days of the determination that the timeframe requires revision.

(iii) **Reporting** – All Permittees shall submit by the second year online Annual Report, a statement signed by both the Permittee's legal counsel and an authorized signatory certifying the Permittee has adequate legal authority to comply with all Order requirements.

### F.5.b. EDUCATION AND OUTREACH PROGRAM

#### F.5.b.1. Compliance Participation Options

All Permittees shall comply with the requirements in this Section by participating in one or more of the following:

(a) Contributing to a countywide storm water program, as determined appropriate by the Permittee members, so that the countywide storm water program conducts education and outreach on behalf of its members; or
(b) Contributing to a regional education and outreach collaborative effort (a regional education and outreach collaborative effort occurs when all or a majority of the Permittees collaborate to conduct regional education and outreach. Regional education and outreach collaboration includes Permittees defining a uniform and consistent message, deciding how best to communicate the message, and how to facilitate behavioral changes. Then collaboratively apply what is learned through local jurisdiction groups, pooling resources and skills.); or
(c) Fulfilling education and outreach requirements within their jurisdictional boundaries on their own. Some level of coordination of education and outreach efforts with an adjacent Phase I MS4 Permittee is recommended/anticipated for watershed/region-wide consistency.; or
(d) A combination of the previous options, so that all requirements are fulfilled.

**Reporting** – By the first year online Annual Report, the Permittee shall submit information indicating which compliance participation option it will use to comply with the public education and outreach requirements in this Section. For each public education and outreach requirement in this Section that the Permittee will comply with through contribution to a countywide storm water program or regional education and outreach collaborative effort, the Permittee shall include in the first year online Annual Report documentation, such as a written agreement, letter or similar document, which confirms the collaboration with other MS4s.

### F.5.b.2. Public Education and Outreach

The public for a Non-traditional MS4 Permittee is considered the following, if applicable:

- Faculty
- Inmates
- Military personnel
- Residents
- Students
- Staff
- Visitors

(i) **Task Description –** Within the second year of the effective date of the permit, the Permittee shall develop and implement a comprehensive storm water public education and outreach program. The public education and outreach program shall be designed to inform the public about storm water pollution and steps that can be taken to reduce storm water pollution. The Public Education and Outreach Program shall measurably increase the public's knowledge regarding the storm drain system, impacts of urban runoff and illicit discharges on receiving waters, and potential BMP solutions for the target audiences.

(ii) **Implementation Level** –The Permittee shall, at a minimum:

(a) Develop and implement a public education strategy that establishes education tasks based on water quality problems, target audiences, and anticipated task effectiveness. The strategy must include identification of who is responsible for implementing specific tasks and a schedule for task implementation. The strategy must demonstrate how specific high priority storm water quality issues in their jurisdiction or local pollutants of concern are addressed.

(b) Implement BMPs that gauge level of awareness in target audiences and effectiveness of education tasks.

(c) Develop and convey a specific storm water message that focuses on the following:

1) Local pollutants of concern
2) Target audience
3) Regional water quality issues

(d) Develop and disseminate appropriate educational materials to target audiences and translate into applicable languages when appropriate (e.g. the materials can utilize various media such as printed materials, billboard and mass transit advertisements, signage at select locations, stenciling at storm drain inlets, radio advertisements, television advertisements, and websites);

(e) Distribute educational materials, using whichever methods and procedures determined appropriate during development of the public education strategy;

(f) Develop and convey messages to explain the benefits of water-efficient landscaping (if appropriate);

(g) Utilize information from storm water-friendly landscaping[31] programs (if appropriate);

(h) Develop and convey messages specific to reducing illicit discharges with information about how the public can report incidents to the appropriate authorities;

(i) Develop and convey of messages specific to proper application of pesticides, herbicides, and fertilizers;

(j) Within the Permittee's jurisdiction, provide independent, parochial and public schools with materials to effectively educate school-age children, if applicable, about storm water and how they can help to protect water quality habitat in their local watersheds. The Permittee is encouraged to use environmental and place-based, experiential learning materials that are integrated into school curricula and school facility management[32]. In the case that a local program does not exist, the Permittee may use California's Education and Environment Initiative Curriculum[33] or equivalent;

(k) Develop (or coordinate with existing effective programs) and convey messages specific to reducing discharges from pressure washing operations and landscape irrigation;

(l) If applicable, utilize storm water-friendly education for organized car wash participants and provide information pertaining to car wash discharge reduction. The Permittee may use the Sacramento Stormwater Quality Partnership's River Friendly Carwash Program[34], or equivalent, for guidance;

(m) The Permittee shall conduct focused education in identified illicit discharge flow areas based on identified illicit discharge(s).

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance directions.

[31] For example, Surfrider's Ocean Friendly Garden Program (www.surfrider.org/programs/ocean-friendly-gardens)

[32] For example, Sacramento Splash Organization (www.sacsplash.org/), Effie Yeaw Nature Center (www.sacnaturecenter.net) or Yolo Basin Organization (yolobasin.org)

[33] http://www.californiaeei.org/

[34] http://www.beriverfriendly.net/riverfriendlycarwashing/

### F.5.b.3. Staff and Site Operator Training and Education: Illicit Discharge Detection and Elimination Training

(i) **Task Description** – Permittees shall develop and implement a training program for all Permittee staff, who, as part of their normal job responsibilities, may be notified of, come into contact with, or otherwise observe an illicit discharge or illegal connection to the storm drain system.

(ii) **Implementation Level** – Within the third year of the effective date of the permit, the Permittee shall develop the training program. The training program shall include at a minimum:

(a) Identification of an illicit discharge or illegal connection;

(b) Proper procedures for reporting and responding to the illicit discharge or illegal connection;

(c) Follow-up training provided as needed to address changes in procedures, techniques, or staffing;

(d) Annual assessment of their trained staff's knowledge of illicit discharge response and shall provide refresher training as needed;

(e) Training of new staff who, as part of their normal job responsibilities may be notified of, come into contact with, or otherwise observe an illicit discharge or illegal connection;

(f) Contact information, including the procedure for reporting an illicit discharge, shall be included in each of the Permittee's fleet vehicles that are used by field staff.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance directions.

### F.5.b.4. Staff Pollution Prevention and Good Housekeeping

The Permittee shall train employees on how to incorporate pollution prevention/good housekeeping techniques into Permittee operations.

(i) **Task Description** – The Permittee shall provide a biennial training program for appropriate employees involved in implementing pollution prevention and good housekeeping practices in the Pollution Prevention/Good Housekeeping for Permittee Operations sections of this permit. The Permittee shall determine the need for interim training during alternate years when training is not conducted, through an evaluation of employee Pollution Prevention/Good Housekeeping knowledge.

(ii) **Implementation Level** – The biennial training program shall include the following:

(a) General storm water education component, any new technologies, operations, or responsibilities that arise during the year and the permit requirements which apply to the staff being trained. Clear guidance on appropriate storm water BMPs to use at Permittee owned facilities and during typical Operation and Maintenance activities.

(b) An assessment of trained staff's knowledge of pollution prevention and good housekeeping and shall revise the training as needed.

(c) A requirement that any contractors hired by the Permittee to perform Operation and Maintenance activities shall be contractually required to comply with all of the storm water BMPs, good housekeeping practices, and standard operating procedures described above.

(d) The Permittee shall provide oversight of contractor activities to ensure that contractors are using appropriate BMPs, good housekeeping practices and following standard operating procedures.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance directions.

### F.5.c. PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM

(i) **Task Description -** Within the third year of the effective date of the permit, the Permittee shall involve its public in the development and implementation of activities related to the program. The public participation and involvement program shall encourage volunteerism, public comment and input on policy, and activism in the community.

(ii) **Implementation Level** – The Permittee shall, at a minimum:

(a) Ensure that high priority storm drain inlets include a labeled, stenciled or other effective method (e.g., clearly visible sign strategically placed in area of high pedestrian activity) of communicating a storm water awareness message such as "drains to creek" or "only rain in the drain".

(b) Integrate storm water awareness messages and information on a publicly accessible website

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance

### F.5.d. ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

The Permittee shall develop an Illicit Discharge Detection and Elimination program to detect, investigate, and eliminate illicit discharges, including illegal dumping, into its system or coordinate with an adjacent Phase I MS4 Permittees existing program. The existing program, at a minimum, must include the provisions in this section.

**F.5.d.1. Outfall Mapping**

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall maintain an up-to-date and accurate outfall map. The map may be in hard copy and/or electronic form or within a geographic information system (GIS). The development of the outfall map shall include a visual outfall inventory involving a site visit to each outfall. It is recommended the Permittee coordinate with an adjacent Phase I MS4 Permittee to collect outfall data for which they may discharge to. Renewal Permittees that have an existing and up-to-date outfall map that includes the minimum requirements specified in Section F.5.d.1.(ii)(a-b) are not required to re-create the outfall map. This does not exempt renewal Permittees with an existing outfall map from conducting the field sampling specified in Section F.5.d.2.

(ii) **Implementation Level** - The outfall map shall at a minimum show:

(a) The location of all outfalls and drainage areas within the urbanized area, contributing to those outfalls that are operated by the Permittee, and that directly discharge within the Permittee's jurisdiction to a receiving water. Each mapped outfall shall be given an individual alphanumeric identifier, which shall be noted on the map. Photographs shall be taken or an electronic database shall be utilized to provide baseline information and track operation and maintenance needs over time.

(b) The location (and name, where known to the Permittee) of all water bodies receiving direct discharges from those outfall pipes.

Submerged outfalls or other outfalls that may pose a threat to public safety are not required to be inventoried.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

**F.5.d.2. Field Sampling to Detect Illicit Discharges**

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall conduct field sampling to detect potential illicit discharges while conducting the outfall inventory specified in Section F.5.d. Outfall Inventory. If while conducting the outfall inventory specified in Section F.5.d., an outfall is flowing or ponding and it has been more than 72 hours since the last rain event, then the Permittee shall sample the discharge.

(ii) **Implementation Level** – If an outfall is flowing or ponding and it has been more than 72 hours since the last rain event, the Permittee shall:

(a) Conduct monitoring for the following indicator parameters identified in Table 1. Field Sampling Indicator Parameters (following page) to help determine the source and identification of the discharge. Alternatively, the Permittee may select parameters based on local knowledge of pollutants of concern in lieu of sampling for the parameters listed in Table 1. Modifications and associated justifications

shall be identified within SMARTS prior to conducting field sampling as specified in Section F.5.d.2.

**Table 1. Field Sampling Indicator Parameters**

**Note:** > = greater than
> 80% — Can almost always (>80% of samples) distinguish this discharge from clean flow types (e.g., tap water or natural water). For tap water, can distinguish from natural water.
> 50% — Can sometimes (>50% of samples) distinguish this discharge from clean flow types depending on regional characteristics, or can be helpful in combination with another parameter.
Poor — Poor indicator. Cannot reliably detect illicit discharges, or cannot detect tap water
Data sources: Pitt (this study)

* Fluoride is a poor indicator when used as a single parameter, but when combined with additional parameters (such as detergents, ammonia and potassium), it can almost always distinguish between sewage and wash water.

| Parameter | Discharge Types It Can Detect | | | | Laboratory/Analytical Challenges |
|---|---|---|---|---|---|
| | Sewage | Washwater | Tap Water | Industrial or Commercial Liquid Wastes | |
| Ammonia | > 80% | > 50% | Poor | > 50% | Can change into other nitrogen forms as the flow travels to the outfall |
| Color | > 50% | > 50% | Poor | > 50% | |
| Conductivity | > 50% | > 50% | Poor | > 50% | Ineffective in saline waters |
| Detergents – Surfactants | > 80% | > 80% | Poor | > 50% | Reagent is a hazardous waste |
| Fluoride* | Poor | Poor | >80% | > 50% | Reagent is a hazardous waste Exception for communities that do not fluoridate their tap water |
| Hardness | > 50% | > 50% | >50% | > 50% | |
| pH | Poor | > 50% | Poor | > 50% | |
| Potassium | > 50% | Poor | Poor | > 80% | May need to use two separate analytical techniques, depending on the concentration |
| Turbidity | > 50% | >50% | Poor | > 50% | |

(c) Verify that indicator parameters with the following action level concentrations specified in Table 2. Action Level Concentrations for Indicator Parameters are not exceeded. Alternatively, the Permittee may tailor Table 2 to align with parameters based on local knowledge of pollutants of concern. Modifications and associated

justifications shall be identified within SMARTS prior to conducting field sampling as specified in Section F.5.d.2.

**Table 2. Action Level Concentrations for Indicator Parameters**

| Indicator Parameter | Action Level Concentration |
|---|---|
| Ammonia | > = 50 milligram per liter |
| Color | >= 500 units |
| Conductivity | > = 2,000 microsiemens per centimeter |
| Hardness | < = 10 milligram per liter as $CaCO_3$ or<br>> = 2,000 milligram per liter as $CaCO_3$ |
| pH | < = 5 or > = 9 |
| Potassium | > = 20 milligram per liter |
| Turbidity | > = 1,000 Nephelometric Turbidity Units |

(d) Conduct follow up investigations per Section F.5.d.3. if the action level concentrations are exceeded.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance

**F.5.d.3. Illicit Discharge Detection and Elimination Source Investigations and Corrective Actions**

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop written procedures for conducting investigations into the source of all non-storm water discharges suspected to be illicit discharges, including approaches to requiring such discharges to be eliminated, and procedures to implement corrective actions (e.g., BMPs). These procedures shall be included as part of the Illicit Discharge Detection and Elimination program.

(ii) **Implementation Level -** At a minimum, the Permittee shall conduct an investigation(s) to identify and locate the source of any suspected illicit discharge within 72 hours of becoming aware of the suspected illicit discharge. For investigations that require more than 72 hours, the Permittee shall identify the actions being taken to identify and locate the source of the suspected illicit discharge. The Permittee shall prioritize investigations of suspected sanitary sewage and/or significant contributors over investigations of non-storm water discharges suspected of being cooling water, wash water, or natural flows.

(a) Report immediately the occurrence of any dry weather flows believed to be an immediate threat to human health or the environment to local Health Department.

(b) Determine and document through its investigations the source of all non-storm water discharges. If the source of the non-storm water discharge is found to be a discharge authorized under this permit, or authorized under another NPDES permit, no further action is required.

(c) Corrective Action to Eliminate Illicit Discharge – Once the source of the illicit discharge has been determined, the Permittee shall immediately notify the responsible party of the problem.

(d) Report immediately to the owners/operators of the downstream MS4 a non-storm water discharge suspected of being sanitary sewage and/or significantly contaminated.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance

**F.5.e. CONSTRUCTION SITE RUNOFF CONTROL PROGRAM**

The Permittee shall develop, implement, and enforce a program to prevent Construction site discharges of pollutants and impacts on beneficial uses of receiving waters. The program shall include the development of contract language ensuring the Permittee's in-house construction operators or outside contractors comply with the CGP.

(i) **Task Description –** Within the first year of the effective date of the permit, each Permittee shall develop and implement contract language ensuring all outside contractors comply with the CGP and implement appropriate BMPs. Contract language shall apply to all projects that result in a total land disturbance of either one acre or more or that result in a total land disturbance of less than one acre if part of a larger common plan or development or sale.

(ii) **Implementation Level** – The Permittee shall include CGP compliance requirements in construction contract language for all projects one acre or more or that result in a total land disturbance of less than one acre if part of a larger common plan or development or sale.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

### F.5.f. POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR PERMITTEE OPERATIONS PROGRAM

The Permittee shall develop and implement a program to prevent or reduce the amount of pollutant runoff from Permittee operations. The Permittee shall train employees on how to incorporate pollution prevention/good housekeeping techniques into Permittee operations. Permittee shall implement appropriate BMPs for preventing or reducing the amount of storm water pollution generated by Permittee operations.

#### F.5.f.1. Inventory of Permittee-Owned or Operated Facilities

(i) **Task Description** - Prepare an inventory of Permittee-owned or operated facilities within their jurisdiction that are a threat to water quality, and are not covered by another storm water General Permit.

(i) **Implementation Level** - Within the second year of the effective date of the permit, the Permittee shall develop and maintain an inventory that shall include facilities that may impact storm water.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

#### F.5.f.2. Map of Permittee-Owned or Operated Facilities

(i) **Task Description –** Within the second year of the effective date of the permit, prepare and submit a map of the urban area covered by the MS4 permit and identify where the Permittee-owned or operated facilities are located.

(ii) **Implementation Level** - The Permittee shall complete and have available a map that identifies the storm water drainage system corresponding to each of the facilities as well as the receiving waters to which these facilities discharge. The map shall also show the facility and the manager of each facility, including contact information. Historic storm water collection facilities, conveyances and drainages located at historic places that are being operated for public interpretation and education shall be noted on this map so that the Regional Water Board can differentiate between modern and historic during site reviews or audits.

(iii) **Reporting** - The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

#### F.5.f.3. Facility Assessment

(i) **Task Description** –Within the third year of the effective date of the permit, conduct an inspection and assessment of pollutant discharge potential and pollutant hotspots.

(ii) **Implementation Levels** - The Permittee shall conduct an annual review and assessment of all Permittee-owned or operated facilities to determine their potential to impact surface waters. The assessment shall include the following:

(a) Identification of pollutant hotspots based on the assessment, the Permittee shall identify as pollutant hotspots those facilities that have a high potential to generate storm water and non-storm water pollutants. Among the factors to be considered are the type and volume of pollutants stored at the site, the presence of improperly stored materials, activities that should not be performed outside (e.g., changing automotive fluids, vehicle washing), proximity to water bodies, poor housekeeping practices, and the discharge of pollutant(s) of concern to receiving water(s). Pollutant hotspots shall include, at a minimum, the Permittee's maintenance yards, hazardous waste facilities, fuel storage locations, and any other facilities at which chemicals or other materials have a high potential to be discharged in storm water.

(b) Documentation of the assessment procedures and results. The Permittee shall document the procedures it uses for conducting the assessment along with a copy of any site evaluation checklists used to conduct the assessment.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

**F.5.f.4. Storm Water Pollution Prevention Plans**

(i) **Task Description** – the Permittee shall develop and implement SWPPPs for pollutant hotspots at high priority sites. If a Permittee has an existing or equivalent document such as Hazardous Materials Business Plan or Spill Prevention Plan, the Permittee is not required to develop a SWPPP if that document includes the necessary information required within a SWPPP.

(ii) **Implementation Level** – Within the fourth year of the effective date of this permit, the Permittee shall implement the following:

(a) The Permittee shall develop and implement a site-specific SWPPP that identifies a set of storm water BMPs to be installed, implemented, and maintained to minimize the discharge of pollutants in storm water.

(b) The SWPPP(s) shall be kept on-site at each of the Permittee-owned or operated facilities' offices for which it was completed. The SWPPP shall be updated as necessary.

(c) At a minimum the SWPPP will address the following:

1) Facility specific information (location, owner, address, etc.)
2) Purpose of the document
3) Key staff/contacts at the facility
4) Site map with drainage identified
5) Identification of significant materials that are handled and stored at the facility that may be exposed to storm water
6) Description of potential pollutant sources

7) BMPs employed at facility
8) Spill control and cleanup – response to spills

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

**F.5.f.5. Inspections, Visual Monitoring and Remedial Action**

(i) **Task Description** –Within the fifth year of the effective date of the permit, the Permittee shall conduct regular inspections of Permittee-owned and operated facilities not covered by another storm water General Permit. The Permittee may incorporate storm water inspections into existing, routine facility inspections.

(ii) **Implementation Level** – The Permittee shall conduct inspections as follows:

(a) Quarterly hotspot visual inspections – Perform quarterly visual inspections in accordance with the developed standing operating procedures of all hotspot Permittee-owned or operated facilities to ensure materials and equipment are clean and orderly, to minimize the potential for pollutant discharge, and to ensure implementation of BMPs. The Permittee shall look for evidence of spills and immediately clean them up to prevent contact with precipitation or runoff. The quarterly inspections shall be tracked in a log for every facility, and records kept with the SWPPP. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct the deficiencies.

(b) Quarterly Hotspot comprehensive inspections – At least once per quarter, a comprehensive inspection of hotspot facilities, including all storm water BMPs, shall be performed, with specific attention paid to the following, but not limited to waste storage areas, dumpsters, vehicle and equipment maintenance/fueling areas, material handling areas, and similar potential pollutant-generating areas. The quarterly inspection results shall be documented and records kept with the SWPPP. This inspection shall be performed in accordance with the developed standard operating procedures. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct deficiencies.

(c) Quarterly Hotspot visual observation of storm water and non-storm water discharges – At least once per quarter, visually observe discharge location from hotspot facilities. Where discharges are observed identify any observed problems (e.g., color, foam, sheen, turbidity) associated with pollutant sources or BMPs shall be remedied within seven days or before the next storm event, whichever is sooner. Visual observations shall be documented, and records kept with the SWPPP. This inspection shall be done in accordance with the developed standard operating procedures. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct the deficiencies.

(d) Non-Hotspot Inspection – At a minimum, inspect each inventoried facility that is not a hotspot, once per permit term. The inspection shall investigate and assess each of the items identified above.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

**F.5.f.6. Storm Drain System Assessment and Prioritization**

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop and implement procedures to assess and prioritize the MS4 storm drain system, including but not limited to catch basins, pipe and pump infrastructure, above-ground conveyances, including receiving waterbodies within the Permittee's urbanized area and detention basins.

(ii) **Implementation Level** – The Permittee shall:
Assess/prioritize storm drain system facilities for cleanout– Assign a priority to all storm drain system facilities within the Permittee's urbanized areas based on accumulation of sediment, trash and/or debris. In particular, assign high priority to catch basins meeting the following criteria:

1) Catch basins known to accumulate a significant amount of sediment, trash, and/or debris;
2) Catch basins collecting large volumes of runoff;
3) Catch basin collecting runoff from area that do not receive regular sweet sweeping;
4) Catch basins collecting runoff from drainage areas with exposed or disturbed soil; and
5) Catch basins that receive citizen complaints/reports.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

**F.5.f.7. Maintenance of Storm Drain System**

(i) **Task Description** –The Permittee shall begin maintenance of all high priority storm drain systems at least annually prior to the rainy season.

(ii) **Implementation Level** – Within the third year of the effective date of the permit, the Permittee shall begin a maintenance program of high priority storm drain systems that, at a minimum includes:

(a) Storm drain systems inspection – Based on the priorities assigned above, in Section F.5.f.6, develop a strategy to inspect storm drain systems within the Permittee's jurisdiction. At a minimum, inspect all catch basins of high priority systems annually, prior to the rainy season.

(b) Storm drain cleaning – Develop and implement a schedule to clean high priority catch basins and other systems. Cleaning frequencies shall be based on priority areas, with higher priority areas receiving more frequent maintenance.

(c) Maintenance of surface drainage structures –Visually monitor all Permittee- owned open channels, detention basins, and other drainage structures for debris at least once per year and identify and prioritize problem areas. At a minimum, removal of trash and debris from open channels and other drainage structures shall occur annually.

(d) Disposal of waste materials - Develop a procedure to dewater and dispose of materials extracted from catch basins. This procedure shall ensure that water removed during the catch basin cleaning process and waste material will not reenter the MS4.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

**F.5.f.8. Permittee Operations and Maintenance Activities (O&M)**

(i) **Task Description –**The Permittee shall assess their O&M activities for potential to discharge pollutants in storm water and inspect all BMPs on a quarterly basis.

(ii) **Implementation Level** - Within the third year of the effective date of the permit, the Permittee shall:

(a) Develop and implement O&M activity assessment. The O&M activities assessment shall include, but not be limited to, the potential to discharge pollutants in storm water.

(b) Identify all materials that could be discharged from each of these O&M activities.

(c) Develop and implement a set of BMPs that, when applied during Permittee O&M activities, will reduce the discharge of pollutants in storm water. The Permittee shall use the CASQA Municipal Handbook or equivalent.

(d) Evaluate annually all BMPs implemented during O&M activities.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the stormwater program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

**F.5.f.9. Pesticide, Herbicide, and Fertilizer Application and New Landscape Design and Maintenance Management**

(i) **Task Description** –The Permittee shall implement a program which focuses on pollution prevention, source control BMPs, and landscape design and maintenance to reduce the amount of pesticides, herbicides and fertilizers used during their Permittee

operations and activities. The Permittee shall implement the landscape design and maintenance on new or decorative landscapes.

(ii) **Implementation Tasks** – Within the second year of the effective date of the permit, the Permittee shall implement the following:

(a) Evaluate pesticides, herbicides and fertilizers used and application activities performed to identify pollution prevention and source control opportunities.

(b) Implement practices that reduce the discharge of pesticides, herbicides and fertilizers. At a minimum the Permittee shall do the following, but not limited to:

1) Educate applicators and distributors of storm water issues.

2) Implement integrated pest management measures that rely on non- chemical solutions, including:

a) Use of native and climate appropriate plants (reduces water usage and fertilization) for decorative landscape applications

b) Keeping clippings and leaves away from waterways and out of the street using mulching, composting, or landfilling

c) Preventing application of pesticides and fertilizers when two or more consecutive days with greater than 50% chance of rainfall are predicted by NOAA[35]

d) Limiting or replacing herbicide and pesticide use (e.g., conducting manual weed and insect removal)

e) Limiting or eliminating the use of fertilizers, including prohibiting application within five feet of pavement, 25 feet of a storm drain inlet, or 50 feet of a water body

f) Reducing mowing of grass to allow for greater pollutant removal, but not jeopardizing public safety

3) Collect and properly dispose of unused pesticides, herbicides, and fertilizers.

4) Minimize irrigation run-off.

(iii) **Reporting** - The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

### F.5.g. POST CONSTRUCTION STORM WATER MANAGEMENT PROGRAM

Permittees shall regulate development to comply with the following Sections:

- Site Design Measures
- Low Impact Development Design Standards
- Alternative Post-Construction Storm Water Management Program
- Operation and Maintenance of Post Construction Storm Water Management Measures

[35] www.srh.noaa.gov/forecast

Non-traditional Permittees with Regional Water Board approved post-construction storm water management requirements based on a watershed process approach, as described in Section E.12.j. Post-Construction Storm Water Management Requirements Based on Assessment and Maintenance of Watershed Processes, shall implement those post-construction requirements in lieu of Section F.5.g. Post Construction Storm Water Management Program.

**F.5.g.1. Site Design Measures**

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall require implementation of site design measures for all projects that create and/or replace (including projects with no net increase in impervious footprint) between 2,500 square feet and 5,000 square feet of impervious surface, including detached single family homes that are not part of a larger plan of development.

(ii) **Implementation Level** - Projects shall implement one or more of the following site design measures to reduce project site runoff:

(a) Stream Setbacks and Buffers – a vegetated area including trees, shrubs, and herbaceous vegetation, that exists or is established to protect a stream system, lake reservoir, or coastal estuarine area;

(b) Soil Quality Improvement and Maintenance - improvement and maintenance soil through soil amendments and creation of microbial community;

(c) Tree planting and preservation – planting and preservation of healthy, established trees that include both evergreens and deciduous, as applicable;

(d) Rooftop and Impervious Area Disconnection - rerouting of rooftop drainage pipes to drain rainwater to rain barrels, cisterns, or permeable areas instead of the storm sewer;

(e) Porous Pavement - pavement that allows runoff to pass through it, thereby reducing the runoff from a site and surrounding areas and filtering pollutants;

(f) Green Roofs – a vegetative layer grown on a roof (rooftop garden);

(g) Vegetated Swales - a vegetated, open-channel management practice designed specifically to treat and attenuate storm water runoff;

(h) Rain Barrels and Cisterns - system that collects and stores storm water runoff from a roof or other impervious surface.

Project proponents shall use the State Water Board SMARTS Post-Construction Calculator[36], or equivalent to quantify the runoff reduction resulting from implementation of site design measures.

(iii) **Reporting** - The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm

[36] The State Water Board SMARTS Post-Construction Calculator can be found at: https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp

water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

**F.5.g.2. Low Impact Development (LID) Design Standards**

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall implement standards to effectively reduce runoff and pollutants associated with runoff from development projects.

(ii) **Implementation Level** - The Permittee shall regulate all development projects that create and/or replace 5,000 square feet or more of impervious surface (Regulated Projects). The Permittee shall require these Regulated Projects to implement measures for site design, source control, runoff reduction, storm water treatment and baseline hydromodification management as defined in this Order.

Regulated Projects do not include:

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

Regulated Projects include development projects. Development includes new and redevelopment projects on public or private land that fall under the planning and permitting authority of a Permittee. Redevelopment is any land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred. The following (a-c) describe specific Regulated Project requirements for redevelopment and road projects:

(a) Where a redevelopment project results in an increase of more than 50 percent of the impervious surface of a previously existing development, runoff from the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included to the extent feasible.

(b) Where a redevelopment project results in an increase of less than 50 percent of the impervious surface of a previously existing development, only runoff from the new and/or replaced impervious surface of the project must be included.

(c) Road Projects - Any of the following types of road projects that create 5,000 square feet or more of newly constructed contiguous impervious surface and that are public road projects and/or fall under the building and planning authority of a Permittee shall comply with Low Impact Development Standards except that treatment of runoff of the 85th percentile 24-hour storm runoff event) that cannot be infiltrated onsite shall follow U.S. EPA guidance regarding green infrastructure to the extent feasible. Types of projects include:

1) Construction of new streets or roads, including sidewalks and bicycle lanes built as part of the new streets or roads which create 5,000 square feet or more of impervious surface.

2) Widening of existing streets or roads with additional traffic lanes.
   a) Where the addition of traffic lanes results in an alteration of more than 50 percent of the impervious surface (5,000 square feet or more) of an existing street or road, runoff from the entire project, consisting of all

existing, new, and/or replaced impervious surfaces, must be included in the treatment system design.

b) Where the addition of traffic lanes results in an alteration of less than 50 percent (but 5,000 square feet or more) of the impervious surface of an existing street or road, only the runoff equivalent from new and/or replaced impervious surface of the project must be included in the treatment system design.

3) Specific exclusions are:
   a) Sidewalks built as part of new streets or roads and built to direct storm water runoff to adjacent vegetated areas.
   b) Bicycle lanes that are built as part of new streets or roads that direct storm water runoff to adjacent vegetated areas.
   c) Impervious trails built to direct storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas, preferably away from creeks or towards the outboard side of levees.
   d) Sidewalks, bicycle lanes, or trails constructed with permeable surfaces.

Effective Date for Applicability of Low Impact Development Runoff Standards to Regulated Projects: By the second year of the effective date of the permit, the Permittee shall require these Post-Construction Standards be applied on applicable new and redevelopment Regulated Projects. These include Regulated Projects that have not been deemed complete for processing, Regulated Projects without vesting tentative maps that have not requested and received an extension of previously granted approvals, and Regulated Projects that have received Project Planning Guide funding. Discretionary projects that have been deemed complete prior to the second year of the effective date of this permit are not subject to the Post-Construction Standards herein. For the Permittee's Regulated Projects, the effective date shall be the date their governing body or designee approves initiation of the project design.

Permittee's Development Projects - The Permittee shall develop and implement an equivalent approach, to the approach used for private development projects, to apply the most current version of the low impact development runoff standards to applicable public development projects.

Where Project Planning Guide funding is applicable, Permittees shall ensure that adequate funding is available to implement post-construction treatment measures for Regulated Projects approved after the effective date of this permit.

Where State of California project approvals are applicable, Permittees shall implement post-construction treatment measures for Regulated Projects approved after the effective date of this permit.

**F.5.g.2.a. Source Control Measures**

(i) **Task Description** – Regulated Projects with pollutant-generating activities and sources shall be required to implement standard permanent and/or operational source control measures as applicable.

(ii) **Implementation Level** - Measures for the following pollutant-generating activities and sources shall be designed consistent with recommendations from the CASQA

Stormwater BMP Handbook for New Development and Redevelopment or equivalent manual, and include:

(a) Accidental spills or leaks
(b) Interior floor drains
(c) Parking/Storage area maintenance
(d) Indoor and structural pest control
(e) Landscape/outdoor pesticide use
(f) Pools, spas, ponds, decorative fountains, and other water features
(g) Restaurants, grocery stores, and other food service operations
(h) Storage and handling of solid waste
(i) Outdoor storage of equipment or materials
(j) Vehicle and equipment cleaning
(k) Vehicle and equipment repair and maintenance
(l) Fuel dispensing areas
(m) Loading docks
(n) Fire sprinkler test water
(o) Drain or wash water from boiler drain lines, condensate drain lines, rooftop equipment, drainage sumps, and other sources
(p) Unauthorized non-storm water discharges
(q) Building and grounds maintenance

**F.5.g.2.b. Numeric Sizing Criteria for Storm Water Retention and Treatment**
The Permittees shall require facilities designed to evapotranspire, infiltrate, harvest/use, and biotreat storm water to meet at least one of the following hydraulic sizing design criteria:

(1) Volumetric Criteria:
   a) The maximized capture storm water volume for the tributary area, on the basis of historical rainfall records, determined using the formula and volume capture coefficients in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998) pages 175-178 (that is, approximately the 85th percentile 24-hour storm runoff event); or
   b) The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology in Section 5 of CASQA's Stormwater Best Management Practice Handbook, New Development and Redevelopment (2003), using local rainfall data.

(2) Flow-based Criteria
   a) The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or
   b) The flow of runoff produced from a rain event equal to at least 2 times the 85th percentile hourly rainfall intensity as determined from local rainfall records.

**F.5.g.2.c. Site Design Measures** as defined in Section F.5.g.1. shall be based on the objective of achieving infiltration, evapotranspiration and/or harvesting/reuse of the 85th percentile rainfall event, to the extent feasible, to meet Section F.5.g.2.b. Numeric

Sizing Criteria for Storm Water Retention and Treatment. Site design measures shall be used to reduce the amount of runoff, to the extent technically feasible, for which retention and runoff is required. Any remaining runoff from impervious DMAs may then be directed to one or bioretention facility as specified in Section F.5.g.2.d. Storm Water Treatment Measures and Baseline Hydromodification Management Measures, described below.

**F.5.g.2.d. Storm Water Treatment Measures and Baseline Hydromodification Management Measures** After implementation of Site Design Measures in F.5.g.2.c., runoff from remaining impervious DMAs must be directed to one or more facilities designed to infiltrate, evapotranspire, and/or biotreat the amount of runoff specified in Section F.5.g.2.b. Numeric Sizing Criteria for Storm Water Retention and Treatment. The facilities must be demonstrated to be at least as effective as a bioretention system with the following design parameters.

(1) Maximum surface loading rate of 5 inches per hour, based on the flow rates calculated. A sizing factor of 4% of tributary impervious area may be used.

(2) Minimum surface reservoir volume equal to surface area times a depth of 6 inches.

(3) Minimum planting medium depth of 18 inches. The planting medium must sustain a minimum infiltration rate of 5 inches per hour throughout the life of the project and must maximize runoff retention and pollutant removal. A mixture of sand (60%-70%) meeting the specifications of American Society for Testing and Materials (ASTM) C33 and compost (30%-40%) may be used.

(4) Subsurface drainage/storage (gravel) layer with an area equal to the surface area and having a minimum depth of 12 inches.

(5) Underdrain with discharge elevation at top of gravel layer.

(6) No compaction of soils beneath the facility, or ripping/loosening of soils if compacted.

(7) No liners or other barriers interfering with infiltration.

(8) Appropriate plant palette for the specified soil mix and maximum available water use.

a) **Alternative Designs for Bioretention Facilities —** Facilities, or a combination of facilities, of a different design than in Section F.5.g.2.d. may be permitted if the following measures of equivalent effectiveness are demonstrated:

(1) Equal or greater amount of runoff infiltrated or evapotranspired

(2) Equal or lower pollutant concentrations in runoff that is discharged after bioretention

(3) Equal or greater protection against shock loadings and spills

(4) Equal or greater accessibility and ease of inspection and maintenance

b) **Allowed Adjustments for Bioretention Facilities for Special Site Conditions** - The bioretention design parameters as specified in Section F.5.g.2.d. may be adjusted for the following special site conditions:

(1) Facilities located within 10 feet of structures or other potential geotechnical hazards established by the geotechnical expert for the project may incorporate

an impervious cutoff wall between the bioretention facility and the structure or other geotechnical hazard.

(2) Facilities in areas with documented high concentrations of pollutants in underlying soil or groundwater, facilities located where infiltration could contribute to a geotechnical hazard, and facilities located on elevated plazas or other structures may incorporate an impervious liner and may locate the underdrain discharge at the bottom of the subsurface drainage/storage layer (this configuration is commonly known as a "flow-through planter").

(3) Facilities located in areas of highly infiltrative soils or high groundwater, or where connection of underdrain to a surface drain or to a subsurface storm drain are infeasible, may omit the underdrain.

c) **Exceptions to Requirements for Bioretention Facilities** - Contingent on a demonstration that use of bioretention or a facility of equivalent effectiveness is infeasible, other types of biotreatment or media filters (such as tree-box-type biofilters or in-vault media filters) may be used for the following:

(1) Projects creating or replacing an acre or less of impervious area, and located in a designated pedestrian-oriented commercial district (i.e., smart growth projects), and having at least 85% of the entire project site covered by permanent structures;

(2) Facilities receiving runoff solely from existing (pre-project) impervious areas;

(3) Historic sites, structures, or landscapes that cannot alter their original configuration in order to maintain their historic integrity.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

**F.5.g.3. Alternative Post-Construction Storm Water Management Program**

A Permittee may propose alternative post-construction measures in lieu of some or all of Section F.5.g. requirements for multiple benefit projects. Multiple-benefit projects include projects that may address any of the following, in addition to water quality: water supply, flood control, habitat enhancement, open space preservation, recreation, climate change. Multiple-benefit projects may be applied at various scales including project site, municipal or sub-watershed level. Multiple-benefit projects may include, but are not limited to, projects developed under Watershed Improvement Plans (Water Code §16100 et seq.), IRWMP implementation and green infrastructure projects. Multiple benefit projects must be equally or more protective of water quality than Section E.12. requirements.

The Regional Water Board or the Executive Officer may approve alternative post-construction measures for multiple-benefit projects, as described above, after an opportunity for public comment, if the Regional Water Board or Executive Officer finds that the alternative measures are consistent with the MEP standard.

### F.5.g.4. Operation and Maintenance (O&M) of Post-Construction Storm Water Management Measures

(i) **Task Description** –Within the third year of the effective date of the permit, the Permittee shall implement an O&M Verification Program for new development projects regulated under this Order.

(ii) **Implementation Level** – At a minimum, the O&M Verification Program shall include the following elements:

(a) Projects shall at a minimum, require at least one of the following from all project proponents and their successors in control of the Project or successors in fee title:

(1) Written conditions in the sales or lease agreements or deed for the project that requires the buyer or lessee to assume responsibility for the O&M of the installed treatment system(s) and hydromodification control(s) (if any) until such responsibility is legally transferred to another entity;

(2) Any other legally enforceable agreement or mechanism, such as recordation in the property deed, that assigns the O&M responsibility for the installed treatment system(s) and hydromodification control(s) (if any) to the project owner(s) or the Permittee.

(b) Coordination with the appropriate mosquito[37] and vector control agency with jurisdiction to establish a protocol for notification of installed treatment systems and hydromodification management controls. On an annual basis, before the wet season, prepare a list of newly installed (installed within the reporting period) storm water treatment systems and hydromodification management controls to the local mosquito and vector control agency and the appropriate Regional Water Board. This list shall include the facility locations and a description of the storm water treatment measures and hydromodification management controls installed.

(c) A database or equivalent tabular format of all projects that have installed treatment systems. This database or equivalent tabular format shall include the following information for each project:

(1) Name and address of the project;

(2) Specific description of the location (or a map showing the location) of the installed treatment system(s) and hydromodification control(s) (if any);

(3) Date(s) that the treatment system(s) and hydromodification controls (if any) is/are installed;

(4) Description of the type and size of the treatment system(s) and hydromodification control(s) (if any) installed;

(5) Responsible operator(s) of each treatment system and hydromodification control (if any);

[37] "Best Management Practices for Mosquito Control on California State Properties" are available from the California West Nile virus website at http://www.westnile.ca.gov/resources.php. Please see Table 1, page 22, for a list of California mosquito control agencies or visit the Mosquito and Vector Control Association of California at: http://mvcac.org

(6) Dates and findings of inspections (routine and follow-up) of the treatment system(s) and hydromodification control(s) (if any) by the Permittee; and

(7) Any problems and corrective or enforcement actions taken.

(d) Maintenance Approvals: The Permittee shall ensure that systems and hydromodification controls installed at projects are properly operated and maintained for the life of the projects. In cases where the responsible party for a treatment system or hydromodification control has worked diligently and in good faith with the appropriate State and federal agencies and the Permittee to obtain approvals necessary to complete maintenance activities for the treatment system or hydromodification management control, but these approvals are not granted, the Permittee shall be deemed to be in compliance with this Provision.

(iii) **Reporting -** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

### F.5.h. PROGRAM EFFECTIVENESS ASSESSMENT AND IMPROVEMENT

#### F.5.h.1. Program Effectiveness Assessment and Improvement Plan

(i) **Task Description -** The Permittee shall develop and implement a Program Effectiveness Assessment and Improvement Plan that tracks short and long-term progress of the storm water program. The Program Effectiveness Assessment and Improvement Plan will assist the Permittee to adaptively manage its storm water program and make necessary modifications to the program to improve program effectiveness, reduce pollutants of concern, achieve the MEP standard, and protect water quality, and to document the Permittee's compliance with permit conditions. The Program Effectiveness Assessment and Improvement Plan shall identify the strategy used to gauge the effectiveness of prioritized BMPs and program implementation as a whole. Prioritized BMPs include BMPs implemented based on pollutants of concern. Where pollutants of concern are unidentified, prioritized BMPs are based on common pollutants of concern (i.e., sediment, bacteria, trash, nutrients). The effectiveness assessments will build upon each other from one year to the next and shall identify modifications to the program the Permittee must undertake to improve effectiveness.

(ii) **Implementation Level** - The Program Effectiveness Assessment and Improvement Plan may be modeled upon the most recent version (if applicable) Municipal Storm Water Program Effectiveness Assessment Guidance (CASQA, May 2007) or equivalent.

(a) The Program Effectiveness Assessment and Improvement Plan shall include the following minimum elements:

(1) Implementation of storm water program elements

(2) Identification and targeting of Target Audience(s)

(iii) **Reporting -** By the second year Annual Report complete and submit the Program Effectiveness Assessment and Improvement Plan. At a minimum, the Plan shall include implementation of storm water program elements and identification of the Targeted Audience(s).

**F.5.h.2. Storm Water Program Modifications**

(i) **Task Description** – Within the fifth year of the effective date of the permit, based on the information gained from the effectiveness assessment, the Permittee shall identify modifications to control measures/significant activities, including new BMPs or modification to existing BMPs. The Permittee shall consult with the Regional Water Board in setting expectations for the scope, timing, and frequency of BMP modifications for the next permit cycle.

(ii) **Implementation Level** –The Permittee shall identify program modifications to include:

(a) Improving upon BMPs that did not accomplish goals;

(b) Continuing and expanding upon BMPs that proved to be effective, including identifying new BMPs or modifications to existing BMPs designed to increase pollutant load reductions;

(c) Discontinuing BMPs that may no longer be productive and replacing with more effective BMPs; and

(d) Shifting priorities to make more effective use of resources

(ii) **Reporting** – By the fifth year Annual Report complete and have available a list of maintenance activities of highest priority BMPs. By the fifth year Annual Report, complete and have available a summary of proposed modifications to the storm water program to improve program effectiveness, to achieve the MEP standard, and to protect water quality.

**F.5.i. TOTAL MAXIMUM DAILY LOADS COMPLIANCE REQUIREMENTS**

**F.5.i.1.** Attachment G contains a list of TMDL-specific, BMP-based water quality based effluent limitations (WQBELs) and other permit requirements, applicable to identified permittees, consistent with the assumptions and requirements of the applicable wasteload allocations of the TMDLs.

Permittees shall comply with the requirement in Section C.1. to reduce the discharge of pollutants to achieve applicable TMDL wasteload allocations as follows:

(i) Prior to the deadline to attain the final wasteload allocation, a permittee is deemed in compliance with the requirement in Section C.1 *to reduce the discharge of pollutants to achieve applicable TMDL wasteload allocations* if the permittee is timely implementing all BMP-based WQBELs and other requirements specified in Attachment G for that TMDL. The permittee may alternatively make a demonstration in accordance with section F.5.i.1.(ii) below.

(ii) On or after the deadline to attain the final wasteload allocation, a permittee is deemed in compliance with the requirement in Section C.1 *to reduce the discharge of pollutants to achieve applicable TMDL wasteload allocations* if the permittee meets one or more of the criteria in subsections (a)-(g) below. For purposes of this section only, the wasteload allocations specified in the applicable TMDLs (as identified in the Fact Sheet) are incorporated by reference.

(a) Receiving water monitoring and analysis by the permittee or other responsible parties under the TMDL, as approved by the Regional Water Board or its designee, demonstrates attainment of the applicable receiving water limitation in the waterbody as determined at the TMDL monitoring attainment locations or as determined at or immediately downstream of the permittee's discharge; or

(b) Receiving water monitoring does not demonstrate attainment of the applicable receiving water limitation in the waterbody, but the permittee demonstrates, through an approach approved by the Regional Water Board or its designee, that exceedances of the receiving water limitations for the receiving water are due to loads from other sources and pollutant loads from the permittee are not causing or contributing to the exceedances; or

(c) Where the wasteload allocation is expressed as a concentration, sampling of the permittee's discharge, as approved by the Regional Water Board or its designee, indicates that the discharge has attained the applicable wasteload; or

(d) Where a mass-based wasteload has been allocated to an individual or jointly to a group or is expressed as a percent reduction in load, the permittee demonstrates, through an approach approved by the Regional Water Board or its designee, that the permittee's discharge is attaining the individual or joint allocation or the percent reduction; or

(e) Where a wasteload allocation is expressed as the number of allowable exceedance days, the permittee demonstrates, through an approach approved by the Regional Water Board or its designee, that the permittee's discharge conforms to the allowable exceedance days; or

(f) The permittee demonstrates, in a manner approved by the Regional Water Board or its designee, that no discharges, either directly or indirectly, from the permittee's MS4 to the applicable water body occurred during the relevant time period; or

(g) The permittee demonstrates the attainment of the wasteload allocation through other factors as described by the specific TMDL(s)[38] and as approved by the Regional Water Board or its designee.

(iii) Pursuant to Section D, a permittee deemed in compliance with Section C.1 in accordance with subsections i) and ii) of this section is also deemed in compliance with the Section D requirement to *not cause or contribute to an exceedance of water quality standards* for the specific pollutants and water bodies addressed.

**F.5.i.2.** In some cases, Attachment G includes dates that fall outside the term of this Order. Attainment dates for BMP-based WQBELs and other permit requirements that

[38] As an example, the TMDL for Sacramento and San Joaquin Delta – Diazinon and Chlorpyrifos states "In determining compliance with the wasteload allocations, the Regional Water Board will consider any data or information submitted by the discharger regarding diazinon and chlorpyrifos inputs from sources outside of the jurisdiction of the permitted discharger, including any diazinon and chlorpyrifos present in precipitation and other available relevant information, and any applicable provisions In the discharger's NPDES permit requiring the discharger to reduce the discharge of pollutants to the maximum extent possible.", Resolution No. R5-2006-0061, Attachment 1, #11, Page 4.

exceed the term of this Order are included for reference, and become enforceable in the event that this Order is administratively extended.

Wasteload allocation attainment dates that have already passed are enforceable on the effective date of this Order and have been assigned a due date of January 1, 2019.

(i) If the Regional Water Board Executive Officer makes a determination, on a case by case basis, that the language of a particular TMDL allows flexibility to extend a final deadline to attain a wasteload allocation, the State Water Board Executive Director may amend Attachment G to provide an extended deadline following public notice and comment.

Where a final deadline to attain a wasteload allocation is past and the permittee has not demonstrated compliance as specified in Section F.5.i.1.(ii) above, the permittee may seek a time schedule order pursuant to Water Code section 13300 from the Regional Water Board. Permittees may either individually request a time schedule order or may jointly request a time schedule order with all Permittees subject to the TMDL in Attachment G. Permittees may also request time schedule orders where the permittee has not timely complied with a BMP-based WQBEL or other permit requirement in Attachment G.

A request to the applicable Regional Water Board for a time schedule order shall include the following information:

(a) Any available data demonstrating the current quality of the MS4 discharge(s) in terms of concentration and/or load of the target pollutant(s) to the receiving waters subject to the TMDL;

(b) A description and chronology of structural controls and source control efforts carried out by the permittee since the effective date of the TMDL to reduce the pollutant load in the MS4 discharges to the receiving waters subject to the TMDL;

(c) Justification of the need for additional time to achieve the requirements;

(d) The specific actions the Permittee will take in order to meet the TMDL requirements and a time schedule of interim and final deadlines proposed to implement those actions. The actions will reflect the requirements specified for the TMDL in Attachment G; and

(e) A demonstration that the time schedule requested is as short as possible, taking into account the technological, operational, and economic factors that affect the design, development, and implementation of the control measures that are necessary to comply with the TMDL requirements.

(ii) It is not the intention of the State Water Board or the Regional Water Boards to bring an enforcement action for non-attainment of the wasteload allocation where:

(a) A permittee is in compliance with a time schedule order's implementation requirements and compliance schedule;

(b) A permittee has in good faith requested a time schedule order from the Regional Water Board and is in compliance with all BMP-based WQBELs and other permit requirements of Attachment G, except the requirement to attain the applicable wasteload allocation by the final attainment deadline;

(c) A Regional Water Board has initiated proceedings to revise the TMDL to provide additional time for attainment or to modify TMDL wasteload allocations and the

permittee is in compliance with all BMP-based WQBELs and other permit requirements in Attachment G, except the requirement to attain the applicable wasteload allocation by the final attainment deadline.

**F.5.i.3.** The State Water Board may revise this Order through a reopener to incorporate any modifications or revisions to the TMDLs in Attachment G, or to incorporate any new TMDLs adopted during the term of this Order that assign a wasteload allocation to the Permittee or that identify the Permittee as a responsible party. In revising Attachment G, the State Water Board will allow adequate notice and public review.

**F.5.i.4.** The Permittee shall complete and have available a report that includes the status of their implementation of the specific TMDL implementation requirements that have been incorporated into the Order with each Annual Report. The TMDL implementation report shall include the following information:

(i) A description of BMPs implemented, including types, number, and locations;

(ii) All supplemental information and reports required under the specific TMDL implementation requirements in Attachment G;

(iii) An assessment of the effectiveness of implemented BMPs in progressing towards attainment of wasteload allocations within the TMDLs' specified timeframes;

(iv) All monitoring data, including a statistical analysis of the data to assess progress towards attainment of wasteload allocations within the TMDLs' specified timeframes;

(v) Based on results of the effectiveness assessment and monitoring, a description of the additional BMPs that will be implemented to attain wasteload allocations within the TMDLs' specified timeframes.

**F.5.i.5.** The Permittee shall comply with implementation requirements specified in Category 4b demonstrations associated with Clean Water Act Sections 303d, 306b, and 314 Integrated Reporting and Listing Decisions. Implementation requirements described in Category 4b demonstrations are effective upon Regional Water Board approval of that region's Integrated Reporting and Listing Decisions and associated Category 4b demonstrations.

### F.5.j. ONLINE ANNUAL REPORTING

**F.5.j.1.** Department of Defense and Department of Corrections, ports, transportation agencies and Rehabilitation Permittees are exempt from Annual Reporting of any provision that could pose a security risk and compromise facility security. Any requested information to determine compliance with this Order [40 C.F.R. 122.41(h)] by the Water Boards or U.S. EPA shall be furnished during normal business hours.

**F.5.j.2. By October 15 of each year,** the Permittee shall use State Water Board's SMARTS to submit a summary of the past year activities for each program element and certify compliance with all requirements of this permit. If a Permittee is unable to certify compliance with a requirement, it must submit in SMARTS the reason for failure to comply, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance.

**F.5.j.3.** Permittees shall complete and retain all Annual Report information on the previous fiscal year beginning July 1 and ending June 30. The Annual Reporting requirements are set forth in Provisions E. The Permittee shall retain documentation as necessary to support their Annual Report. The Permittee shall make this supporting information available during normal business hours, unless agreed to by the Regional Water Board's Executive Officer.

**F.5.j.4.** The Permittee shall submit when requested by the Executive Officer of the applicable Regional Water Board a detailed written online annual report or in-person presentation of the annual report that addresses the activities described in Provision F. The detailed Annual Report must clearly refer to the permit requirements and describe in quantifiable terms, the status of activities undertaken to comply with each requirement.

**F.5.j.5.** Permittees involved in regional programs may coordinate with the members to identify reporting responsibility. The one report submitted on behalf of Permittees involved in a regional program must include a summary of the past year activities implemented for each program element and certification of compliance for each of the Permittees in the regional program.

## G. REGIONAL WATER BOARD AUTHORITIES

Regional Water Boards are responsible for overseeing compliance with this Order. Oversight may include, but is not limited to, reviewing reports, requiring modification to storm water program components and various submissions, imposing region-specific monitoring requirements, conducting inspections and program evaluations (audits), taking enforcement actions against violators of this Order. Permittees shall modify and implement their storm water management programs and monitoring as required by the Regional Water Board Executive Officer. The Regional Water Board may designate additional Small MS4s as Regulated Small MS4s under this Order consistent with the criteria articulated in Finding 24 of this Order. Such designations must be approved by the Regional Water Board following public review and comment. The Executive Director of the State Water Board may amend Attachments A and B to add Regional Water Board designations. The Regional Water Boards may also issue individual permits to Regulated Small MS4s, and alternative general permits to categories of Regulated Small MS4s. Upon issuance of such permits by a Regional Water Board, this Order shall no longer regulate the affected Small MS4(s).

## H. DISPUTE RESOLUTION

In the event of a disagreement between a Permittee or other interested party and a Regional Water Board over the interpretation or implementation of any provision of this Order, a Permittee or interested party shall first attempt to resolve the issue with the Executive Officer of the Regional Water Board. If a satisfactory resolution is not obtained at the Regional Water Board level, a Permittee or interested party may submit the issue in writing to the Executive Director of the State Water Board or his designee for resolution, with a copy to the Executive Officer of the Regional Water Board. The issue must be submitted to the Executive Director within thirty days of any final determination by the Executive Officer of the Regional Water Board; after thirty days the Permittee or

interested party will be deemed to have accepted the Regional Water Board Executive Officer's determination. The Executive Officer of the Regional Water Board will be provided an opportunity to respond. The Executive Director or his/her designee shall make a determination on the request within 60 days. Determinations of the Regional Water Board Executive Officers in interpreting and implementing this permit are considered actions of the State Water Board except where the Regional Water Board itself acts or the Executive Officer acts under Water Code Sections 13300, 13304, or 13383.

## I. PERMIT RE-OPENER

This Order may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations 122.62, 122.63, 122.64, and 124.5. The State Board may additionally reopen and modify this Order at any time prior to its expiration under any of the following circumstances:

1. Present or future investigations demonstrate that the discharge(s) regulated by this Order may have the potential to cause or contribute to adverse impacts on water quality and/or beneficial uses.
2. New or revised Water Quality Objectives come into effect, or any TMDL is adopted or revised that is applicable to the Permittees
3. TMDL-specific permit requirements for adopted TMDLs are developed or revised by a Regional Water Board for incorporation into this Order.
4. The State Water Board determines, after opportunity for public comment and a public workshop, that revisions are warranted to those provisions of the Order addressing compliance with water quality standards in the receiving water or those provisions of the Order laying out an iterative process for implementation of management practices to achieve compliance with water quality standards in the receiving water.
5. The State Board completes the delineation of statewide watershed management zones based on watershed processes and the development of watershed based criteria for hydromodification measures.
6. The State Water Board completes the statewide policy for trash control in California's waterways.

## J. PERMIT EXPIRATION

This Order expires on June 30, 2018. If this Order is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with 40 Code of Federal Regulations section 122.6 and remain in full force and effect. If you wish to continue an activity regulated by this Order after the expiration date of this Order, you must apply for and obtain authorization as required by the new permit once it is issued.

**CERTIFICATION**

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of State Water Board held on February 5, 2013.

| | |
|---|---|
| AYE: | Chairman Charles R. Hoppin Vice Chair Frances Spivy-Weber<br>Board Member Tam M. Doduc<br>Board Member Steven Moore<br>Board Member Felicia Marcus |
| NAY: | None |
| ABSENT: | None |
| ABSTAIN: | None |

Jeanine Townsend
Clerk to the Board

**CALIFORNIA STATE WATER RESOURCES CONTROL BOARD**
**1001 I Street**
**Sacramento, CA 95814**

**FACT SHEET FOR**

# NPDES GENERAL PERMIT and WASTE DISCHARGE REQUIREMENTS FOR STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (ORDER)

**ORDER No. 2013-0001-DWQ**

**As Amended by Order 2017-XXXX-DWQ**

This Fact Sheet describes the factual, legal, and methodological basis for the General Permit, provides supporting documentation, and explains the rationale and assumptions used in deriving the limits and requirements.

## I. BACKGROUND

### History

A 1972 amendment to the federal Water Pollution Control Act (also referred to as the Clean Water Act) provides that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the Clean Water Act added section 402(p), which established a framework for regulating storm water discharges under the NPDES Program. Subsequently, in 1990, the U.S. Environmental Protection Agency (U.S. EPA) promulgated regulations for permitting storm water discharges from industrial sites (including construction sites that disturb five acres or more) and from municipal separate storm sewer systems (MS4s) serving a population of 100,000 people or more. These regulations, known as the Phase I regulations, require operators of medium and large MS4s to obtain storm water permits. On December 8, 1999, U.S. EPA promulgated regulations, known as Phase II regulations, requiring permits for storm water discharges from Small MS4s and from construction sites disturbing between one and five acres of land. The Order accompanying this Fact Sheet regulates storm water discharges from Small MS4s.

A municipal separate storm sewer is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) “owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity….” (ii) designed or used for collecting or conveying storm water; (iii) which is not a combined sewer; and (iv) which is not part of a Publicly Owned Treatment Works (POTW). [See Title 40, Code of Federal Regulations (40 C.F.R.) §122.26(b)(8).]

A Small MS4 is an MS4 that is not permitted under the municipal Phase I regulations. (40 C.F.R. §122.26(b)(16)). Small MS4s include systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares, but do not include separate storm sewers in very discrete areas, such as individual buildings. (40 C.F.R. §122.26(b)(16(iii).) This permit refers to MS4s that operate throughout a community as “Traditional MS4s” and MS4s that are similar to traditional MS4s but operate at a separate campus or facility as “Non-traditional MS4s.”

Federal regulations allow two permitting options for storm water discharges: individual permits and general permits. The State Water Resources Control Board (State Water Board) elected to adopt a statewide general permit for Small MS4s in order to efficiently regulate numerous storm water discharges under a single permit. In certain situations a storm water discharge may be more appropriately and effectively regulated by an individual permit, a region-specific general permit, or by inclusion in an existing Phase I MS4 permit. In these situations, the Regional Water Quality Control Board (Regional Water Board) Executive Officer will direct the Small MS4 operator to submit the appropriate application, in lieu of a Notice of Intent (NOI), to comply with the terms of this Order. In these situations, the individual or regional permits will govern, rather than this Order.

This Order regulates storm water runoff from small municipalities and other facilities, including federal and State operated facilities that can include universities, prisons, hospitals, military

bases (e.g. State Army National Guard barracks, parks and office building complexes.) Regulating many storm water discharges under one permit greatly reduces the administrative burden associated with permitting individual storm water discharges. Permittees obtain coverage under this Order by filing an electronic NOI through the State Water Board's Stormwater Multiple Application and Report Tracking System (SMARTS) and by mailing the appropriate permit fee to the State Water Board.

**Order Goals**

The goals for the Order included:

1. Ensure statewide consistency for Regulated Small MS4s.
2. Include more specificity in Order language and requirements to streamline implementation of storm water programs.
3. Implement and enhance actions to control 303(d) listed pollutants, pollutants of concern, achieve Wasteload Allocations adopted under Total Maximum Daily Loads, and protect Areas of Special Biological Significance.
4. Implement more specific and comprehensive storm water monitoring, including monitoring for 303(d) listed pollutants.
5. Incorporate emerging technologies, especially those that are being increasingly utilized by municipalities (e.g., low impact development).
6. Include program elements that address Program Management Effectiveness Assessments.
7. Implement a step-wise stakeholder collaborative approach.

**Stakeholder Collaborative Process**

State Water Board staff conducted a series of stakeholder meetings with Permittees and other interested parties over a five year period, from 2007- 2012. These meetings included the California Stormwater Quality Association (CASQA) Phase II Small MS4 Subcommittee, representatives of non-governmental organizations, Non-traditional Small MS4s and Regional Water Board staff. The following is a summary of the stakeholder process.

State Water Board staff completed an administrative draft Order and submitted it to CASQA, U.S. EPA, Natural Resources Defense Council, Coast/Bay Keepers, and Heal the Bay for informal stakeholder review in February 2011. Each of the nine Regional Water Boards provided comments. Staff revised the draft Order to address the informal comments received and released it for 60-day public review in June 2011.

Approximately 151 comments were received and several workshops were held throughout California to meet Stakeholders, answer questions and discuss the development process.

On May 4, 2012 a second administrative draft was completed and submitted for informal stakeholder review. On May 18, 2012 the second draft Order was released for 60-day public review. Approximately 110 comments were received and a public hearing was held on August 8, 2012 to hear oral comments on the second administrative draft.

On November 16, 2012 a third draft was completed and submitted for 30-day public review period. The comment deadline was set for noon on December 17, 2012. Approximately 55 comments were received and a board workshop was held on January 8, 2013 to hear comments on the revisions made to the second administrative draft.

On January 23, 2013, a final draft was completed and proposed for State Water Board adoption.

In 2015, State Water Board staff conducted a series of stakeholder meetings with Permittees and other interested parties over several months to discuss proposed changes to the Order, specifically revising and Attachment G with updated TMDL requirements. These meetings included the CASQA Phase II Small MS4 Subcommittee, representatives of non-governmental organizations, Non-traditional Small MS4s and Regional Water Board staff. On June 5, 2017 a draft amendment to this Order was issued for a 45-day public review period. The public review period was extended by request and the due date for public comments became August 21, 2017.

## II. PERMITTING APPROACH

### Existing General Permit Approach

U.S. EPA storm water regulations for Phase II storm water permits envision a process in which entities subject to regulation develop a Storm Water Management Plan (SWMP). The SWMP contains detailed Best Management Practices (BMPs) and specific level-of- implementation information reviewed and approved by the permitting agency before the Permittee obtains coverage under the storm water permit. The existing General Permit followed this approach as suggested by U.S. EPA and simply identified goals and objectives for each of the six Minimum Control Measures.

The existing General Permit approach provides the flexibility to target an MS4's problem areas while working within the existing organizational structure. However, audits of Permittees and information gained from interviews with Regional Water Board staff revealed that many of these storm water programs lacked a baseline program and specific details in the SWMP to implement an adequate program for protection from the impacts of storm water runoff. Regional Water Board staff found it difficult to determine Permittees' compliance with the existing General Permit, due to the lack of specific requirements. The permit language did not contain specific deadlines for compliance, did not incorporate clear performance standards, and did not include measurable goals or quantifiable targets for implementation.[1]

The Regional Water Boards conducted approximately 36 on-site audits of MS4 programs[2] in the state that addressed 122 Permittees, including some Phase II Small MS4s. They found that programs with more specific permit requirements generally resulted in more comprehensive and progressive storm water management programs. For example, the more prescriptive permit requirements in the Los Angeles and San Diego MS4 permits require Permittees to be specific in how they implement their storm water program. The auditors concluded that the specificity of the provisions enabled the permitting authorities to enforce the MS4 permits and improve the quality of MS4 discharges. In addition, U.S. EPA on-site audits of MS4s throughout the nation have

Given this information, State Water Board staff aimed to write permit language clear enough to set appropriate standards and establish required outcomes.

[1] Storm Water Phase I MS4 Permitting: Writing more effective, measurable permits, EPA, Kosco. repeatedly shown the need for clear, measurable requirements in MS4 permits to ensure an effective and enforceable program.

[2] Assessment Report on Tetra Tech's Support of California's MS4 Storm Water Program, July 2006

**Current Order Approach**

The current approach simplifies assessment of Permittee compliance and allows the public to more easily access measurable results. The Order provisions establish compliance implementation levels such as escalating enforcement and requirements for tracking projects. Required actions include specific reporting elements to substantiate compliance with implementation levels. Regional Water Board staff will be able to evaluate each individual Permittee's compliance through an online Annual Report review and the program evaluation (audit) process.

Federal regulations and State law require that the implementation specifics of Municipal Storm Water NPDES permits be adopted after adequate public review and comment.[3] This Order's approach satisfies the public involvement requirements of both the federal Clean Water Act and the California Water Code. Permit details are known at the time of adoption of the Order. Substantive information as to how the discharger will reduce pollutants to the Maximum Extent Practicable (MEP) is not left to the details of the SWMP. The public need not guess program details until Regional Water Board review and approval of a SWMP, as was the case in the existing General Permit.

This Order specifies the actions necessary to reduce the discharge of pollutants in storm water to the MEP in a manner designed to achieve compliance with water quality standards and objectives. This set of specific actions is equivalent to the requirements that were included in a separate SWMP for each Permittee in the existing General Permit.

This order effectively prohibits non-storm water discharges into municipal storm drain systems and watercourses within the Permittees' jurisdictions.

The State Board has also identified the most critical water quality problems as priorities in this Order. The priorities include (1) discharges to Areas of Special Biological Significance (2) discharges to water bodies listed as impaired on the 303[d] list (3) Post- Construction Requirements and (4) Water Quality Monitoring Requirements. A majority of the Permittees' implementation efforts focus on the four priority areas as identified by the State Water Board.

*Permittee Diversity*

In California, Permittees face highly variable conditions both in terms of threats to water quality from their storm water discharges and resources available to manage those discharges. Consequently, making one set of prescriptive requirements work for all of them is inherently difficult. This Order contains separate provisions for Traditional and Non-traditional MS4s. The

[3] On January 14, 2003, the U.S. Ninth Circuit Court issued a decision in *Environmental Defense Center v. EPA* ((9th Cir. 2003) 344 F.3d 832.) This ruling upheld the Phase II regulations on all but three of the 20 issues contested. The court determined that applications for general permit coverage (including the NOI and any Storm Water Management Program [SWMP]) must be made available to the public, the applications must be reviewed and determined to meet the Maximum Extent Practicable (MEP) standard by the permitting authority before coverage commences, and there must be a process to accommodate public hearings. Regarding the issue of public participation, the Ninth Circuit noted that such participation was required because the "substantive information about how the operator of a small MS4 will reduce discharges to the maximum extent practicable" was found in the storm water management plan rather than the permit itself" (344 F3d at 857).

requirements for the Non-traditional MS4s are tailored specifically to the Non-traditional management structure. Additionally, this permit introduces the concept of compliance tiers in particular sections, designed to relieve the Regional Water Board burden of reviewing and approving individual SWMPs while preserving the ability of the Permittees to tailor requirements that address their unique circumstances.

*Non-traditional MS4 Categories and Provisions*

This Order identifies specific provisions Non-traditional MS4 Permittees must comply with in Section F and considers the following categories to be Non-traditional MS4s, but not limited to:

- Community Services Districts
- Fairgrounds
- Higher Education Institutions (Community Colleges and Universities)
- Military Bases
- Ports
- State Parks/Beaches/Historical Areas
- School Districts K-12
- State and Federal Prisons/Health Institutions
- State Vehicle Recreation Areas
- Water Agencies
- Transit Agencies

The regulations direct that the term Small MS4s includes “large hospitals” and “prison complexes.” (40 C.F.R. §122.26(b)(16)(iii).) For purposes of State Water Board designation of state and federal hospitals and prisons, the Board interprets the terms “large hospital” and “prison complex” to mean health institutions and prison facilities with a resident and staff population of 5,000 or more. However, Regional Water Boards may designate smaller facilities on a case by case basis.

*Guidance Document*

The case for eliminating a SWMP for this second permit term has been clearly addressed, however, the latent advantages of having some form of a storm water management document has not.

First, a storm water management document assists Permittees in managing their storm water program. Such a document serves as guidance to (1) identify different staff involved in storm water compliance over multiple departments within the Permittee agency and, (2) provide those staff with a simple narrative connecting all the detailed, specific BMPs in relation to multiple Permittee departments. Simply put, the document provides the Permittee with a map to the compliance process.

Second, the storm water management document is an essential tool for Regional Water Board audits. During MS4 audits, the Regional Water Board typically requests and reviews a SWMP to understand the Permittee’s storm water program and management structure. Although the Order contains specific details on each program requirement, it lacks the simple narrative nexus that a storm water management document can provide on how the storm water program is implemented by a specific Permittee. The guidance document may be in spreadsheet form, as a flowchart, or as a written narrative. In other words, the structure is left up to the Permittee as to the way in which they want to demonstrate or illustrate the relationship between their

storm water program and their management structure. To that end, the guidance document will provide the Permittee with a clear map to the compliance process. Therefore, although the draft Order eliminates the submittal for review and approval of a SWMP, the requirement to develop a planning/guidance document has been retained for new Permittees.

New Permittees are allowed six months to develop and upload the guidance document to SMARTS along with the NOI and appropriate fee. The document is open for public viewing, but will not be reviewed and approved by the relevant Regional Water Board.

Renewal Permittees will also submit a guidance document and are allowed six months to develop and upload the guidance document to SMARTS along with the NOI and appropriate fee.

The State Water Board recognizes that in some instances Renewal Permittees' existing SWMPs have incorporated BMPs designed to address locality-specific storm water issues and that in some cases these BMPs may, because of locality-specific factors, be more protective of water quality than the minimum requirements established by this Order. Renewal Permittees will additionally include in the guidance document the following: identification and brief description of each BMP and associated measurable goal included in the Permittee's most current SWMP that constitutes a more specific local or tailored level of implementation that may be more protective of water quality than the minimum requirements of this Order; and identification of whether the Permittee proposes to maintain, reduce, or cease implementation for each more protective, locally-tailored BMP. In no instance may a BMP be reduced or ceased if it is required by the minimum standards set by this Order. Further, for each more protective, locally-tailored BMP and associated measurable goal for which the Renewal Permittee proposes to reduce or cease implementation, the Renewal Permittee may do so only if the Permittee can demonstrate, to the Regional Water Board Executive Officer, that the reduction or cessation is in compliance with this Order and the maximum extent practicable standard, and will not result in increased pollutant discharges. This process is designed to direct Renewal Permittees, where appropriate, to continue to implement more protective, locally-tailored BMPs and measurable goals developed in the previous permit term that were specifically designed to address local storm water priorities.

**Summary of Significant Changes in this Order**

This Order significantly differs from the previous order (Order 2003-0005-DWQ) by including the following:

- Specific BMP and Management Measure Requirements
- Elimination of submission of a SWMP for review and approval by the Regional Water Boards
- Electronic filing of NOIs and Annual Reports
- Waiver Certification
- New State Water Board and Regional Water Board designation criteria
- Separate requirements for Traditional and Non-traditional MS4s
- New program management requirements
- Post-construction storm water management requirements
- TMDL implementation requirements
- Requirements for ASBS discharges
- Water quality monitoring and BMP assessment
- Program effectiveness assessment

## III. ECONOMIC CONSIDERATIONS

In 2000, the State Water Board issued a precedential order (Order WQ 2000-11 (Cities of Bellflower, et al.)) stating that cost of compliance with the programs and requirements of a municipal storm water permit is a relevant factor in determining MEP. The Order also explicitly stated that a cost benefit analysis is not required. The State Water Board discussed costs as follows:

While the standard of MEP is not defined in the storm water regulations or the Clean Water Act, the term has been defined in other federal rules...

These definitions focus mostly on technical feasibility, but cost is also a relevant factor. There must be a serious attempt to comply, and practical solutions may not be lightly rejected. If, from the list of BMPs, a permittee chooses only a few of the least expensive methods, it is likely that MEP has not been met. On the other hand, if a permittee employs all applicable BMPs except those where it can show that they are not technically feasible in the locality, or whose cost would exceed any benefit to be derived, it would have met the standard. MEP requires permittees to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs would not be technically feasible, or the cost would be prohibitive. Thus while cost is a factor, the Regional Water Board is not required to perform a cost-benefit analysis.

(State Water Board Order WQ 2000-11, supra, p.20.) The State Water Board received extensive comments addressing the costs associated with compliance with the first publicly released Phase II small MS4 draft Order in June 2011. The depressed economic conditions in California challenge Permittees' ability to fully implement the requirements of the first draft permit. The State Water Board recognizes that many Permittees currently have limited staff and resources to implement storm water provisions. State Water Board staff carefully considered comments received regarding economic feasibility while revising the June 2011 draft Order. The Order continues to address critical water quality priorities, namely discharges to ASBS, TMDLs, and waterbodies listed as impaired on the 303(d) list, but aims to do so in a focused and cost-effective manner.

*Brief History*

State Water Board staff completed an administrative draft Order and submitted it to CASQA, U.S. EPA, Natural Resources Defense Council, Water Keepers, and Heal the Bay for informal stakeholder review in February 2011. Each of the nine Regional Water Boards also provided comments. Staff revised the draft Order to address the informal comments received and released it for 60-day public review in June 2011. Approximately 151 comments were received and several workshops were held throughout California to meet Stakeholders, answer questions and discuss the development process.

On October 6, 2011, the California Senate Select Committee on California Job Creation and Retention held a hearing on the economic impacts of the State Water Board's three general or statewide storm water permits that were under renewal: the Phase II Small MS4 permit, the Industrial General Permit, and the Caltrans statewide MS4 permit. The Executive Director of the State Water Board testified at the hearing that the comments regarding cost of compliance with the permits were being considered carefully and that the three permits required substantial revision to address the comments. Following the hearing, State Water Board staff launched Stakeholder meetings beginning in November 2011 to April 2012. The meetings were held with CASQA, National Resources Defense Council, Water Keepers, Heal the Bay

and each category of Non- traditional Small MS4 proposed for designation in the draft permit. The meetings were designed to discuss implementation challenges and solutions for each section of this Order, given the issues raised at the Senate hearing and the written comments from the June 2011 draft Order. Substantial revisions were then made and were reflected in the May 2012 draft Order. State Water Board staff attempted to reduce costs while maintaining the level of water quality protection mandated by CWA, CWC and other applicable requirements.

*Approach to Cost of Compliance*

This section is a general discussion of the more significant changes between the June 2011 and the May 2012 draft Order, including cost of compliance. It is not possible to accurately predict the cost impact of requirements that involve an unknown level of implementation or that depend on environmental variables that are as yet undefined. Only general conclusions can be drawn from this information.

It is extremely important to note that many storm water program components and their associated costs existed before any MS4 permits were issued. For example, storm drain maintenance, street sweeping and trash/litter collection costs cannot be solely or even principally attributed to MS4 permit compliance since these long-standing practices preceded the adoption of the earliest storm water permit in 1990. Even many structural BMPs (erosion protection, energy dissipation devices, detention basins etc.) are standard engineering practice for many projects and are not implemented solely to comply with permit provisions. Therefore, the true cost resulting from MS4 permit requirements is some fraction of the total storm water program costs.

The California State University, Sacramento study found that only 38% of program costs are new costs fully attributable to MS4 permits. The remainder of program costs was either pre-existing or resulted from enhancement of pre-existing programs.[4] The County of Orange found that even lesser amounts of program costs are solely attributable to MS4 permit compliance, reporting that the amount attributable to implement its Drainage Area Management Plan is less than 20% of the total budget. The remaining 80% is attributable to pre-existing programs.[5] Any increase in cost to the Permittees by the requirements of this Order will be incremental in nature.

Testimony from the California Senate Select Committee on California Job Creation and Retention hearing and comment letters on the June 2011 draft Order asserted numerous estimates of compliance costs. Generally, the estimates are based on worst-case scenarios or the most restrictive interpretation of the June 2011 draft Order. A worst-case scenario would come about, for example, if a new Traditional MS4 Permittee fails to leverage existing resources and maximize efficiencies, and does not segregate pre-existing program expenditures and new costs to implement the storm water program when considering cost of compliance. Furthermore, the assertions do not take into consideration the phased-in nature of many of the June 2011 draft Order requirements. Finally, the cost estimate assertions did not address the diversity among Permittees, specifically the different levels of compliance from a

[4] Ibid. p. 58

[5] County of Orange, 2000. A NPDES Annual Progress Report. P. 60. More current data from the County of Orange is not used in this discussion because the County of Orange no longer reports such information.

new vs. renewal Traditional MS4 Permittee expenditure and new vs. renewal Non-traditional MS4 expenditure and funding sources.

State Water Board staff estimated the cost of compliance in two ways. First, staff utilized cost data from the California State University (CSUS) NPDES Stormwater Cost Survey[6]. The rationale for using this document is that it's very difficult to precisely determine the true cost of implementation of the Permittees' storm water management program as affected by this Order. Reported costs of compliance for the same program element vary widely from city to city and by a very great margin that cannot be explained. However, economies of scale play a great role for the great margin of compliance costs. Some Permittees storm water programs are general funded while others utilize a service/user/utility fees to support the program. Unfortunately, those Permittees with general funded programs must compete for dollars in a dwindling economic climate. Furthermore, a study by the Los Angeles Regional Water Board reported wide variability in the cost of compliance among municipal permit holders, which was not easily explained.[7] Due to the wide diversity among the Permittees, Traditional and Non-traditional and new and renewal Permittees, the uncertainty of the extent of needed improvements, and the difficulty in isolating program costs attributable to permit compliance, the true cost of implementation can only be discussed in a general way.

Second, staff considered comparisons between the June 2011 draft Order and first term Phase I MS4 permits. The municipalities chosen in the CSUS survey were smaller Phase I cities, were early in the first permit term, and had reported cost in their annual reports. In addition, the cost categories correspond to the federal Phase II Small MS4 six minimum control measures. Given these factors, State Water Board staff estimated the worst-case scenario example to be a $32 median annual cost per household to implement the June 2011 draft Order. The CSUS survey estimated the annual cost per household for the six storm water programs ranged from $18 to $46.

Of the 100 new Traditional Small MS4s proposed to be designated, 20,000 is the average population with an average of 2.8 individuals per household, therefore the average annual cost to implement the June 2011 draft Order is approximately $229,000.

The average population of a renewal Traditional MS4 Permittee identified in the June 2011 draft Order is 27,353 with an average of 2.8 individuals per household. Therefore, the average annual cost to implement the June 2011 draft Order is approximately $313,000.

As discussed previously, the May 2012 draft Order has undergone substantial edits and no requirements have been added to the draft Order that would materially increase the cost of compliance. State Water Board staff carefully evaluated comments from Stakeholder meetings, written public comments, and testimony from the Senate Select Committee hearing. And, although the May 2012 draft Order contains these substantial revisions, the draft Order continues to protect storm water quality without overburdening Permittees and Businesses. Below is a list of some of the more significant changes to reduce costs.

1. Deleted annual cost analysis
2. Deleted Industrial/Commercial Inspection Program
3. Deleted mandatory construction inspection frequency

[6] California State University, NPDES Stormwater Cost Survey, 2005

[7] LARWQCB, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. p.2

4. Deleted Trash Reduction Program
5. Modified post-construction standard requirements
6. Modified Community-Based Social Marketing provision
7. Modified Non-traditional MS4 provisions
8. Extended compliance deadlines
9. Eliminated redundancy with construction inventory and tracking requirements
10. Deleted mandatory development of a citizen advisory group
11. Deleted costly IDDE monitoring, complaint response based
12. Made spatial data in a Geographic Information System (GIS) optional
13. Deleted requirement to identify 20% of storm drain system as high priority
14. Included Water Quality Monitoring Tiers

Though no firm conclusions or precise estimates can be drawn from this analysis, it is expected that the revisions to the May 2012 draft Order will significantly reduce the cost of compliance of the average annual cost per household from the estimated $32 to substantially lower.

*TMDLs*

The cost of complying with TMDL waste load allocations is not considered since TMDLs are not subject to the MEP standard. Federal law requires that NPDES permits contain effluent limitations consistent with the assumptions of any applicable wasteload allocation in a TMDL. (40 C.F.R. §122.44(d)(1)(vii)(B).)

*Benefits of Permit Costs*

The State Water Board further found in adopting Order WQ-2000-11 that in considering the cost of compliance, it is also important to consider the costs of impairment; that is, the negative impact of pollution on the economy and the positive impact of improved water quality. For example, economic benefits may result through program implementation, and alternative costs (as well as environmental impacts) may be incurred by not fully implementing the program.

Storm water management programs cannot be considered solely in terms of their costs. The programs must also be viewed in terms of their value to the public. For example, household willingness to pay for improvements in fresh water quality for fishing and boating has been estimated by U.S. EPA to be $158-210.[8] This estimate can be considered conservative, since it does not include important considerations such as marine waters benefits, wildlife benefits, or flood control benefits. The California State University, Sacramento study corroborates U.S. EPA's estimates, reporting annual household willingness to pay for statewide clean water to be $180.[9] Though these costs may be assessed differently at the state level than at the municipal level, the results indicate that there is public support for storm water management programs and that costs incurred by the Permittees to implement its storm water management program remain reasonable.

It is also important to consider the cost of not implementing a storm water management program. Urban runoff in southern California has been found to cause illness in people bathing

[8] Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68793.

[9] State Water Board, 2005. NPDES Storm water Cost Survey. P. iv.

near storm drains.[10] A study of south Huntington Beach and north Newport Beach found that an illness rate of about 0.8% among bathers at those beaches resulted in about $3 million annually in health-related expenses.[11] Extrapolation of such illness rates and associated health expenses to the beaches and other water contact recreation areas in the state would increase these costs significantly.

Storm water runoff and its impact on receiving waters also negatively affects the tourism industry. The California Travel and Tourism Commission estimated that out-of-state visitors spent $168 per person per day (including transportation) in California in 2007. The Commission estimated total direct travel spending in California was $97.6 billion, directly supporting 924,000 jobs, with earnings of $30.6 billion. Effects on tourism from storm water runoff (e.g. beach closures) can have a significant impact on the economy. The experience of Huntington Beach provides an example of the potential economic impact of poor water quality. Approximately eight miles of Huntington Beach were closed for two months in the middle of summer of 1999, impacting beach visitation and the local economy.

Finally, the benefits of storm water management programs must be considered in conjunction with their costs. A study conducted by University of Southern California and the University of California, Los Angeles assessed the costs and benefits of implementing various approaches for achieving compliance with the MS4 permits in the Los Angeles Region. The study found that non-structural systems would cost $2.8 billion but provide $5.6 billion in benefit. If structural systems were necessary, the study found that total costs would range from $5.7 to $7.4 billion, while benefits could reach

$18 billion.[12] Costs are anticipated to be borne over many years, approximately a ten year minimum. That the benefits of the programs would considerably exceed their costs is a view corroborated by U.S. EPA, which also found that the benefits of implementation of its Phase II storm water rule would outweigh the costs.[13]

## IV. UNFUNDED MANDATES

Article XIII B, Section 6(a) of the California Constitution provides that whenever “any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service.” The requirements of this Order do not constitute state mandates that are subject to a subvention of funds.

First, the requirements of this Order do not constitute a new program or a higher level of service as compared to the requirements of the Existing Order. The overarching requirement to impose controls to reduce the pollutants in municipal storm water is dictated by the Clean Water Act and is not new to this permit cycle. (33 U.S.C. §1342(p)(3)(B).) The inclusion of new and advanced measures as the storm water programs evolve and mature over time is

[10] Haile, R.W., et al, 1996. An Epidemiological Study of Possible Adverse Health Effects of Swimming in Santa Monica Bay. Santa Monica Bay Restoration Project.

[11] Los Angeles Times, May 2, 2005. Here’s What Ocean Germs Cost You: A UC Irvine Study Tallies the Cost of Treatment and Lost Wages for Beachgoers Who Get Sick.

[12] LARWQCB, 2004. Alternative Approaches to Storm water Control.

[13] Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791.

anticipated under the Clean Water Act (55 Fed. Reg. 48052), and these new and advanced measures do not constitute a new program or higher level of service. Further, this Order sets out a more detailed set of requirements compared to the 2003 Order in large part because, unlike the 2003 Order, this Order does not require submission of SWMPs. Specifics concerning how the minimum measures will be implemented, which would have been proposed in the SWMP under the 2003 Order, are now incorporated into the Order itself.

Second, and more broadly, mandates imposed by federal law, rather than by a state agency, are exempt from the requirement that the local agency's expenditures be reimbursed. (Cal. Const., art. XIII B, §9, subd. (b).) The Draft Order implements federally mandated requirements under the Clean Water Act and its requirements are therefore not subject to subvention of funds. This includes federal requirements to effectively prohibit non-storm water discharges, to reduce the discharge of pollutants to the maximum extent practicable, and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. (30 U.S.C. §1342(p)(3)(B).) The authority exercised under this Order is not reserved state authority under the Clean Water Act's savings clause (cf. *Burbank v. State Water Resources Control Bd*. (2005) 35 Cal.4th 613, 627-628), but instead is part of a federal mandate to develop pollutant reduction requirements for municipal separate storm sewer systems. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, *City of Rancho Cucamonga v. Regional Water Quality Control Bd.- Santa Ana Region* (2006) 135 Cal.App.4th 1377, 1389; *Building Industry Ass'n of San Diego County v. State Water Resources Control Bd*. (2004) 124 Cal.App.4th 866, 882-883.)

Further, the maximum extent practicable standard is a flexible standard that balances a number of considerations, including technical feasibility, cost, public acceptance, regulatory compliance, and effectiveness. (*Building Ind. Asso., supra*, 124 Cal. App.4th at pp. 873, 874, 889.) Such considerations change over time with advances in technology and with experience gained in storm water management. (55 Fed.Reg. 48052.) Accordingly, the determination of whether the Draft Order conditions exceed the requirements of federal law cannot be based on a point by point comparison of the permit conditions and the six minimum measures that are required "at a minimum" to reduce pollutants to the maximum extent practicable and to protect water quality (40 C.F.R. §122.34). Likewise, individual permit provisions cannot be considered in isolation. When implementing the federal requirement to reduce pollutants to the maximum extent practicable, the entire permit must be evaluated as a whole. This is so because the permitting agency may decide that it is more practicable to expend limited municipal resources on one aspect of the permit rather than another. In other words, requirements in one area may be relaxed to account for greater expenditures in another that will reduce pollutants to the maximum extent practicable

In recent months, the County of Los Angeles and County of Sacramento Superior Courts have granted writs setting aside decisions of the Commission on State Mandates that held that certain requirements in Phase I permits constituted unfunded mandates.

In both cases, the courts found that the correct analysis in determining whether a municipal storm water permit constituted a state mandate was to evaluate whether the permit conditions were expressly specified in federal statute or regulation but whether the permit conditions exceeded the maximum extent practicable standard. *(State of Cal. v. Comm. On State Mandates* (Super. Ct. Sacramento County, 2012, No. 34-2010- 80000604), *State of Cal. v. County of Los Angeles* (Super. Ct. Los Angeles County, 2011, No. BS130730.) It should be noted that USEPA has issued an online MS4 Permit Improvement Guide (April 2010, available

at: http://www.epa.gov/npdes/pubs/ms4permit_improvement_guide.pdf) that recommends many provisions for Phase II MS4 permits not explicitly specified in the six minimum measures established at Code of Federal Regulations, title 40, section 122.34.

As laid out in this Fact Sheet and as supported by the record of this permitting action, the requirements of the Draft Order, taken as a whole rather than individually, are necessary to reduce the discharge of pollutants to the maximum extent practicable, to effectively prohibit non-storm water discharges, and to protect water quality. The findings as to implementing these federal requirements are the expert conclusions of the principal state agency charged with implementing the NPDES program in California. (Wat. Code, §§13001.) The requirements of the Draft Order do not constitute an unfunded mandate.

It should be noted that the Draft Order provisions to effectively prohibit non-storm water discharges are also mandated by the Clean Water Act. (33 U.S.C. §1342(p)(3)(B)(ii).) Likewise, the provisions of this Draft Order to implement total maximum daily loads (TMDLs) are federal mandates. Federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable wasteload allocation in a TMDL. (40 C.F.R. §122.44(d)(1)(vii)(B).)

Finally, even if any of the permit provisions could be considered unfunded mandates, under Government Code section 17556, subdivision (d), a state mandate is not subject to reimbursement if the local agency has the authority to charge a fee. The local agency permittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order. (See, e.g., *Apartment Ass'n of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 842.) The authority of a local agency to defray the cost of a program without raising taxes indicates that a program does not entail a cost subject to subvention. (*Clovis Unified School Dist. v. Chiang* (2010) 188 Cal. App.4th 794, 812, quoting *Connell v. Superior court* (1997) 59 Cal.App.4th 382, 401; *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487–488.)

## V. ROLE OF THE REGIONAL WATER BOARDS

Under the Water Code, either the State Water Board or the regional boards have authority to issue NPDES permits (Wat. Code, §13377.) The State Water Board is issuing this Order; however Regional Water Board staff will continue to have the authority to evaluate each individual Permittee's compliance through online Annual Report review and by requesting a detailed annual report from Permittees anytime during the permit term. In addition, Regional Board staff can conduct program evaluations (audits). These evaluations can either be targeted or comprehensive evaluations. Responsibilities of Regional Water Board staff also include oversight of implementation and compliance with this Order. As appropriate, they can require modification to programs and other submissions, impose region-specific monitoring requirements, conduct inspections, take enforcement actions, and make additional designations of Regulated Small MS4s. The Regional Water Boards also have a role in approving water quality monitoring efforts and may also direct that dischargers carry out a particular type of education and outreach program (see discussion under Section XII).

Regional Water Boards may also issue individual permits to Regulated Small MS4s, and alternative general permits to categories of Regulated Small MS4s. In addition, Regional Water Boards may allow Phase II Permittees the ability to become Phase I Permittees within the same urbanized area. Upon issuance of such permits by a Regional Water Board, this Order shall no longer regulate the affected MS4s.

The Permittees and Regional Water Boards are encouraged to work together to accomplish the goals of the storm water program, specifically, by coordinating the oversight of construction and industrial sites. For example, certain Permittees are required to implement a construction program that must include procedures for construction site inspection and enforcement. Construction sites disturbing an acre of land or more are also subject to inspections by the Regional Water Board under the State Water Board's Construction General Permit for Storm Water Discharges associated with Construction and Land Disturbance Activities (CGP). U.S. EPA intended to provide a structure that requires permitting through the federal Clean Water Act while at the same time achieving local oversight of construction projects. A structured plan review process and field enforcement at the local level, which is also required by this Order, were cited in the preamble to the Phase II regulations as the most effective components of a construction program.

The Permittees and Regional Water Boards are encouraged to coordinate efforts and use each of their enforcement tools in the most effective manner. However, in order to further ensure coordination, this Order requires Permittees to include procedures for referring non-filers as identified in the Program Management section and violations of the storm water general permits to the Regional Water Board when observed.

*Dispute Resolution*

As discussed, several areas of the permit will be mandated at the discretion of the Regional Board Executive Officer after permit adoption. In this function, the Regional Water Board Executive Officers are in essence acting as agents of the State Water Board. Therefore, determinations of the Regional Water Board Executive Officers in interpreting and implementing this permit are considered actions of the State Water Board (and accordingly not actions of the Regional Water Board subject to the petition process under Water Code section 13320) except where the Regional Water Board itself acts or the Executive Officer acts under Water Code Sections 13300, 13304, or 13383. However, recognizing the need for some level of statewide consistency in interpretation and implementation of Order provisions, the Order includes a dispute resolution process where there is disagreement between a Permittee and a Regional Water Board Executive Officer. The Permittee should first attempt to resolve the issue with the Executive Officer of the Regional Water Board. If a satisfactory resolution is not obtained at the Regional Water Board level, the Permittee may submit the issue in writing to the Executive Director of the State Water Board or his designee for resolution, with a copy to the Executive Officer of the Regional Water Board. The issue must be submitted to the Executive Director within thirty days of any final determination by the Executive Officer of the Regional Water Board; after thirty days the Permittee will be deemed to have accepted the Regional Water Board Executive Officer's determination. The Executive Officer of the Regional Water Board will be provided an opportunity to respond.

## VI. ENTITIES SUBJECT TO THIS ORDER

This Order regulates discharges of storm water from Regulated Small MS4s. A Regulated Small MS4 is a Small MS4 that has been designated as regulated in accordance with criteria described in 40 C.F.R. 122.32.

a. **Renewal Permittee - Traditional and Non-traditional MS4s**
All Traditional and Non-traditional MS4s currently covered under the existing General Permit are covered under this Order and must implement the requirements of this Order.

b. **New Traditional MS4 Permittee or New Urbanized Areas**
In some cases, the urbanized boundaries and/or infrastructure of previously permitted Traditional MS4 Permittees may expand to include new areas designated as urbanized under the 2010 U.S. Decennial Census (e.g., when new areas are annexed within the urbanized area). Permittees must identify and include these new urbanized areas as part of their existing storm water program. Any new urbanized areas must be indicated on Permittees permit boundary map. For cities, the permit area boundary is the city boundary. For counties, permit boundaries must include urbanized areas and places identified in Attachment A located within their jurisdictions. The boundaries must be proposed in the permit boundary map and may be developed in conjunction with the applicable Regional Water Board

New Traditional MS4 Permittees that are outside of Urbanized Areas have been designated as Regulated Small MS4s based on one or more of the following criteria developed by the State Water Board:

1) High population and population density – High population means a population of 10,000 or more. High population density means a density greater than 1,000 residents per square mile. Also considered in this definition is high density created by a non-residential population, such as tourists or commuters.
2) Discharge to Areas of Special Biological Significance (ASBS) as defined in the California Ocean Plan.

The above factors were considered when evaluating whether an MS4 outside an Urbanized Area should be regulated pursuant to this Order. An MS4 and the population that it serves need not meet all of the factors to be designated. The criteria selected to designate MS4s to be regulated are based on the potential impact to water quality due to conditions influencing discharges into their system or due to their discharge location(s).

On a case by case basis, the Regional Water Boards may designate Small MS4s outside of Urbanized Areas as Regulated Small MS4s. Case by case determinations of designation shall be based on the potential of a Small MS4's discharges to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts. Where such case by case designations have been recommended by the Regional Water Boards prior to adoption of this Order, the designated Small MS4s are listed on the relevant Attachments to the Order and the reasons for designation are laid out in the Fact Sheet. The Regional Water Boards may continue to make case by case determinations of designation during the permit term by notification to the discharger, which shall include a statement of reasons for the designation.

Finally, any Small MS4 that contributes substantially to the pollutant loadings of a physically interconnected municipal separate storm sewer that is regulated by the NPDES storm water program must be designated as Regulated Small MS4s. An MS4 is

interconnected with a separately permitted MS4 if storm water that has entered the MS4 is discharged to another permitted MS4. In general, if the MS4 discharges more than 10 percent of its storm water to the permitted MS4, or its discharge makes up more than 10 percent of the other permitted MS4's total storm water volume, it is a significant contributor of pollutants to the permitted MS4. In specific cases, the MS4s involved or third parties may show that the 10 percent threshold is inappropriate for the MS4 in question. The definition for significant contributor of pollutants to an interconnected permitted MS4 uses a volume of 10 percent, with the assumption that storm water contains pollutants. This is meant to capture flows that may affect water quality or the permit compliance status of another MS4, but exclude incidental flows between communities.

c. **New Non-traditional MS4 Permittees**
Non-traditional MS4s include, but are not limited to, universities, prisons, large hospitals, military bases (e.g., State Army National Guard barracks), and State parks.

The previous General Permit, Water Quality Order 2003-0005-DWQ, Attachment 3 listed Non-traditional MS4s anticipated to be designated by the end of the permit term, either by the State or Regional Water Boards. However, some Non- traditional MS4s were not designated. All Non-traditional MS4s, except K-12 School Districts, Offices of Education and Community Colleges, not yet designated are now subject to this Order. These entities are listed in Attachment B.

Additional Non-traditional MS4 Permittees have been designated as Regulated Small MS4s in accordance with the same criteria described in b above.

## VII. APPLICATION REQUIREMENTS

All Regulated Small MS4s listed in Attachments A and B are automatically designated upon adoption of this Order and must file for coverage. To file for coverage, Permittees must electronically file an NOI on the State Water Board's SMARTS website (https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp) and mail the appropriate permit fee to the State Water Board:

The NOI will include a statement that the discharger intends to comply with the BMP requirements of the Order in lieu of proposing BMP practices. Permittees must file the NOI by July 1, 2013.

Joint Phase II Co-Permittees or Permittees relying on Separate Implementing Entities must also electronically file an NOI via SMARTS and mail the appropriate fee to the State Water Board, by July 1, 2013.

Census Designated Places (CDPs) are included in Attachment A to clearly show that they are designated Phase II entities. However, CDPs that are located within an urbanized area and within an existing NPDES permit area do not have a government entity and as such, are not required to file separately and pay fees. The Permittee (i.e. a designated county) will name the CDPs within their jurisdiction when they file their NOI via SMARTS.

For fee purposes, in determining the total population served by the MS4, both resident and commuter populations are to be included. For example, publicly operated school complexes including universities and colleges, the total population served would include the sum of the average annual student enrollment plus staff.

For community services districts, the total population served would include the resident population and any non-residents regularly employed in the areas served by the district.

Regulated Small MS4s that fail to obtain coverage under this Order or other NPDES permit for storm water discharges will be in violation of the Clean Water Act and the California Water Code.

The Order includes State and Regional Water Board contact information for questions and submittals.

*Waiver Certification*

This Order allows Regulated Small MS4s to request a waiver of requirements. Regulated Small MS4 must certify (1) their discharges do not cause or contribute to, or have the potential to cause or contribute to a water quality impairment, and (2) they meet one of the following three waiver options:

a. Option 1

   (1) The jurisdiction served by the system is less than 1,000 people;
   (2) The system is not contributing substantially to the pollutant loadings of a physically interconnected regulated MS4; and
   (3) If the small MS4 discharges any pollutants identified as a cause of impairment of any water body to which it discharges, storm water controls are not needed based on waste load allocations that are part of an EPA approved or established TMDL that addresses the pollutant(s) of concern.

b. Option 2

   (1) The jurisdiction served by the system is less than 10,000 people;
   (2) The Regional Water Board has evaluated all waters of the U.S. that receive a discharge from the system;
   (3) The Regional Water Board has determined that storm water BMPs are not needed based on wasteload allocations that are part of an EPA approved or established TMDL that addresses the pollutant(s) of concern or an equivalent analysis; and
   (4) The Regional Water Board has determined that future discharges from the Regulated Small MS4 do not have the potential to result in exceedances of water quality standards.

c. Option 3 (applicable to Small MS4s outside an Urbanized Area only)

   (1) Small Disadvantaged Community – a community with a population of 20,000 or less with an annual median household income (MHI) that is less than 80 percent of the statewide annual MHI (CWC § 79505.5 (a)).

## VIII. POST-CONSTRUCTION STORMWATER MANAGEMENT CRITERIA FOR NEW DEVELOPMENT AND REDEVELOPMENT

This Order incorporates Site Design and Low Impact Development (LID) Runoff requirements for new development and redevelopment. The Order will incorporate runoff retention and hydromodification control criteria in the next permit term that will be keyed to specific watershed processes as identified by the State Water Board within specific Watershed

Management Zones (WMZs). The WMZs will be used to identify applicable areas and appropriate criteria for runoff retention and hydromodification control.

## IX. DISCHARGE PROHIBITIONS

### Storm Water Discharges

This Order authorizes storm water and conditionally exempt non-storm water discharges[14] from the Permittees' MS4s subject to effluent and receiving water limitations. This Order prohibits the discharge of material other than storm water, unless specifically authorized in this Order.

### Non-Storm Water Discharges

Section 402(p)(3)(B)(ii) of the Clean Water Act requires that MS4 permits include a requirement to effectively prohibit non-storm water discharges into the storm sewers. Prohibition B.3 of the Order implements this requirement. Although the Clean Water Act phrases the non-storm water discharge prohibition as a prohibition of discharges "into the storm sewers," this Order states that "discharges *through the MS4* of material other than storm water to waters of the U.S. shall be effectively prohibited." There is no meaningful distinction between the two language iterations as both prohibit discharges from reaching receiving waters and are consistent with the intent of the Clean Water Act. When discussing the effective prohibition of non-storm water discharger, U.S. EPA's preamble to its Phase I regulations uses the term "through" interchangeably with the term "into." (55 Fed. Reg. 47995.) Staff believes that the use of the phrasing "through the MS4 . . . to waters of the U.S." allows the Permittees greater flexibility with regard to utilizing dry weather diversions.

The Phase I regulations at 40 C.F.R. §122.34(b)(3)(iii). specify certain categories of non- storm water discharges that are conditionally exempt from the prohibition and the Order follows this approach. Unless authorized by a separate NPDES permit, non-storm water discharges that are not specifically exempted by this Order are prohibited. Certain enumerated conditionally exempt non-storm water discharges are allowed provided they are not found to be significant source of pollution If a discharger or a Regional Water Board Executive Officer determines that any individual or class of conditionally exempt non-storm water discharge may be a significant source of pollutants, the Regional Water Board may require the discharger to monitor and submit a report and impose BMPs to control the discharge.

### Areas of Special Biological Significance

The State Water Board adopted the California Ocean Plan (Ocean Plan) on July 6, 1972 and revised the Ocean Plan in 1978, 1983, 1988, 1990, 1997, 2000, 2005 and 2009. The Ocean Plan prohibits the discharge of waste to Areas of Special Biological Significance (ASBS). The State Water Board designates ASBS as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable.

The Ocean Plan states that the State Water Board may grant an exception to Ocean Plan provisions where the State Water Board determines that the exception will not compromise protection of ocean waters for beneficial uses and the public interest will be served.

[14] Conditionally exempt non-storm water also refers to authorized non-storm water.

On October 18, 2004, the State Water Board directed several dischargers to cease the discharge of storm water and nonpoint source waste into ASBS, or request an exception to the Ocean Plan. Several of these dischargers are designated as Regulated Small MS4s.

On March 20, 2012, the State Water Board adopted Resolution 2012-0012 granting an exception from the Ocean Plan prohibition to 13 parties (Attachment D) designated as Regulated Small MS4s under this Order. In order to legally discharge into an ASBS, the parties must comply with the terms of the exception and have an appropriate authorization to discharge. Authorization for point source discharges to ASBS consists of coverage under this NPDES Order.

The parties authorized to discharge under the general exception are listed in Attachment D. The general exception contains “Special Protections” to protect beneficial uses and maintain natural water quality in ASBS. Limited by the special conditions in the resolution, parties listed in Attachment D can legally discharge waste into ASBS as long as the discharges are also regulated under this Order.

This Order incorporates the terms of the exception and includes the monitoring requirements the 13 parties identified as Regulated Small MS4s must comply with.

## X. EFFLUENT LIMITATIONS

Consistent with Clean Water Act section 402(p)(3)(B)(iii), this Order requires that Permittees implement controls to reduce the discharge of pollutants from their MS4s to waters of the U. S. to the Maximum Extent Practicable (MEP). The MEP standard requires Permittees to apply Best Management Practices (BMPs) that are effective in reducing or eliminating the discharge of pollutants to the waters of the U.S. MEP emphasizes pollutant reduction and source control BMPs to prevent pollutants from entering storm water runoff. MEP may require treatment of the storm water runoff if it contains pollutants. The MEP standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling urban runoff continues to evolve, so does that which constitutes MEP. BMP development is a dynamic process and may require changes over time as the Permittees gain experience and/or the state of the science and art progresses. Permittees must conduct and document evaluation and assessment of each relevant element of the program, and of the program as a whole, and revise activities, control measures/BMPs, and measurable goals, as necessary to meet MEP. MEP requires Permittees to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs are not technically feasible, or the cost is prohibitive. Further, because local conditions vary, some BMPs may be more effective in one community than in another. MEP is the cumulative result of implementing, evaluating, and creating corresponding changes to a variety of technically appropriate and economically feasible BMPs, ensuring that the most appropriate BMPs are implemented in the most effective manner. Under 40 Code of Federal Regulations section 122.44(k)(2) & (3), the State Water Board may impose BMPs for control of storm water discharges in lieu of numeric effluent limitations.[15]

[15] On November 12, 2010, U.S. EPA issued a revision to a November 22, 2002, memorandum in which it had “affirm[ed] the appropriateness of an iterative, adaptive management best management practices (BMP) approach” for improving storm water management over time. In the revisions, U.S. EPA recommended that, in the case the permitting authority

In 2004, the State Water Board assembled a blue ribbon panel to address the feasibility of including numeric effluent limits as part of NPDES municipal, industrial, and construction storm water permits. The panel issued a report dated June 19, 2006, which included recommendations as to the feasibility of including numeric limits in storm water permits, how such limits should be established, and what data should be required.

The report concluded that "It is not feasible at this time to set enforceable numeric effluent criteria for municipal BMPs and in particular urban discharges. However, it is possible to select and design them much more rigorously with respect to the physical, chemical and/or biological processes that take place within them, providing more confidence that the estimated mean concentrations of constituents in the effluents will be close to the design target."

Consistent with the federal regulations, the findings of the Blue Ribbon Panel, and precedential State Water Board orders (State Water Board Orders Nos. WQ 91-03 and WQ 91-04), this Order allows the Permittees to implement BMPs to comply with the requirements of the Order.

## XI. RECEIVING WATER LIMITATIONS

Under federal law, an MS4 permit must include "controls to reduce the discharge of pollutants to the maximum extent practicable . . . and such other provisions as . . . the State determines appropriate for the control of such pollutants." (Clean Water Act §402(p)(3)(B)(iii).) Consistent with this provision, requirements to meet water quality standards are at the discretion of the permitting agency. (*Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F3d 1159.)

The State Water Board has previously determined that limitations necessary to meet water quality standards are appropriate for the control of pollutants discharged by MS4s and must be included in MS4 permits. (State Water Board Orders WQ 91-03, 98-01, 99- 05, 2001-15).). This Order accordingly prohibits discharges that cause or contribute to violations of water quality standards. Consistent with federal law, the State Water Board has also found it appropriate to require implementation of BMPs in lieu of numeric water quality-based effluent limitations and further, in lieu of "strict compliance" with water quality standards, has prescribed an iterative process of BMP improvement to achieve water quality standards. (State Water Board Orders WQ 91-03, 98-01, 2001-15; 40 C.F.R. §122.44(k).) As a result, this Order further sets out that, upon determination that a Permittee is causing or contributing to an exceedance of applicable water quality standards, the Permittee must engage in an iterative process of proposing and implementing additional control measures to prevent or reduce the pollutants causing or contributing to the exceedance. This iterative process is modeled on receiving water limitations set out in State Water Board precedential Order WQ 99-05 and required by that Order to be included in all municipal storm water permits.

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determines that MS4 discharges have the reasonable potential to cause or contribute to a water quality excursion, the permitting authority, where feasible, include numeric effluent limitations as necessary to meet water quality standards. However, the revisions recognized that the permitting authority's decision as to how to express water quality based effluent limitations (WQBELs), i.e. as numeric effluent limitations or BMPs, would be based on an analysis of the specific facts and circumstances surrounding the permit. U.S. EPA has since invited comment on the 2010 memorandum and will be making a determination as to whether to "either retain the memorandum without change, to reissue it with revisions, or to withdraw it." http://www.epa.gov/npdes/pubs/sw_tmdlwla_comments_pdf

The Water Boards have generally directed dischargers to achieve compliance with water quality standards by improving control measures through the iterative process and, as a matter of practice, have generally declined to initiate enforcement actions against MS4 permittees who have been actively engaged in the iterative process. At the same time, however, the Water Boards have maintained that the iterative process does not provide a "safe harbor" to MS4 permittees:[16] that is, when a discharger is shown to be causing or contributing to an exceedance of water quality standards, that discharger is in violation of the relevant discharge prohibitions and receiving water limitations of the permit and potentially subject to enforcement by the Water Boards or through a citizen suit, even if the discharger is actively engaged in the iterative process.

The question of the "safe harbor" became a priority concern for storm water dischargers following the Ninth Circuit's holding in *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2011) 673 F.3d 880 that engagement in the iterative process does not provide a safe harbor from liability for violations of permit terms prohibiting exceedances of water quality standards. Although the U.S. Supreme Court has reversed the judgment of the Ninth Circuit and remanded (on grounds unrelated to the "safe harbor" holding), *LA County Flood Control District v. NRDC* (2013) 568 U.S., the receiving water limitations provisions is expected to remain a significant issue for dischargers based on the position, to date, of the Water Boards that the iterative process does not provide a "safe harbor" from violations. The State Water Board has received multiple comments, from dischargers and from other interested parties, expressing confusion and concern about the Order provisions regarding receiving water limitations and the iterative process. Many commenters have stated that the provisions as currently written do not provide the dischargers with a viable path to compliance with the proposed Order. Other commenters, including environmental parties, support the current language.

As stated above, the provisions in this Order regarding receiving water limitations and the iterative process are based on precedential Board orders. Accordingly, substantially identical provisions are found in the adopted Caltrans MS4 NPDES permit, as well as the Phase I NPDES permits issued by the Regional Water Boards. Because of the broad applicability of any policy decisions regarding the receiving water limitations and iterative process provisions, the State Water Board held a public workshop on November 20, 2012, to consider this issue and seek public input.

Rather than delay consideration of adoption of the tentative Order in anticipation of any future changes to the receiving water limitations and iterative process provisions that may result from the public workshop and deliberation, the Board has added a specific reopener clause at Section H to facilitate any future revisions as necessary.

## XII. STORM WATER MANAGEMENT PROGRAM FOR TRADITIONAL MS4S PROGRAM ELEMENTS

### Program Management

This component is essential to ensure timely implementation of all elements of the storm water program and consistency with the Order requirements. Lessons learned in California from

[16] *Building Industry Assn. of San Diego County v. State Water Resources Control Bd*. (2004) 124 Cal.App.4th 866; *City of Rancho Cucamonga v. Regional Water Quality Control Bd*. (2006) 135 Cal.App.4th 1377.

Phase I Permittees and various municipal audits are that a Program Management element can:

1. Identify departments that assist with the implementation of the program as well as their roles and responsibilities; and
2. Maintain and enforce adequate legal authority to control pollutant discharges.

*Adequate Legal Authority and Certification*

Legal Authority: Clean Water Act § 402(p)(3)(b); 40 C.F.R. §§ 122.22(b), 122.34(b)(3)(ii)(B), (b)(4)(ii)(A), and (b)(5)(ii)(B); 122.41(k). MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001; MS4 Program Evaluation Guidance, U.S. EPA, EPA-833-R-07-003

Adequate legal authority is required for Permittees to implement and enforce their storm water programs. Without adequate legal authority, Permittees would be unable to perform many vital program elements such as performing inspections and requiring installation of control measures. In addition, Permittees would not be able to conduct enforcement activities, assess penalties and/or recover costs of remediation.

*Enforcement Response Plan*

Legal Authority: Clean Water Act §402(p)(3)(b); MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001; MS4 Program Evaluation Guidance, U.S. EPA, EPA-833-R-07-003

In ordinances or other regulatory mechanisms, Permittees are required to include penalty provisions to (1) ensure compliance with construction and industrial requirements, (2) to require the removal of illicit discharges, and (3) to address noncompliance with post-construction requirements. To meet these requirements, this Order requires enforcement responses that vary with the type of permit violation, and escalate if violations are repeated or not corrected. The Permittee must develop and implement an Enforcement Response Plan (ERP), which clearly describes the action to be taken for common violations associated with the construction program, illicit discharge detection and elimination, or other program elements. A well-written ERP provides guidance to inspectors on the different enforcement responses available, actions to address general permit non-filers, when and how to refer violators to the State, and how to track enforcement actions.

**Education and Outreach on Storm Water Impacts**

Legal Authority: Clean Water Act § 402(p)(3)(b); 40 C.F.R. § 122.34(b)(1); MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001; MS4 Program Evaluation Guidance, U.S. EPA , EPA-833-R-07-003; U.S. EPA Stormwater Phase II Final Rule Fact Sheet Series, U.S. EPA Stormwater Phase II Final Rule (64 FR 68722), EPA National Menu of Best Management Practices for Stormwater Phase II[17]; Measurable Goals Guidance for Phase II Small MS4s; U.S. EPA Getting In Step

Without a focused and comprehensive program, outreach and education efforts will be poorly coordinated and ineffective. This Order requires Permittees to develop an education and outreach program that is tailored and targeted to specific water quality issues of concern in the community. These community-wide and targeted issues should then guide the development of the comprehensive outreach program, including the creation of appropriate messages and

[17] http://cfpub.epa.gov/npdes/stormwater/menuofbmps/

educational materials. Outreach and education not only includes the public as the target audience, but includes Permittee staff and construction site operators as well.

This Order includes a different compliance path that, upon determination by a Regional Board Executive Officer, requires the possible implementation of Community-Based Social Marketing (CBSM). CBSM is a systematic way to change the behavior of communities to reduce their impact on the environment. Simply providing information is usually not sufficient to initiate behavior change. CBSM uses tools and findings from social psychology to discover the perceived barriers to behavior change and ways of overcoming these barriers.[18]

CBSM is also cited in EPA's Getting in Step[19] outreach guide which includes successful CBSM case studies. The CBSM path is included in Attachment E.

To ensure effective implementation of CBSM principles, Regional Water Boards who have invoked Attachment E, CBSM Requirements, are encouraged to consult with Permittees to ensure CBSM principles are implemented adequately. Regional Board staff should use the first year annual report and effectiveness assessment information during the consultation. The information gained from the consultation should assist the Regional Water Board's evaluation of program effectiveness and whether a Permittee should continue implementation of Attachment E.

In addition to external public outreach, outreach and education efforts should also be directed internally at Permittee staff who, as part of their normal job responsibilities, participate in storm water program operations such as illicit discharge detection and elimination, construction, and pollution prevention and good housekeeping. The training program will ensure proper illicit discharge and illicit connection identification, reporting and response. The construction training program will ensure that Permittee staff who is responsible for construction storm water program implementation receive adequate training. Additionally, the Permittee must develop educational materials and training for construction site operators to ensure program compliance. Construction operators must be educated about site requirements for control measures, local storm water requirements, enforcement activities, and penalties for non-compliance. Permittee staff training in pollution prevention/good housekeeping will ensure the incorporation of pollution prevention/good housekeeping techniques into Permittee operations.

A comprehensive and cohesive outreach and education program will likely be effective and well-coordinated if it involves the public, storm water program staff, and construction site operators.

This Order includes a list of potential residential and commercial pollution sources, but the Permittee may also identify other sources that contribute significant pollutant loads to the MS4. The Order identifies specific pollutant generating activities that must be addressed, including organized car washes, mobile cleaning and power washing operations, and landscape over-irrigation.

[18] A variation of social marketing, referred to as CBSM by Canadian environmental psychologist Doug McKenzie- Mohr

[19] Getting in Step, 3rd Edition, A Guide to Watershed Outreach Campaigns, November 2010 EPA 841-B-10-002

The Permittee is encouraged to use existing public educational materials in its program. The Permittee is also encouraged to leverage resources with other agencies and municipalities with similar public education goals.

In addition, this Order requires storm water education for school-age children. The United States suffers from a "nature deficit disorder" as discussed in popular literature (e.g., "Last Child in the Woods" by Richard Louv) and elsewhere (American Fisheries Society "Fisheries" magazine, available online at www.fisheries.org). As discussed in the "America's Great Outdoors: A Promise to Future Generations" report, in order to make environmental stewardship and conservation relevant to young Americans, environmental and place-based, experiential learning must be integrated into school curricula and school facility management across the country.[20] If a program such as Splash (www.sacsplash.org/ ),Effie Yeaw Nature Center (www.sacnature.net) or Yolo Basin (www. Yolobasin.org) does not exist, Permittees are encouraged to use California's Education and Environment Initiative Curriculum (EEI)[21] or equivalent. California's landmark EEI Curriculum is a national model designed to help prepare today's students to become future scientists, economists, and green technology leaders.

The K-12th grade curriculum is comprised of 85 units teaching select Science and History-Social Science academic standards. Each EEI Curriculum unit teaches these standards to mastery using a unique set of California Environmental Principles and Concepts. The EEI curriculum was created to bring education about the environment into the primary and secondary classrooms of more than 1,000 school districts serving over 6 million students throughout California.

Classroom education plays an integral role in any storm water pollution outreach program. Providing storm water education through schools conveys the message not only to students but to their parents. Permittees should partner with educators and experts to develop storm water-related programs for the classroom. These lessons need not be elaborate or expensive to be effective.

The Permittees' role is to support a school district's storm water education efforts, not to dictate what programs and materials the school should use. Permittees should work with school officials to identify their needs. For example, if the schools request storm water outreach materials, Permittees can provide a range of educational aids, from simple photocopied handouts, overheads, posters and slide shows, to more costly and elaborate working models and displays.

The principal goal of any public education and outreach effort is to change awareness and knowledge. The advanced level public education and outreach effort goes a step further in pursuit of changing behavior. The Permittee should develop a process to assess its public education and outreach programs and to determine necessary improvements to raise public awareness and knowledge. The Permittee is encouraged to use a variety of assessment methods to evaluate the effectiveness of different public education activities. The first evaluation assessment must be conducted before the final year of the Permittee's coverage under this permit, before the next permit is issued. Permittees should coordinate their evaluation assessment with other Permittees on a regional level to determine how best to get

[20] http://americasgreatoutdoors.gov/files/2011/02/AGO-Report-With-All-Appendices-3-1-11.pdf
[21] http://www.californiaeei.org/

the regional message out and how to facilitate awareness, knowledge and ultimately, behavior changes.

**Public Involvement/Participation**

Legal Authority: Clean Water Act § 402(p)(3)(b); 40 C.F.R. § 122.34(b)(2). MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001

Storm water management programs can be greatly improved by involving the community throughout the entire process of developing and implementing the program. Involving the public benefits both the Permittee as well as the community. By listening to public concerns and coming up with solutions together, the Permittee stands to gain public support and the community should become invested in the program. The Permittees will likewise gain more insight into the most effective ways to communicate their messages.

This Order requires the development of a public involvement strategy, which may include a citizen advisory group or process to solicit feedback on the storm water program, and opportunities for citizens to participate in implementation of the storm water program. If a citizen advisory group is developed, the group should meet with the local land use planners and provide input on land use code or ordinance updates so that land use requirements incorporate provisions for better management of storm water runoff and watershed protection. Public participation in implementation of the storm water program can include many different activities such as stream clean-ups, storm drain markings, volunteer monitoring, and participation in integrated regional water management and watershed planning efforts.

Permittees are encouraged to work together with other entities that have an impact on storm water (for example, schools, homeowner associations, Department of Transportation agencies, other MS4s). Permittees are also encouraged to work through existing advisory groups, community groups or processes in order to implement these public involvement requirements.

**Illicit Discharge Detection and Elimination**

Legal Authority: Clean Water Act § 402(p)(3)(b); 40 C.F.R. § 122.34(b)(3). MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001

Studies have shown that dry weather flows from the storm drain system may contribute a larger amount of some pollutants than wet weather storm water flows.[22] Detecting and eliminating these illicit discharges involves complex detective work, which makes it hard

to establish a rigid prescription to identify and correct all illicit connections. There is no single approach to take, but rather a variety of ways to get from detection to elimination. Local knowledge and available resources can play significant roles in determining which path to take. At the very least, communities need to systematically understand and characterize their stream, conveyance, and storm sewer infrastructure systems. Illicit discharges need to be identified and eliminated. The process is ongoing and the effectiveness of a program should improve with time. A well-coordinated IDDE programs can benefit from and contribute to other

[22] Evaluation of Non-Storm water Discharges to California Storm Drains and Potential Policies for Effective Prohibition. California Regional Water Quality Control Board. Los Angeles, CA., Duke, L.R. 1997., Results of the Nationwide Urban Runoff Program. Water Planning Division, PB 84-185552, Washington, D.C. U.S. EPA. 1983.

community-wide water resources- based programs such as public education, storm water management, stream restoration, and pollution prevention.[23]

This Order requires the Permittees to address illicit discharges into the MS4. An illicit discharge is defined as any discharge to a municipal separate storm sewer system that is not composed entirely of storm water, except allowable discharges pursuant to an NPDES permit (40 C.F.R. 122.34(b)(3)).[24] This Order includes requirements that the Permittee have the legal authority to effectively prohibit non-storm water discharges from entering storm sewers as well as provisions requiring the development of a comprehensive, proactive IDDE program.

Specifically, this Order requires the development of a map that includes outfalls operated by the Permittee within the urbanized area. The map will also include identification of receiving water bodies, priority areas (i.e. areas with a history of past illicit discharges), and the permit boundary.

It is essential for Permittees to understand their stream and storm sewer systems and how illicit discharge sources are connected to outfalls that discharge to their system. To that end, this Order requires the development of an inventory that identifies potential illicit discharge sources and facilities. To proactively identify illicit discharges originating from priority inventoried sources, it is essential that an assessment is conducted at least once over the permit term. The assessment may include field observations, field screening, inspections and any other appropriate and effective survey methods that proactively identify potential illicit discharges. As an alternative, the Permittee may require a self-certification program that all appropriate BMPs are in place to prevent illicit discharges from the inventoried source or facility.

Further, a once per permit term survey of outfalls will identify outfalls needing sampling and possible follow-up actions[25]. The outfall inventory will also assist Permittees in the identification of “problem” outfalls, or those outfalls that may have a history of past illicit discharges. The inventory can be utilized to conduct source investigations and corrective actions for potential illicit discharges into their system.

Additionally, dry weather sampling must be conducted in each subsequent year of the permit term for outfalls identified as priority areas. While the Order specifies indicator parameters used to detect illicit discharges, the Permittee may select alternative parameters to sample that are based on local pollutants of concern. Similarly, the action level concentrations for the indicator parameters may also be tailored to match the parameters selected based on local knowledge. Finally, the outfall inventory will assist Permittees in clearly understanding the stream system and the storm sewer system within their jurisdiction.

The Permittee shall provide a mechanism for public reporting of illicit discharges and spills.

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[23] Illicit Discharge Detection and Elimination A Guidance Manual for Program Development and Technical Assessments, CWP and Pitt, 2006

[24] Non-point source return flows from irrigated agriculture are not considered illicit discharges.

[25] The Permittee may utilize existing forms such as the CWP Outfall Reconnaissance Inventory/Sample Collection Field Sheet (http://cfpub.epa.gov/npdes/stormwater/idde.cfm) while conducting the mapping inventory and Field Sampling as specified below, in Section E.9.c.

**Construction Site Storm Water Runoff Control**

Legal Authority: Clean Water Act § 402(p)(3)(b); 40 C.F.R. § 122.34(b)(4). MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001

Permittees must implement a construction site storm water runoff management program that includes an enforceable ordinance or other regulatory mechanism with commonly understood and legally binding definitions. These terms should be defined consistently across other related guidance and regulatory documents. The construction site storm water runoff management program is designed to prevent pollutants associated with construction activity from entering receiving water bodies (i.e. sediment, fertilizers, pesticides, paints, solvents and/or fuels).

The Permittee must ensure that construction site operators select and implement appropriate construction site storm water runoff management measures to reduce or eliminate impacts to receiving waters. The Permittee is required to utilize California Stormwater Quality Association's (CASQA) Construction BMP handbook or equivalent to help guide their Construction Program). In the case that a project proponent is not implementing appropriate measures to reduce or eliminate impacts to receiving waters (i.e. ineffective BMPs installed), the Permittee must take appropriate enforcement action to address the problem. Enforcement may include verbal warnings, written notices and escalated enforcement measures as described in the Enforcement Response Plan (Section E.6.c. of the Order).

While the construction site storm water runoff management program focuses the Permittee's detailed inspections on projects less than one acre, Permittees must use their discretion to provide oversight to projects that are subject to the CGP that pose a threat to water quality. For example, in the case that a Permittee identifies a project subject to the CGP that has BMPs that have not been maintained, the Permittee should notify the local Regional Water Board. Priority project sites include: sites with 5 acres or more of soil disturbance, sites with one acre or more soil disturbance that discharge to a tributary listed as impaired water for sediment or turbidity under the CWA Section 303(d), and other sites with one acre or more of soil disturbance determined by the Permittee or State or Regional Water Quality Control Board to be a significant threat to water quality.

**Pollution Prevention/Good Housekeeping for Permittee Operations**

Legal Authority: Clean Water Act § 402(p)(3)(b); 40 C.F.R. § 122.34(b)(6)

Permittees are required to develop a program to:

a. Prevent or reduce the amount of storm water pollution generated by permittee operations.
b. Train employees on how to incorporate pollution prevention/good housekeeping techniques into permittee operations.
c. Identify appropriate control measures and measurable goals for preventing or reducing the amount of storm water pollution generated by permittee operations.

Permittees must first assess the areas and municipal facilities that it controls, determine which activities may currently have a negative impact on water quality, and find solutions for any problems. The simplest solution is to limit the number of activities that are conducted outside and exposed to storm water.

*Storm Drain System Maintenance*

Storm drain systems need maintenance to ensure that structures within the storm drain system that are meant to reduce pollutants do not become sources of pollution. Maintenance of catch basins and storm sewers will prevent the accumulation of pollutants that are later released during rain events as well as blockages, backups, and flooding. Most Permittees have an existing program to maintain the storm sewer infrastructure. Some of these programs have tended to focus on flood control and complaint response rather than reducing water quality impacts from storm water discharges.

This Order requires that the system be maintained to prevent the discharge of pollutants into receiving waters. To achieve this, the storm sewer system must be mapped and a program of regular maintenance established. The Permittee must establish a tiered maintenance schedule for the entire storm sewer system area, with the highest priority areas being maintained at the greatest frequency. Priorities are driven by water quality concerns and can be based on the land use within the watershed, the condition of the receiving water, the amount and type of material that typically accumulates in an area, or other location-specific factors. The Permittee also must use spill and illicit discharge data to track areas that may require immediate sewer infrastructure maintenance. Any waste that is collected must be disposed of in a responsible manner.

All storm sewer system maintenance procedures should be documented in the Permittee's standard operating procedures (SOPs) or similar type of documents. All staff should be trained on these SOPs. Maintenance activities should be documented and, where possible, quantified (e.g., number and location of inspections and clean- outs, type and quantity of materials removed). Characterization of the quantity, location, and composition of pollutants removed from catch basins can be used to assess the program's overall effectiveness, identify illicit discharges, and help the Permittee better prioritize implementation activities in the future.

*Pollutant Generating Activities*

This Order contains specific requirements and recommendations related to pollutant-generating activities such as discouraging conventional landscaping practices (including the application of pesticides, herbicides, and fertilizer) and operating and maintaining public streets.

Resource-sensitive landscaping practices such as integrated pest management (IPM), climate appropriate plant selection and irrigation, and mechanical (non-chemical) removal of unwanted plants are required under this Order. The use of other landscaping practices, such as mulch and compost, minimizing chemical inputs (pesticides, herbicides, and fertilizer), emphasis on maintaining and enhancing soil quality, and erosion control is required. The Order recognizes the storm water quality benefits that will likely result from implementation of the Water Efficient Landscape Ordinance required under AB 1881.

*Flood Management Projects*

The Order requires that water quality be considered when designing new and upgraded flood management projects. The focus of storm water management in the past has been to control flooding and mitigate property damage, with less emphasis on water quality protection. These structures may handle a significant amount of storm water and therefore offer an opportunity to modify their design to include water quality features for less than the cost of building new controls. This requirement applies to new and upgraded flood control projects.

*Municipally-owned or operated facilities*

Municipally-owned or operated facilities often serve as the focal point of activity for municipal staff from different departments. Some municipalities have one facility at which all activities take place (e.g., the municipal maintenance yard), while others may have several specialized facilities. A comprehensive inventory and map of facilities will help Permittee staff build a better awareness of facility locations within the MS4 and their potential to contribute storm water pollutants. The facility inventory will also serve as a basis for scheduling periodic facility assessments and developing, where necessary, facility storm water pollution prevention plans.

The best way to avoid pollutant discharges is to keep precipitation and runoff from coming into contact with potential pollutants. For example, the Permittee should cover or build berms around stockpiles, create dedicated structures for stored materials, and maintain a minimum distance between stockpiles and storm water infrastructure and receiving waters.

*Inspections*

This Order requires comprehensive quarterly site inspections which is an appropriate frequency to ensure that material stockpiles that might be moved or utilized on a seasonal basis are protected from precipitation and runoff. Also, quarterly inspections will allow inspectors to observe different types of operations that occur at different times of the year (e.g., landscape maintenance crews are less active in the winter). Quarterly visual observations are required so that inspectors can see in real time the qualitative nature of the storm water discharge so that corrective action can be taken where necessary to improve on-site storm water controls.

This Order also specifies documentation requirements of inspection procedures and results, including inspection logs for each facility to ensure that the site inspections are consistent and that maintenance of storm water controls remains part of the municipality's standard operating procedures. The requirement for an inspection log will allow the Regional Water Boards to verify that periodic site inspections have been performed.

*Storm Sewer System Maintenance*

Fine particles and pollutants from run-off, run-on, atmospheric deposition, vehicle emissions, breakup of street surface materials, littering, and sanding (for improving traction in snow and ice) can accumulate in the gutters between rainfall events. Storm drain maintenance is often the last opportunity to remove pollutants before they enter the environment. Because storm drain systems effectively trap solids, they need to be cleaned periodically to prevent those materials from being picked up during high flow storm events.

Some catch basins will accumulate pollutants faster than others due to the nature of the drainage area and whether controls are present upstream of the catch basin. A priority ranking system is required for catch basins so that municipal resources are directed to the areas and structures that generate the most pollutants. Catch basins with the highest accumulations will need to be cleaned more frequently than those with low accumulations. The Order also includes a requirement that triggers catch basin cleaning when a catch basin is one-third full.[26]

Proper storm drain system cleanout includes vacuuming or manually removing debris from catch basins; vacuuming or flushing pipes to increase capacity and remove clogs; removing

[26] Note: This requirement was eliminated from the Final Order as adopted on February 5, 2013.

sediment, debris, and overgrown vegetation from open channels; and repairing structures to ensure the integrity of the drainage system. It is important to conduct regular inspections of all storm sewer infrastructure and perform maintenance as necessary. Though these activities are intended to ensure that the storm drain system is properly maintained and that any accumulated pollutants are removed prior to discharge, if not properly executed, cleanout activities can result in pollutant discharges. The Permittee should carefully evaluate maintenance practices to minimize unintended pollutant discharges, such as flushing storm drains without capturing the discharge.

Materials removed from catch basins must not be allowed to reenter the MS4. If necessary, the material can be dewatered in a contained area and the water treated with an appropriate and approved control measure or discharged to the sanitary sewer. The solid material must be disposed of properly to avoid discharge during a storm event. Some materials removed from storm drains and open channels may require special handling and disposal, and may not be suitable for disposal in a landfill.

*Green waste on the streets*[27]

For some Traditional MS4 Permittees, residents are allowed to deposit non- containerized green waste (lawn and garden clippings) onto the street for weekly collection by the municipal staff. Permittees instruct residents to put the green waste out right before collection and to avoid putting it in gutters or near storm drains. However, green waste on the street is a potential illicit discharge and maintenance concern.[28] This Order prohibits green waste on the streets. Permittees must find additional ways to educate residents on the potential problems this practice can cause or to find alternatives to the current practice.

*Street Sweeping and Cleaning Streets*

Street sweeping and cleaning streets and parking lots is a practice that most municipalities initially conducted for aesthetic purposes or air quality benefit. However, the water quality benefits are now widely recognized. As a result, many California MS4 permits require some sort of street sweeping provision that require the MS4 to prioritize streets as high, medium, and low pollutant-generators and base the cleaning schedule appropriately.

This Order does not include street sweeping and cleaning streets as a permit requirement because MS4s already conduct these activities for aesthetics and air quality benefit. Permittees should count street sweeping not as a storm water compliance cost, but an aesthetic and air quality cost.

*Third-party contractors*

Third-party contractors conducting municipal maintenance activities must be held to the same standards as the Permittee. These expectations are required to be defined in contracts between the Permittee and its contractors; however, the Permittee is responsible for ensuring, through contractually-required documentation or periodic site visits, that contractors are using storm water controls and following standard operating procedures.

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[27] Note: This requirement was eliminated form the Final Order as adopted on February 5, 2013.

[28] Program Evaluation Report, Sacramento Area Stormwater Program, NPDES Permit No. CA0082597, May 21, 2002, USEPA and Tetra Tech Inc.

**Post Construction Storm Water Management for New Development and Re-development**

Legal Authority: Clean Water Act § 402(p)(3)(b); 40 C.F.R. § 122.34(b)(5). MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001; U.S. EPA Incorporating Environmentally Sensitive Development into Municipal Stormwater Programs, EPA 833-F-07-011

In California, urban storm water is listed as the primary source of impairment for ten percent of all rivers, ten percent of all lakes and reservoirs, and 17 percent of all estuaries (2010 Integrated Report). Although these numbers may seem low, urban areas cover just six percent of the land mass of California[29], and so their influence is disproportionately large. Urbanization causes a number of changes in the landscape, including increased loads of chemical pollutants; increased toxicity; changes to flow magnitude, frequency, and seasonality of various discharges; physical changes to stream, lake, or wetland habitats; changes in the energy dynamics of food webs, sunlight, and temperature; and biotic interactions between native and exotic species.[30] These impacts are also referred to as “urban stream syndrome [31]. In addition to surface water impacts, urbanization can alter the amount and quality of storm water that infiltrates and recharges groundwater aquifers. In essence, once watershed processes are disturbed, receiving water conditions also become disturbed, (Figure 1)

In California and the rest of the United States, the challenge to storm water managers and regulators has been to establish goals and performance standards that account for the highly variable nature of urban flow and pollutant inputs while ensuring that the ultimate biological response is within “acceptable” limits. The Surface Water Ambient Monitoring Program (SWAMP) is attempting to define biological responses through their Biological Objectives Development Process. Although final results and policy recommendations from this effort are not yet available, linking urbanization drivers to biological response represents the next phase in storm water management and cannot be delayed.[32]

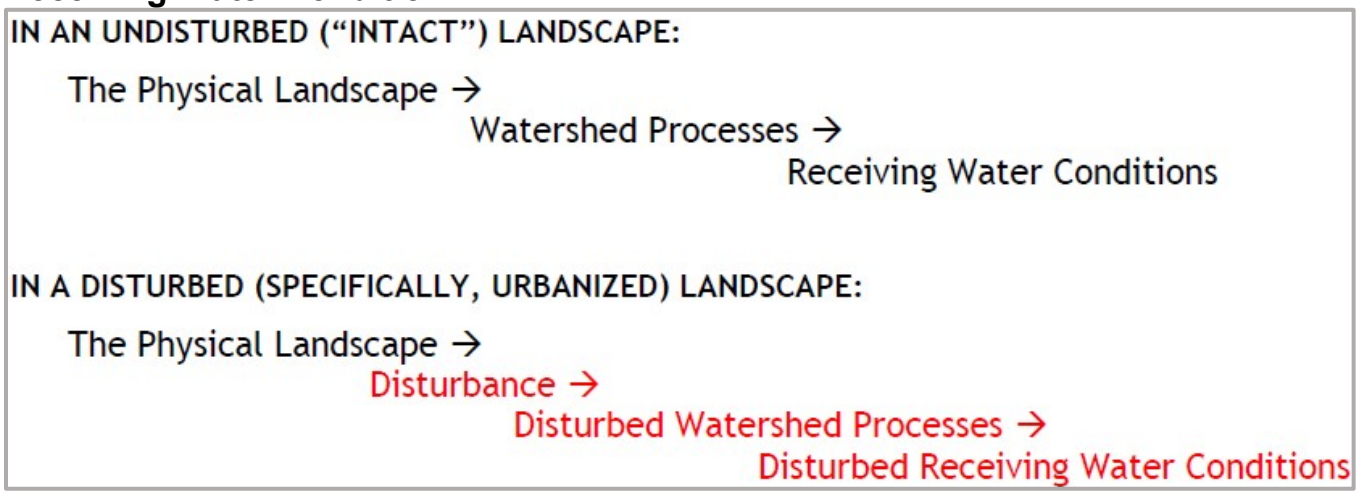
[29] U.S. Department of Agriculture, 2009

[30] Urban Storm Water Management in the United States, National Research Council, 2008.

[31] Walsh, C.J., A.H.Roy, J.W. Feminella, P.D. Cottingham, P.M. Groffman, and R.P. Morgan. 2005. The urban stream syndrome: current knowledge and the search for a cure. J. N. Am. Benthol. Soc. 24(3):706–723.

[32] Urban Storm Water Management in the United States, National Research Council, 2008.

**Figure 1 – Relationship between Physical Landscape, Watershed Processes, and Receiving Water Condition**




The Water Boards have historically derived site design, runoff reduction and hydromodification control criteria without identifying the dominant watershed processes and the sensitivity of receiving waterbodies to degradation of those processes. In most MS4 permits, projects are subject to the same set of criteria regardless of the dominant watershed processes and the sensitivity of receiving waters to degradation of those processes. In reality, every location on the landscape does not require the same set of control criteria because of intrinsic differences in the dominant watershed processes at each location and sensitivity of receiving waters to degradation of those processes. In recognizing this, the State Water Board is developing criteria that are more protective of receiving water quality.

The existing General Permit requires post-construction controls for areas of high growth or areas with a population greater than 50,000. These requirements are contained in Attachment 4 of Order 2003-0005-DWQ and include matching pre-development peak discharge rates, conserving natural areas, minimizing storm water pollutants of concern, protecting slopes and channels, and designing volumetric and flow through treatment measures to handle a specific volume or flow rate. These requirements represented an initial attempt at establishing performance standards that account for hydrological and geomorphological processes (Figure 1). Recent research has yielded new information on complex watershed process interactions. For example, storm water management techniques that are intended to mimic natural hydrologic functions (e.g., low impact development) can protect key hydrologic processes such as surface and base flow, and groundwater recharge. Additionally, there is increasing awareness that, while site- based requirements are important to reduce impacts from urbanization, a site-based approach alone is unable to achieve a broader set of watershed goals, especially given the State Water Board's interest in regional issues such as water reuse, groundwater management, and maintaining instream flows. Consequently, a better understanding of watershed conditions and processes has become increasingly important in the development of MS4 permits.

This Order has specific site design and LID requirements for all projects. The LID requirements emphasize landscape-based site design features that are already required elsewhere (e.g., the Water Efficient Landscape Ordinance required under AB 1881).

*Hydromodification Requirements*

This Order also incorporates a baseline peak flow matching requirement for hydromodification control. During this permit term, the State Board will work towards developing runoff retention and hydromodification control criteria that are keyed to watershed processes (See discussion in Section VIII.) Watershed management zones[33] will be delineated by the State Board during this permit term. The watershed management zones will be used to identify applicable areas and to determine appropriate criteria for runoff retention and hydromodification control. Watershed process based runoff retention and hydromodification criteria will be incorporated into the next permit. Through the development of hydromodification measures based on watershed management zones, key watershed processes will be protected, and where degraded, restored. As a result of restored and maintained watersheds, key relationships between hydrology, channel geomorphology and biological health will be created and maintained and water quality/beneficial uses protected.

The State Water Board's efforts in developing runoff retention and hydromodification control criteria keyed to watershed processes can be significantly informed by similar efforts carried out regionally under the Regional Water Boards. This Order provides at Provision E.12.k (also referenced in F.5.g.) that Small MS4s shall comply with any post- construction storm water management requirements based on a watershed process approach developed by Regional Water Boards in lieu of the post-construction requirements of E.12 (also referenced in F.5.g.). The regional watershed process- based approach must be approved by the Regional Water Board following a public process and must include the following:

- Completion of a comprehensive assessment of dominant watershed processes affected by urban storm water
- LID site design and runoff reduction measures, numeric runoff treatment and retention controls, and hydromodification controls that will maintain watershed processes and protect water quality and beneficial uses.
- A process by which Regional Board staff will actively engage Permittees to adaptively manage requirements as determined by the assessment of watershed processes.
- An annual reporting program that involves Regional Board staff and State Board staff to inform statewide watershed process based criteria.

A watershed process-based approach is already being used for Phase II MS4s that participated in the Central Coast Joint Effort for developing hydromodification control criteria. By Resolution No. R3-2012-0025 dated September 6, 2012, the Central Coast Water Board approved modifications to the SWMPs of MS4s participating in the Joint Effort. These modifications would incorporate the Central Coast-Specific Post- Construction Requirements into the SWMPs. Several petitions are currently pending before the State Water Board challenging the Resolution. In the November 16, 2012, draft of this Order, the requirements developed in the Joint Effort were proposed to be adopted into the Order as Attachment J. After receiving extensive public comment on Attachment J, the State Water Board determined that, while the Board continues to support a watershed process-based approach to hydromodification requirements, the Joint Effort process should be allowed to evolve and

[33] A Watershed Management Zone (WMZ) is a combination of a Physical Landscape Zone (PLZ, based on surficial geology and slope) and direct receiving water type. Key watershed processes potentially impacted by urbanization (e.g., infiltration and groundwater recharge) are derived from each PLZ-receiving water combination.

proceed, without incorporation into this Order, to address several unresolved issues acknowledged by the parties to that process, including the Regional Water Board.

Under Provisions E.12.k (also referenced in F.5.g), the Central Coast Region Small MS4s will be required to implement watershed process-based requirements developed through the Joint Effort only after those requirements have been reconsidered and approved by the Central Coast Water Board. Because the requirements cannot be imposed through existing Resolution No. R3-2012- 0025 (which operated as an update to SWMPs that are no longer required under this Order), the State Water Board expects the pending petitions on that Resolution to be moot as of adoption of this Order. As part of the petition process, the State Water Board will evaluate whether the entirety of the petitions are moot following adoption of the Order. However, any future action by a Regional Water Board, including the Central Coast Water Board, to adopt a regional watershed process-based approach would be subject to petitions for review by the State Water Board.

*Multiple-benefits Projects*

This Order encourages and allows for multiple-benefits projects at various scales. At the development site scale, multiple-benefit site design measures are required for all projects that create and/or replace more than 2,500 square feet of impervious surface. Designers are able to quantify runoff reduction using a site design runoff calculator in SMARTS for site design measures (e.g., trees, stream setbacks and buffers, and soil quality improvement). The site design measures in this Order all have multiple benefits (e.g., shading from trees, wildlife habitat from stream setbacks and buffers, less need for pesticides and irrigation from soil quality improvement) in addition to storm water runoff and pollutant load reduction. At the site and local scale, smart growth projects that utilize density, design and land use strategically to achieve multiple benefits including environmental, economic and social benefits are encouraged. For example, high density development contributes to less impervious surface than low density development, generally resulting in less vehicle-related emissions and pollutants (e.g., heavy metals, oil and grease, fine sediment), improved water and air quality results, thus, achieving environmental benefits. The clustering of populations through high density development essentially substitutes evaluation of individual site design criteria for evaluation of per capita loading (Jacob and Lopez 2009[34]). As such, Permittees may implement an alternative approach to requirements for bioretention measures if they can effectively demonstrate a reduction in runoff volume per capita. In other words, alternative compliance may be achieved through the implementation of high density development, or smart growth projects.

Section E.12.l gives “credit” and creates incentive for Permittees to identify and implement watershed scale projects that achieve multiple-benefits. When evaluating watershed-scale, multiple-benefits projects, environmental, social, technical, economic, and political considerations can become intertwined to the point of intractability. These criteria need to be systematically examined through an organizing framework for rational analysis and alternative comparison. A Multi-Criterion Decision Analysis (MCDA) approach provides a flexible, rational, and transparent means to establish decision- making criteria and prioritize alternatives, assuring that projects achieve the desired multiple-benefit outcomes. Watershed scale

[34] Jacob, John S. and Lopez, Ricardo. Is Denser Greener? An Evaluation of Higher Density Development as an Urban Stormwater-Quality Best Management Practice. Journal of the American Water Resources Association. June 2009: 45:3: 687 – 701.

multiple-benefit projects include projects that address water quality, water supply, flood control, habitat enhancement, open space preservation, recreation, and climate change.

Once these projects are identified under Watershed Improvement Plans (Water Code §16100 et seq.), through an IRWMP process, or as part of an overall green infrastructure effort, the Permittee may impose requirements and create incentives on the site, local, and watershed scale to ensure project success.

*Post-Construction BMP Condition Assessment*

Permittees must understand how their actions reduce the discharge of pollutants to receiving waters. This is accomplished through an assessment of the performance of the Permittees BMPs, especially structural practices designed for specific pollutant/flow reductions. Only Renewal Permittees were required to install structural post- construction BMPs in the existing permit term. However, during MS4 audits by State and Regional Water Board staff, many of those BMP locations were unknown and not maintained causing water quality threats. In this Order, only Renewal Permittees are asked to implement a plan that contains simple and repeatable field observation and data management tools that can assist them in determining the relative condition of BMPs. The primary purpose is to inform Permittees of: 1) where the BMPs are located, 2) the relative urgency of water quality maintenance and, 3) provide a practical, consistent and reliable tool to track the condition of BMPs relative to observed condition at time of installation or immediately following complete maintenance. Permittees may implement this plan themselves or may be determined through a Self-Certification Annual Report submitted annually by an authorized party demonstrating proper maintenance and operations. Allowing an authorized party to conduct the BMP condition assessment offsets program costs and shifts responsibility to the party that should be maintaining the BMP they initially installed.

*Applicability*

Renewal Permittees currently listed in Attachment 4 to WQO 2003-0005-DWQ (Attachment 4) must continue to implement Attachment 4 Post-Construction Requirements up until the date when Section E.12 requirements of this Order are effective (the second year of the effective date of the Permit). All Permittees that are not subject to Attachment 4 must implement the CGP Post-Construction Requirements up until the second year of the effective date of the Permit. In the second year of the effective date of the permit, all Permittees, New and Renewal, must implement Section E.12. Post-Construction Requirements contained within this Order.

Lastly, extensive monitoring studies conducted by the California Department of Public Health (CDPH) have documented that mosquitoes opportunistically breed in structural storm water Best Management Practices (BMPs), particularly those that hold standing water for over 96 hours. Certain Low Impact Development (LID) site design measures that hold standing water such as rainwater capture systems may similarly produce mosquitoes. These structures create a potential public health concern and increase the burden on local vector control agencies that are mandated to inspect for and abate mosquitoes and other vectors within their jurisdictional boundaries. These unintended consequences can be lessened when structures incorporate design, construction, and maintenance principles developed specifically to minimize standing water available to mosquitoes1 while having negligible effects on the capacity of the structures to provide water quality improvements as intended. The California Health and Safety Code prohibits landowners from knowingly providing habitat for or allowing the production of

mosquitoes and other vectors, and gives local vector control agencies broad inspection and abatement powers. This Order requires regulated MS4s to comply with applicable provisions of the Health and Safety Code and to cooperate and coordinate with CDPH and local mosquito and vector control agencies on vector-related issues.

**Water Quality Monitoring Requirements**

Legal Authority: Clean Water Act §§308(a), 402(p)(3)(b); 40 C.F.R. §§122.44(i), 122.48(b); MS4Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001; W[35]; Ecological Condition Assessments of California's Perennial Wadeable Streams: Highlights from the Surface Water Ambient Monitoring Program's Perennial Streams Assessment (PSA ) (2000-2007)[36]; National Research Council Report on Urban Storm Water in the United States, 2008[37]

The existing General Permit included requirements meant to eliminate or reduce the discharge of pollutants to receiving waters. Improved knowledge of the water quality impacts and management practices, obtained either as part of the permit requirements or from outside sources (e.g., scientific literature, studies, and expert panels), is intended to be used in an adaptive management fashion to inform requirements in subsequent permits. As such, monitoring and assessment represents a critical component in understanding the link between permit requirements, the benefits achieved due to those requirements, and the condition of receiving waters. Aside from general knowledge that storm water discharges from urbanized watersheds contribute pollutants to receiving waters, little is known about the specific conditions in such receiving waters outside of major metropolitan areas. The effectiveness of almost a decade of storm water management in Phase I MS4s has not been systematically evaluated through receiving water monitoring.

Nationwide, there are few of analyses of available data and guidance on how Permittees should be using the data to inform their storm water management decisions.

This Order prioritizes monitoring for ASBS, TMDLs, and 303d listed waterbodies. Permittees that have a population of 50,000 or greater and are part of an urbanized area are required to choose from a number of monitoring options. These larger Permittees are assumed to have the resources to undertake monitoring. For the majority of Phase II Permittees, this permit term will be the first time a monitoring program has been implemented. As such, prioritization of monitoring allows for a firm foundation from which Phase II Permittees may initiate and develop monitoring programs that will result in improvement of local knowledge of water quality impacts and implementation of storm water management practices. Any of the monitoring requirements may be conducted through participation in a regional monitoring group. Regional

[35] 2010 Integrated Report can be found at: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml

[36] Ode, P.R.1, T.M. Kincaid2, T. Fleming3 and A.C. Rehn 9. 2011. Ecological Condition Assessments of California's Perennial Wadeable Streams: Highlights from the Surface Water Ambient Monitoring Program's Perennial Streams Assessment (PSA) (2000-2007). A collaboration between the State Water Resources Control Board's Non-Point Source Pollution Control Program (NPS Program), Surface Water Ambient Monitoring Program (SWAMP), California Department of Fish and Game Aquatic Bioassessment Laboratory, and the U.S. Environmental Protection Agency.

[37] Urban Storm Water in the United States, National Research Council, 2008 can be found at: http://www.epa.gov/npdes/pubs/nrc_stormwaterreport.pdf

monitoring not only allows Permittees to share costs but also facilitates monitoring data and information sharing across local regions. In effect, regional programs provide a broad-scale picture of water quality condition within a watershed.

**Program Effectiveness Assessment**

Legal Authority: Clean Water Act § 402(p)(3)(b); 40 C.F.R.C.F.R. § 122.34(g) 40 CFR 122.34(g)(3), CASQA Effectiveness Assessment Guide[38]; Evaluating the Effectiveness of Municipal Stormwater Programs, U.S. EPA, EPA 833-F-07-010, MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001

A key requirement in the storm water Phase II rule is a report that includes "the status of compliance with permit conditions, an assessment of the appropriateness of identified [control measures] and progress towards achieving identified measurable goals for each of the minimum control measures." This assessment is critical to the storm water program framework which uses the iterative approach of implementing controls, conducting assessments, and designating refocused controls leading toward attainment of water quality standards. As a result, this Order requires a quantitative evaluation of the Permittees MS4 programs. Measurable program evaluations are critical to the development, implementation, and adaptation of effective local storm water management programs.

To date, only a small number of Phase I MS4s have provided measurable outcomes with regard to aggregate pollutant reduction achieved by their municipal storm water programs. Most Permittees, both Phase I and II, are struggling simply to organize or document their program activities and few have provided a quantitative link between program activities and water quality improvements. The few that have determined whether or not water quality is improving as a result of storm water program implementation took many years. Despite these past obstacles, the process of evaluating and understanding the relationship between the storm water program implementation and water quality needs to begin now.

Building on the monitoring and assessment program, the Permittee must conduct an annual effectiveness assessment to assess the effectiveness of prioritized BMPs, program elements and the storm water program as a whole. Prioritized BMPs include BMPs implemented based on pollutants of concern. Where pollutants of concern are unidentified, prioritized BMPs are based on common urban pollutants (i.e., sediment, bacteria, trash, nutrients). The California Stormwater Quality Association's (CASQA) Municipal Stormwater Program Effectiveness Guidance describes strategies and methods for assessing effectiveness, including examples of effectiveness assessment for each program component. The CASQA Effectiveness Guidance is available at www.casqa.org for purchase. A two-hour EPA webcast focusing on the CASQA Guide is also available (available at www.epa.gov/npdes/training under "Assessing the Effectiveness of Your Municipal Stormwater Program"). A resources document from the webcast includes a 10 page summary of the CASQA Guide and example pages from the municipal chapter:
(www.epa.gov/npdes/outreach_files/webcast/jun0408/110961/municipal_resources.pdf)

The Municipal Stormwater Program Effectiveness Assessment Guidance synthesizes information on designing and conducting program effectiveness assessments. The document also explains how to select certain methods based on programmatic outcomes and goals. The

[38] https://www.casqa.org/casqastore/products/tabid/154/p-7-effectiveness-assessment-guide.aspx

reader is led through a series of questions and case studies to demonstrate how proper assessments are selected. Techniques are related to different level of outcomes: level one – documenting activities, level two – raising awareness, level 3 – changing behavior, level 4 – reducing loads from sources, level 5 – improving runoff quality, and level 6 – protecting receiving water quality. The Guide includes fact sheets for all six NPDES program elements, outlining methods and techniques for assessing effectiveness of each program.

**Annual Reporting**

In general, an annual report must document and summarize implementation of the storm water program during the previous year, evaluate program results and describe planned changes towards continuous improvement. The annual report also can serve as a "state of the storm water program" report for the general public or other stakeholders in the community serving as an excellent summary document to provide about the status of storm water program.

However, lessons learned from Phase I MS4 annual reports demonstrate that many Permittees tend to submit too much information, and, as a result, Regional Water Boards receive large binders full of materials that do not provide useful information to assess compliance. As a result, this Order requires Permittees to annually submit a summary of the past year activities. For example, the Permittees should not only address "bean counting" of required task, but address such questions as:

- For illicit discharge data, what are the most prevalent sources and pollutants in the illicit discharge data, and where are these illicit discharges occurring?
- How many illicit discharges have been identified, and how many of those have been resolved?
- How many outfalls or screening points were visually screened, how many had dry weather discharges or flows, at how many were field analyses completed and for what parameters, and at how many were samples collected and analyzed?
- Does the MS4 need to conduct more inspections in these areas, or develop more specific outreach targeting these sources and pollutants?

In addition, Permittees use SMARTS to certify Annual Reports which verifies compliance with all requirements of this Order.

*Nexus Between Annual Reporting and Program Effectiveness Assessment*

In addition to submitting program element summaries, Permittee must analyze their yearly activities and link it to their Program Effectiveness Assessment and Improvement Plan which tracks and documents their annual and long-term effectiveness of the storm water program. For example:

- Planned Activities and Changes. The annual report should describe activities planned for the next year highlighting any changes made to improve control measures or program effectiveness.

*Detailed Annual Report*

Most major areas of this Order require Permittees to submit, via SMARTS, a summary annual report for the past year's activities. For certain program elements such as Water Quality Monitoring, Program Effectiveness Assessment, and TMDLs, more detailed annual report information is required to be tracked and submitted via SMARTS.

Additionally, at any time during the permit term, the Executive Officer of the applicable Regional Water Board can request a more detailed annual report. This information may be required to determine compliance or prior to targeted or comprehensive storm water program audit. The table below shows detailed annual reporting information an Executive Officer of the applicable Regional Water Board may require:

| Permit Provision | Detailed Annual Reporting Information |
|---|---|
| E.6.c. | By the third year Annual Report and annually thereafter, report on the Enforcement Response Plan summarizing all enforcement activities including inspections of chronic violators and the incentives, disincentives, or escalated enforcement responses at each site. Summarizations of enforcement activities shall include, at a minimum, the following information for each type of site or facility:<br>(a) Number of violations, including a listing of sites or facilities with identified violations<br>(b) Number of enforcement actions, including types<br>(c) Other follow-up actions taken<br>(d) Demonstration that compliance has been achieved for all violations, or a description of actions that are being taken to achieve compliance |
| E.7.a. | By the third year Annual Report, and annually thereafter, submit a report on the implementation and progress of the public education strategy and general program development and progress. Report on the development of education materials, methods for educational material distribution, public input, landscaping outreach, reporting of illicit discharges, proper application of pesticides, herbicides, and fertilizers, elementary school education, reduction of discharges from organized car washes, mobile cleaning and pressure washing operations, and landscape irrigation efforts. By the fifth year Annual Report, submit a report summarizing changes in public awareness and knowledge resulting from the implementation of the program and any modifications to the public outreach and education program. |
| E.7.b.1. | By the third year Annual Report, document and maintain records of the training provided and the staff trained annually. The annual report shall include the number and percentage of Permittee's applicable staff that were trained and summarize the knowledge assessment as specified in E.7.b.1.(ii)(d). |
| E.7.b.2. Permittee Staff | By the second year of the permit and annually thereafter, submit the following information:<br>a. Training topics covered<br>b. Dates of training<br>c. Number and percentage of Permittees' staff, as identified in Sections E.7.b.2. possessing the specified credentials. |
| E.7.b.2. Construction Site Operator Education | By the third year Annual Report and annually thereafter, submit a report including the following information:<br>(a) Training topics covered;<br>(b) Dates of training;<br>(c) Number and percentage of Permittee's operators and number of contractors attending each training;<br>(d) Results of any surveys conducted to demonstrate the awareness and potential behavioral changes in the attendees. |

| Permit Provision | Detailed Annual Reporting Information |
|---|---|
| E.7.b.3. | By the second year Annual Report and annually thereafter, submit a summary that includes oversight procedures and identifies and tracks all personnel requiring training and assessment and records. The annual report shall include the number and percentage of Permittee's applicable staff that were trained during the year and summarize the knowledge assessment as specified in E.7.b.3(ii)(b). |
| E.8. | By the second year Annual Report and annually thereafter, submit a description of the public involvement program and summary of the MS4s efforts related to facilitating public involvement, including efforts to engage citizen advisory groups, increase citizen participation, and involvement with the IRWMP or other watershed-level planning effort. |
| E.9.a. | Submit a map by the second year Annual Report, and annually thereafter submit either (a) a current updated outfall map, or (b) verification that no changes or additions were made to the Permittee's MS4. |
| E.9.b. | By the second year online Annual Report, submit inventory and annually thereafter an updated inventory. By the second year online Annual Report, identify the illicit discharge procedures implemented and the locations of the implementation. Also identify in each online Annual Report the remaining inventoried facilities and priority areas still requiring illicit discharge assessment over the permit term. |
| E.9.c. | By the second year Annual Report, submit a report summarizing the field investigation results and areas of follow up actions, including the following information:<br>(a) The number of outfalls found to be flowing or ponding more than 72 hours after the last rain event;<br>(b) The number of such outfalls sampled in accordance with permit conditions;<br>(c) Sampling result in tabular form; and<br>(d) The number of outfalls found to be in exceedance of action levels |
| E.9.d. | By the second year Annual Report, submit all source investigations and corrective actions. At a minimum the report shall include:<br>(a) Brief description of each non-stormwater discharge reported or observed;<br>(b) Date(s) the non-storm water discharge was reported or observed;<br>(c) Brief description of any actual or potential water quality impact resulting from the discharge;<br>(d) Description and results of steps taken to investigate the source of the discharge;<br>(e) Description and results of all follow-up or enforcement actions taken as a result of the investigation;<br>(f) Date the investigation was closed, and whether the discharge was eliminated. |

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| E.9.e. | Within the first year of the effective date of the permit, submit a spill response plan that contains the items specified in Section E.9.e. In subsequent Annual Reports summarize any spill response activities, and any follow-up actions, as specified in the spill response plan. |
| E.10.a. | Submit an up to date construction site inventory enumerating items listed in this Section with each Annual Report. |
| E.10.b. | By the first year Annual Report, submit a summary of review procedures. The summary should clearly indicate how the procedures will achieve compliance with all requirements of this Section, and clearly delineate responsibilities for implementing, and ensuring implementation of each aspect of the procedures. |
| E.10.c. | By the second year Annual Report and annually thereafter, submit the following information:<br>(a) Total number of active sites disturbing less than one acre of soil requiring inspection;<br>(b) Number and percentage of each type of enforcement action taken as listed in each Permittee's Enforcement Response Plan;<br>(c) Number of sites with discharges of sediment or other construction related materials, both actual and those inferred through evidence.;<br>(d) Number and percentage of violations fully corrected prior to the next rain event but no longer than 10 business days after the violations are discovered or otherwise considered corrected in a Permittee-defined timely period.<br>(e) Number and percentage of violations not fully corrected 30 days after the violations are discovered.<br>(f) Number of follow-up inspections that demonstrated the operator continued to implement BMPs according to plan and the number of follow-up inspections that required further enforcement. |
| E.11.a. | By the second year Annual Report submit the inventory and submit annual updates thereafter. |
| E.11.b. | By the second year Annual Report, submit the completed map and update annually thereafter if any of the information indicated on the map has changed. |
| E.11.c. | By the third year Annual Report, submit the results of the Permittee's annual assessment, including the list of identified hotspots and any identified deficiencies and corrective actions taken. The Permittee shall identify designated hotspots on the facility inventory updated and submitted in each subsequent year annual report. |
| E.11.d. | By the fourth year Annual Report, submit a summary of SWPPPs developed for pollutant hotspots. In subsequent Annual Reports, submit a summary of SWPPPs updated. |

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| E.11.e. | By the fifth year Annual Report and annually thereafter, submit the following information:<br>(a) Total number of facilities required to be inspected.<br>(b) Verification that all inspections were conducted at all facilities in accordance with the requirements of this Section<br>(c) Summary of spills and corrective actions<br>(d) Summary of the results of inspections, including a summary of deficiencies noted and corrective actions taken<br>(e) Results of the quarterly visual observations of storm water discharges<br>(f) Total number of facilities inspected (visual and comprehensive inspections) and frequency of inspections<br>(g) All inspection records, reports, and logs<br>(h) Records of corrective actions taken and the results of corrective actions |
| E.11.f. | By the second year Annual Report, submit the assessment procedures and maintenance prioritization list, including a description of the method used to identify high priority storm drain system features and catch basins and number of catch basins identified as high priority. If flood conveyance maintenance is undertaken by another entity, submit a summary report of coordination by the first year Annual Report. |
| E.11.g. | By the third year Annual Report, submit a summary of the following information:<br>(a) Storm sewer maintenance schedule<br>(b) List of storm sewer systems and the maintenance priority assigned<br>(c) Documentation of all required storm sewer systems maintenance logs<br>(d) Documentation of waste material disposal procedure<br>By the third Annual Report and annually thereafter, the Permittee shall submit verification that all storm drain facilities were maintained according to the priorities, procedures, and schedules developed according to this Section. The report shall include a summary of the results of inspections, deficiencies found, corrective actions taken, and the results of corrective actions. |
| E.11.h. | By the third year Annual Report, submit the following:<br>(a) List of BMPs and associated pollutants with each O&M activity<br>(b) BMPs applied during Permittee O&M activities<br>(c) Log of quarterly BMP evaluations.<br>By the third Annual Report and annually thereafter, the Permittee shall submit verification that identified BMPs were effectively implemented for all O&M activities. |
| E.11.i. | By the third year Annual Report, submit a summary of the development and implementation process to incorporate water quality and habitat enhancement design into new or upgraded flood management projects. By the fourth year Annual Report and annually thereafter, submit a list of new or upgraded flood management projects, including a summary of water quality and habitat enhancement features incorporated into their design. |

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| E.11.j. | By the second year Annual Report, submit an evaluation of materials used and activities performed for pollution prevention and source control opportunities and a list of practices implemented to minimize the use of herbicide, pesticide, and fertilizers. By the second year Annual Report and annually thereafter, submit verification that identified BMPs were effectively implemented for all landscaping design and maintenance activities. By the second year Annual Report, submit a summary identifying the measures that the Permittee will use to demonstrate reductions in the application of pesticides, herbicides, and fertilizers. In subsequent annual reports, verify implementation of this measure, and describe reductions in pesticide, herbicide, and fertilizer application. |
| E.12.b | By the second year Annual Report and annually thereafter, the Permittee shall submit the following information:<br>(a) A list of all project creating or replacing 2,500 square feet or more of impervious surface, as described above; and<br>(b) A brief description of site design measures applied to each project. |
| E.12.c. | For each Regulated Project approved, the following information shall be submitted by the third year Annual Report:<br>(a) Project Name, Number, Location (cross streets), and Street Address;<br>(b) Name of Developer, Phase No. (if project is being constructed in phases, each phase shall have a separate entry), Project Type (e.g., commercial, industrial, multiunit residential, mixed-use, public), and description;<br>(c) Project watershed(s);<br>(d) Total project site area and total area of land disturbed;<br>(e) Total new impervious surface area and/or total replaced impervious surface area;<br>(f) For a redevelopment or road widening project: total pre-project impervious surface area and total post-project impervious surface area;<br>(g) Status of project (e.g., application date, application deemed complete date, project approval date);<br>(h) Source control measures;<br>(i) Site design measures;<br>(j) All post-construction storm water treatment systems installed onsite, at a joint storm water treatment facility, and/or at an offsite location;<br>(k) O&M responsibility mechanism for the life of the project.<br>(l) Water quality treatment calculations used;<br>(m) Off-site compliance measures for Regulated Project (if applicable); Additional (watershed-specific) hydromodification standards used. |

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| E.12.h. | By the second year Annual Report and annually thereafter, for each Regulated Project inspected during the reporting period the following information shall be submitted in tabular form:<br>(1) Name of facility/site inspected.<br>(2) Location (street address) of facility/site inspected.<br>(3) Name of responsible operator for installed storm water treatment systems and hydromodification management controls.<br>(4) Inspection details including: date of inspection, type of inspection (e.g., initial, annual, follow-up, spot), type(s) of storm water treatment systems inspected (e.g., swale, bioretention unit, tree well, etc.) and an indication of whether the treatment system is an onsite, joint, or offsite system.<br>(5) Type of hydromodification management controls inspected.<br>(6) Inspection findings or results (e.g., proper installation, proper O&M, system not operating properly because of plugging, bypass of storm water because of improper installation, maintenance required immediately, etc.).<br>(7) Enforcement action(s) taken, if any (e.g., verbal warning, notice of violation, administrative citation, administrative order).<br>(8) A discussion of the inspection findings for the year and any common problems encountered with various types of treatment systems and/or hydromodification management controls. This discussion shall include a general comparison to the inspection findings from the previous year.<br>(9) A discussion of the effectiveness of the Permittee's O&M Program and any proposed changes to improve the O&M Program (e.g., changes in prioritization plan or frequency of O&M inspections, other changes to improve effectiveness of O & M program).<br>On an annual basis, before the wet season, provide a list of newly installed (installed within the reporting period) storm water treatment systems and hydromodification management controls to the local mosquito and vector control agency and the appropriate Regional Water Board. This list shall include the facility locations and a description of the storm water treatment measures and hydromodification management controls installed. |
| E.12.i. | By the third year Annual Report and subsequently thereafter, submit the post-construction best management practice condition assessment plan as required in E.12.i.(ii)a-d. |
| F.5.b.2. | By the third year Annual Report and annually thereafter, submit the public education strategy and general program development and progress. By the fifth year Annual Report, summarize changes in public awareness and knowledge resulting from the implementation of the program and any modifications to the public education and outreach program. If applicable, submit a report on development of education materials, methods for educational material distribution, public input, Water Efficient Landscape Ordinance, elementary school education, reduction of discharges from mobile cleaning and pressure washing operations, and landscape irrigation efforts. |

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| F.5.b.3. | By the third year Annual Report, submit records of the training provided and the staff trained annually. |
| F.5.b.4. | By the second year Annual Report and annually thereafter, submit a summary of oversight procedures and identify and track all personnel requiring training and assessment and records. |
| F.5.c. | By the third year Annual Report and annually thereafter, submit a description of the public involvement program and summary of the MS4s efforts related to facilitating public involvement. |
| F.5.d. | By second year Annual Report submit the outfall inventory map, and annually thereafter submit either (a) a current updated outfall map, or (b) verification that no changes or additions were made to the Permittee's MS4. |
| F.5.d.1. | By the second year Annual Report, submit a report summarizing the field investigation results and areas of follow up investigations. The report shall summarize all applicable observations.<br>By the second year of the permit term and annually thereafter, submit all source investigations and corrective actions. At a minimum the report shall include:<br>(a) Date(s) the non-storm water discharge was observed;<br>(b) Results of the investigation;<br>(c) Date the investigation was closed.<br>(d) A summary of all non-storm water discharges that were found. |
| F.5.e. | By the second year Annual Report, the Permittee submit an updated contract language that includes CGP compliance requirements for all projects subject to the CGP. |
| F.5.f.1. | By the second year Annual Report submit and annually thereafter an updated inventory. |
| F.5.f.2. | By the second year Annual Report and annually thereafter, submit the map. |
| F.5.f.3. | By the third year Annual Report, submit the results of the Permittee's annual assessment, any identified deficiencies and corrective actions taken, list of the pollutant hotspots. |
| F.5.f.4. | By the fourth year Annual Report and annually thereafter, submit a summary of SWPPPs developed and updated for pollutant hotspots. |
| F.5.f.5. | By the fifth year Annual Report and annually thereafter, the following information shall be submitted:<br>(a) Total number of facilities required to be inspected.<br>(b) Total number of facilities inspected (visual and comprehensive inspections) and frequency of inspections<br>(c) Summary of spills and corrective actions<br>(d) Results of the quarterly visual observations of storm water discharges |
| F.5.f.6 | By the second year Annual Report, submit the assessment procedures and maintenance prioritization list. |

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| F.5.f.7 | By the third year Annual Report, submit a summary of the following information:<br>(a) Storm sewer maintenance schedule<br>(b) List of storm sewer systems and the priority assigned<br>(c) Documentation of all required storm sewer systems maintenance logs<br>(d) Documentation of waste material disposal procedure |
| F.5.f.8. | By the third year Annual Report, submit the following:<br>(a) List of BMPs and associated pollutants with each O&M activity<br>(b) BMPs applied during Permittee O&M activities<br>(c) Log of annual BMP evaluations. |
| F.5.f.9 | By the second year Annual Report, submit an evaluation of materials used and activities performed for pollution prevention and source control opportunities and a list of practices implemented to minimize the use of herbicide, pesticide, and fertilizers. By the second year Annual Report, submit a document identifying the measures that the Permittee will use to demonstrate reductions in the application of pesticides, herbicides, and fertilizers. In subsequent annual reports, use this measure to demonstrate reductions in pesticide, herbicide, and fertilizer application. |

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| F.5.g. | By the second year Annual Report and annually thereafter, the Permittee shall submit the following information:<br>(a) A list of all project creating or replacing 2,500 square feet or more of impervious surface, as described above; and<br>A brief description of site design measures applied to each project.<br>For each project approved, the following information shall be submitted by the second year Annual Report:<br>(a) Project Name, Number, Location (cross streets), and Street Address;<br>(b) Name of Developer, Phase No. (if project is being constructed in phases, each phase shall have a separate entry), Project Type (e.g., commercial, industrial, multiunit residential, mixed-use, public), and description;<br>(c) Project watershed(s);<br>(d) Total project site area and total area of land disturbed;<br>(e) Total new impervious surface area and/or total replaced impervious surface area;<br>(f) If a redevelopment or road widening project, total pre-project impervious surface area and total post-project impervious surface area;<br>(g) Status of project (e.g., application date, application deemed complete date, project approval date);<br>(h) Source control measures;<br>(i) Site design measures;<br>(j) All post-construction storm water treatment systems installed onsite, at a joint storm water treatment facility, and/or at an offsite location;<br>(k) O&M responsibility mechanism for the life of the project.<br>(l) Water quality treatment calculations used;<br>(m) Off-site compliance measures (if applicable)<br>(n) Additional (watershed-specific) hydromodification standards used<br>(a) For each project inspected during the reporting period the following information shall be submitted in tabular form as part of each year's Annual Report:<br>(1) Name of facility/site inspected.<br>(2) Location (street address) of facility/site inspected.<br>(3) Name of responsible operator for installed storm water treatment systems and hydromodification management controls.<br>(4) Inspection details including: Date of inspection, type of inspection (e.g., initial, annual, follow-up, spot), type(s) of storm water treatment systems inspected (e.g., swale, bioretention unit, tree well, etc.) and an indication of whether the treatment system is an onsite, joint, or offsite system.<br>(5) Type of hydromodification management controls inspected.<br>(6) Inspection findings or results (e.g., proper installation, proper O&M, system not operating properly because of plugging, bypass of storm water because of improper installation, maintenance required immediately, etc.).<br>(7) Enforcement action(s) taken, if any (e.g., verbal warning, notice of violation, administrative citation, administrative order).<br>(8) A discussion of the inspection findings for the year and any common problems encountered with various types of treatment |

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| | systems and/or hydromodification management controls. This discussion shall include a general comparison to the inspection findings from the previous year.<br>(9) A discussion of the effectiveness of the Permittee's O&M Program and any proposed changes to improve the O&M Program (e.g., changes in prioritization plan or frequency of O&M inspections, other changes to improve effectiveness of program).<br>(b) On an annual basis, before the wet season, provide a list of newly installed (installed within the reporting period) storm water treatment systems and hydromodification management controls to the local mosquito and vector control agency and the appropriate Regional Water Board. This list shall include the facility locations and a description of the storm water treatment measures and hydromodification management controls installed. |

Program Management
Without the requirement of a SWMP, this section serves as the framework/backbone for the storm water program. This section is a consolidation of all of the Permittee's relevant ordinances or other regulatory requirements, the description of all programs and procedures (including standard forms to be used for reports and inspections) that will be implemented and enforced to comply with the permit and to document the selection, design, and installation of all storm water control measures.

Legal Authority
Without adequate legal authority the MS4 would be unable to perform many vital program functions such as performing inspections and requiring installation of control measures. In addition, the Permittee would not be able to penalize and/or attain remediation costs from violators.

Certification
Submittal and signature certifies Permittee will comply with this Order.

Enforcement Response Plan (ERP)
This Order requires Permittees to have an established, escalating enforcement policy identified in the ERP that clearly describes the action to be taken for common violations. The plan must describe the procedures to ensure compliance with local ordinances and standards, including the sanctions and enforcement mechanisms that will be used to ensure compliance. (See 40 CFR 122.26(d)(2)(i)). It is critical that the Permittee have the authority to initiate a range of enforcement actions to address the variability and severity of noncompliance.

IDDE and Good Housekeeping
Both these programs pose potential immediate threat to water quality without quick access to information submitted in SMARTS. For example, in order to respond to discharges, an effective IDDE program responds to complaints about illicit discharges or spills such as illegal connections to the storm sewer system, improper disposal of wastes, or dumping of used motor oil or other chemicals. In order to trace the origin of a suspected illicit discharge or connection, the Permittee must have an updated map of the storm drain system and a formal plan of how to locate illicit discharges and how to respond to them once they are located or reported.

Construction Inventory
To effectively conduct inspections, the Permittee must know where construction activity is occurring. A construction site inventory tracks information such as project size, disturbed area, distance to any waterbody or flow channel, when the erosion and sediment control/stormwater plan was approved by the Permittee, and whether the project is covered by the CGP. This inventory will allow the Permittee to track and target its inspections.

Effectiveness Assessment
Without assessing the effectiveness of the stormwater management program the Permittee will not know which parts of the program need to be modified to protect and/or improve water quality and instead will essentially be operating blindly.

## XIII. TOTAL MAXIMUM DAILY LOAD (TMDL)

Section 303(d) of the Clean Water Act requires States to identify waters that do not meet water quality standards after applying certain required technology-based effluent limitations ("impaired" waterbodies). States are required to compile this information in a list and submit the list to the U.S. EPA for review and approval. This list is known as the Section 303(d) list of impaired waters, which is incorporated into the Integrated Report.

This listing process requires States to prioritize waters/watersheds for future development of TMDLs. A TMDL is defined as the sum of the individual waste load allocations for point sources of pollution, plus the load allocations for nonpoint sources of pollution, plus the contribution from background sources of pollution. The Water Boards have ongoing efforts to monitor and assess water quality, to prepare the Section 303(d) list, and to subsequently develop TMDLs. The 2010 California 303(d) List identifies impaired receiving water bodies and their watersheds within the state.

TMDLs are developed by either the Regional Water Boards or U.S. EPA in response to Section 303(d) listings. Regional Water Board-developed TMDLs are subject to approval by the State Water Board, approval by the Office of Administrative Law, and ultimately approval by U.S. EPA. TMDLs developed by Regional Water Boards are incorporated as Basin Plan amendments and include implementation provisions.

TMDLs developed by U.S. EPA typically contain the total load and waste load allocations required by Section 303(d), but do not contain comprehensive implementation provisions.

TMDLs are not self-implementing but rely on other regulatory mechanisms for implementation and enforcement. Urbanized areas typically utilize municipal storm water permits as the implementation tool. Incorporation of TMDL implementation requirements into general permits (as opposed to individual MS4 permits) is difficult. First, there are numerous Traditional MS4s (municipalities) and Non-traditional MS4s such as military bases, public campuses, prison and hospital complexes covered under this Order. Second, the waste load allocations for many TMDLs are shared among several dischargers; that is, a single waste load allocation may be assigned to multiple dischargers, making it difficult to assign responsibility. Further, individual dischargers may not be explicitly identified. For example, "urban runoff" may be listed as a source of impairment, but the individual MS4s responsible for the impairment may not be identified. Third, the implementation plans adopted by the Regional Water Boards often provide for phased compliance with multiple milestones and deliverables, with optional and alternative means of compliance depending on the results of monitoring and special studies.

Section C.1 of this Order requires that permittees "shall . . . reduce the discharge of pollutants . . .to achieve TMDL wasteload allocations established for discharges by the MS4s." The variance in the level of detail of TMDLs necessitates the development of TMDL-specific permit requirements to provide clarity on the Permittees' compliance responsibilities.

The Regional Water Boards submitted proposed TMDL-specific permit requirements to the State Water Board for applicable TMDLs, with statements explaining how these requirements are designed to implement the TMDLs and the corresponding wasteload allocations. (40 C.F.R. §122.44(d)(1)(vii)(B)) Sections E.15 and F.5 of this Order require permittees to comply with all applicable TMDL-based requirements listed in Attachment G; the requirements are directly enforceable through this Order. Attachment G does not restate the final applicable wasteload allocations for each TMDL; however, those wasteload allocations are specified in the Fact Sheet and this Order incorporates them by reference as appropriate.

In a few cases, the TMDL-specific requirements of Attachment G are based on a load allocation, rather than a wasteload allocation. Several TMDLs incorporated into this Order assign load allocations to storm water that may not have been regulated as NPDES discharges at the time of the TMDL adoption, but have now been determined to be subject to this Order. USEPA has issued guidance providing that in such circumstances, the "NPDES permit authority could identify an appropriate allocation share and include a corresponding limitation specific to the newly permitted stormwater source."[39]

Some TMDLs do not name specific Permittees but name a category of discharges such as "urban runoff." This Order identifies the Permittees subject to the TMDL. In most cases, the permittees subject to the TMDLs are Traditional MS4s. For some TMDLs the State Water Board has determined that the TMDL requirements are also applicable to specific Non-traditional MS4s. Attachment G specifically names such permittees and sets out how the permittees will implement the TMDL. The State Water Board or the applicable Regional Water Board may, in the future, designate additional Traditional or Non-traditional MS4s based on further determination of TMDL applicability.

Attachment G assigns monitoring requirements to certain Permittees and section E.13.b. of this Order states that "Permittees shall implement any monitoring requirements assigned in Attachment G." Section E.13. also states, in part, "Traditional Small MS4 Permittees that are required to conduct monitoring of discharges to … TMDL… waterbodies… are not required to perform additional monitoring as specified in Sections E.13.d.1 and E.13.d.2." Therefore, a Permittee that is assigned TMDL-related monitoring in Attachment G is not required to implement monitoring in accordance with Sections E.13.d.1. or E.13.d.2.

Permittees will report compliance with TMDL permit requirements in the Annual Report required to be submitted electronically via SMARTS.

The previous General Permit, Water Quality Order 2003-0005-DWQ, relied in part on the preparation, approval, and implementation of a Storm Water Management Program to incorporate TMDL-specific requirements for Permittees. This Order does not rely on preparation of a Storm Water Management Program, but rather incorporates programmatic requirements, including the TMDL-specific requirements in Attachment G, in the Order itself. In some cases, as noted in the discussion below, this Order directs the Permittee to continue implementing requirements specified in the Storm Water Management Plan required by the previous 2003 Permit. In those cases, Attachment G incorporates those specific requirements by reference.

In sum, Attachment G contains specific management practice-based planning and implementation requirements that act as BMP-based WQBELs. Attachment G also contains monitoring and other requirements. These requirements are referred to in the Order as "BMP-based WQBELs and other permit requirements," and are expected to achieve the water quality results specified by the wasteload allocations. Because the ultimate purpose of TMDL implementation is to reach the water quality results specified in the TMDL wasteload allocations in order to attain water quality standards in receiving waters that are currently impaired, Attachment G requires a demonstration of attainment of the waste load allocation at the final compliance deadline. This demonstration ensures that Attachment G incorporates

[39] Revisions to the November 22, 2002 Memorandum 'Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs,'" issued by USEPA, November 26, 2014.

BMP-based WQBELs and other permit requirements that are consistent with the assumptions and requirements of the applicable waste load allocations (40 C.F.R. § 122.44(d)(1)(vii)(B)) and implements the basin plans into which the TMDL implementation plans are incorporated (Wat. Code, §§13263, subd. (a), 13377.) Permittees are to make this demonstration consistent with criteria articulated in sections E.15.b. and F.5.i.2 of the Order.

This Order implements TMDLs with either past deadlines or soon approaching deadlines. In precedential Order WQ 2015-0075, the State Water Board found that final TMDL attainment deadlines should not be extended through permitting actions. The State Water Board stated as follows:

> *Final TMDL deadlines are established and incorporated into the Basin Plans during the TMDL development process. That process invites stakeholder participation and the proposed schedule is subject to public review and comment and approval by the relevant regional water board, the State Water Board, and USEPA. The deadlines are established with consideration of the time needed for compliance for all dischargers contributing to an impairment, including industrial and construction storm water dischargers and traditional NPDES dischargers. Although we recognize that it may not always be feasible for municipal storm water dischargers to meet final TMDL deadlines, short of amending the Basin Plan to modify the deadlines (see California Association of Sanitation Agencies v. State Water Resources Control Board (2012) 208 Cal.App.4th 1438), we find it appropriate for the dischargers to request time schedule orders rather than be granted an extension within the provisions of the [regional water board permits].*
> (State Water Board Order WQ 2015-0075, p. 37, fn. 110.)

Attachment G incorporates the final attainment deadlines for each TMDL; some TMDL attainment deadlines are now past. In these instances, the associated wasteload allocations are effective on the effective date of the Order, i.e. January 1, 2019. Where appropriate, the State Water Board will work with the Regional Water Boards to determine if there is any regulatory flexibility for extension of final attainment dates consistent with any particular TMDL. The State Water Board and the Regional Water Boards additionally have discretion with regard to enforcement actions and will exercise that discretion on a case-by-case basis based on all the facts underlying a violation, including how recently the Permittee was assigned TMDL-specific requirements in the permit and the Permittee's efforts, to date, to meet the TMDL-specific requirements. A permittee with a past or imminent TMDL attainment deadline may request a Time Schedule Order (TSO) from the applicable Regional Water Board in accordance with criteria established in the Order. A Regional Water Board's issuance of a TSO will establish an implementation schedule for the Permittee to comply with the TMDL requirements.

The State Water Board delayed the effective date of the Order to January 1, 2019, one year following adoption, to allow permittees additional time to demonstrate attainment of the wasteload allocations, request time schedule orders incorporating compliance schedules for the attainment of the wasteload allocations, or request consideration by the Regional Water Board Executive Officer of whether the particular regulatory language of a given TMDL allows for an extension of a deadline for attainment of the wasteload allocation.

Attachment G specifies BMP-based WQBELs and other permit requirements for attainment of the wasteload allocations even in cases where the final wasteload allocation deadline is past. These requirements are included because the Order states that it is not the intention of the State Water Board or the Regional Water Boards to take enforcement action against a

permittee where (1) a permittee has applied in good faith for a time schedule order and is implementing the requirements in Attachment G pending approval of the time schedule order or (2) the Regional Board has initiated proceedings to revise the implementation schedule or other requirements of a TMDL and the permittee is implementing the requirements in Attachment G pending the outcome of the proceedings.

**Unfunded Mandates Considerations Specific to TMDL Requirements in the Order**
The TMDL requirements of this Order do not constitute unfunded state mandates requiring reimbursement.

*The TMDL-specific requirements do not constitute a new program or higher level of service:*

When a state agency requires a local government to provide "a new program or higher level of service," the state must "reimburse that local government for the costs of the program or increased level of service." (Cal. Const., art. XIII B, §6, subd. (a).) The TMDL-specific requirements of this Order, as amended on December 19, 2017, do not constitute a new program or higher level of service for two reasons.

First, the Order, as adopted on February 5, 2013 (effective July 1, 2013), requires permittees to "reduce the discharge of pollutants . . . to achieve TMDL wasteload allocations . . . established for discharges by the MS4s." (Section C.1.) Attachment G listed the applicable TMDLs and specified requirements for implementation of the wasteload allocations. The 2017 amendments to the Order revise or clarify TMDL implementation requirements where requirements in the 2013 Order were unclear or too general. The amendments do not change the baseline requirement in Section C.1 that permittees reduce discharges of pollutants to achieve the wasteload allocations, but simply provide more clarity to the permittees in how to implement that ongoing requirement. Thus, the amendments do not constitute a new program, and do not constitute an increased level of service as permittees were already required to meet TMDL wasteload allocations by implementation of appropriate actions. Refinements of existing requirements do not constitute a higher level of service, even where there may be an increase in costs. (See *County of Los Angeles v. Comm'n on State Mandates*, 110 Cal.App.4th 1176, 1189-1195 [discussing case law on "new program" and "higher level of service"].)

Second, even where the 2013 Order has been amended to include requirements for TMDLs adopted since 2013, the TMDL-specific requirements are not a new program or higher level of service because the TMDLs are simply the mechanism to achieve compliance with water quality standards. The Order, as adopted in 2013, included receiving water limitations stating that "discharges shall not cause or contribute to an exceedance of water quality standards contained in a Statewide Water Quality Control Plan, the California Toxics Rule (CTR), or in the applicable Regional Water Board Basin Plan." (Section D.) TMDLs are the means to implement water quality standards in impaired water bodies. Incorporation of TMDL-based requirements into the MS4 permit, consistent with applicable basin plans, allows the permittee greater flexibility in achieving the water quality standards in the receiving water by allowing additional time to meet the receiving water limitations or, in some cases, permitting interim compliance through management practice implementation rather than immediate compliance with numeric limitations. The TMDL-specific requirements accordingly do not constitute a new program or higher level of service as compared with the baseline requirement of the receiving water limitations.

*The TMDL-specific requirements impose requirements that are mandated by federal law:*

The TMDL-specific requirements of this Order also fit under exceptions to the requirement to reimburse local government for a new program or higher level of service. Most significantly, one exception exists if "[t]he statute or executive order imposes a requirement that is mandated by a federal law or regulation and results in costs mandated by the federal government, unless the statute or executive order mandates costs that exceed the mandate in that federal law or regulation." (Gov. Code, §17556, subd.(c).)

The TMDL-specific requirements of Attachment G are mandated by federal law and federal regulations. Clean Water Act Section 303(d) states that each state "shall" identify impaired waterbodies, "shall" prioritize such waters/watersheds for future development of TMDLs, and "shall" develop TMDLs for the appropriate pollutants in accordance with the prioritization. (33 U.S.C. § 1313(d).) The TMDLs must be approved by U.S. EPA. (Id.) The Code of Federal Regulations provides that once U.S. EPA approves a TMDL for a waterbody, the effluent limitations in any NPDES permit "shall" be "consistent with the assumptions and requirements of any available wasteload allocations." (40 C.F.R. § 122.44(d)(1)(vii)(B).) Specific to Phase II MS4 permits, the Code of Federal Regulations states that "the permit will include… [m]ore stringent terms and conditions… based on an approved total maximum daily load…" (40 C.F.R. § 122.34(c)(1).)

Federal law thus compels the State Water Board to include the TMDL-specific provisions of Attachment G in the Phase II MS4 Permit.[40]

The California Supreme Court's 2016 decision in *Department of Finance v. Comm'n on State Mandates* (2016) 1 Cal.5th 749, *as modified on denial of rehearing* (Nov. 16, 2016) (*Department of Finance*) established a new framework for analyzing the federal mandates exception to article XIII B, section 6 of the Constitution. An agency order is not a federal mandate if (1) federal law gives the State discretion to impose the particular implementing requirement, and (2) the State exercises that discretion in imposing the requirement by virtue of a "true choice." (*Department of Finance*, *supra*, 1 Cal.5th at 765.) That case concerned the discretion of the Los Angeles Water Board under the MEP standard and the court held that the Board had exercised a true choice in imposing certain requirements on the permittees. Here, the discretion exercised by the State Water Board in complying with section 122.44, subdivision (d)(1)(vii)(B) of Title 40 of the federal regulations is different and more limited than under the MEP standard. Title 40, Section 122.44, subdivision (d)(1)(vii)(B) specifically directs the Board to include effluent limitations which are consistent with the assumptions of any applicable wasteload allocations. The State Water Board had no choice but to include the TMDL-specific provisions in this Order that would result in attainment of the wasteload allocation within the timeframe established in the TMDL. The only discretion the Board employed when complying with section 122.44, subdivision (d)(1)(vii)(B) was crafting

[40] USEPA has similarly required attainment of applicable wasteload allocations in MS4 permits. (See, e.g., sections 1.4.2 and 4.10 of Modified NPDES Permit No. DC0000022 for the MS4 for the District of Columbia, issued October 7, 2011, modified November 9, 2012, available at https://www3.epa.gov/reg3wapd/pdf/pdf_npdes/stormwater/DCMS4/MS4FinalLimitedModDocument/FinalModifiedPermit_10-25-12.pdf and section 2.1.1 and Appendix F of the General Permit for Small MS4s in Massachusetts, issued April 4, 2016, available at https://www3.epa.gov/region1/npdes/stormwater/ma/2016fpd/final-2016-ma-sms4-gp.pdf)

provisions which were consistent with the assumptions and requirements of the applicable wasteload allocations. In exercising this limited discretion, the Board simply translated the wasteload allocations directly into effluent limitations in the form of required control actions. This involved significantly less discretion than did the provisions at issue in *Department of Finance*. Further, in instances where the State Water Board and the appropriate regional water board determined that a choice of actions is available to the permittee to achieve the wasteload allocations in the required timeframe, Attachment G provides that the permittee may propose a set of actions for approval by the relevant regional water board.

Additional federal laws and regulations mandate inclusion of portions of the TMDL-specific requirements of this Order. Under Clean Water Act section 402, subdivision (p)(3)(B)(ii), MS4 permits must effectively prohibit non-storm water discharges into MS4s. (33 U.S.C. §1342(p)(3)(B)(ii); see also 40 C.F.R. § 122.34(b)(3).) Several TMDLs implemented through this Order apply to dry weather discharges, i.e. non-storm water discharges, and require illicit discharge detection and elimination efforts to address non-storm water discharges. The federal regulations also require Phase II permits to incorporate an evaluation of "compliance with the terms and conditions of the permit, including the effectiveness of the components of [ ] storm water management program[s] and the status of achieving the measurable requirements in the permit" (40 C.F.R. §122.34(d)(1).) The TMDL requirements include monitoring and reporting to determine that the TMDL-specific requirements are leading to appropriate progress toward achievement of the wasteload allocations.

*The MS4s have authority to levy service charges, fees, and assessments:*

Another exception applies where "the local agency . . . has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service." (Gov't Code, § 17556, subd. (d).) The MS4 permittees have the ability to charge fees, such as inspection fees or storm water fees, to cover the cost of the TMDL-specific requirements.

*The TMDL-specific requirements are requirements of general applicability:*

Finally, reimbursement to local agencies is required only for the costs involved in carrying out functions peculiar to government, not for expenses incurred by local agencies as an incidental impact of laws that apply generally to all state residents and entities. (*City of Richmond v. Comm'n on State Mandates* (1998) 64 Cal.App.4th 1190, 1199.) The Clean Water Act and the federal regulations' TMDL requirements are laws of general applicability, uniformly imposed on all NPDES permittees, including not just MS4s, but also industrial and construction storm water dischargers, as well as traditional NPDES permittees such as wastewater treatment plants.

For the foregoing reasons, the TMDL requirements of this Order do not constitute unfunded mandates requiring reimbursement.

**Basis of TMDL-Related Permit Requirements**

The following discussion provides the basis for the TMDL-related requirements in Attachment G of this Order.

## NORTH COAST REGIONAL WATER BOARD TMDLs

***Laguna de Santa Rosa Ammonia & Dissolved Oxygen TMDL***

The Laguna de Santa Rosa Ammonia and Dissolved Oxygen TMDL was approved by U.S. EPA as the Waste Reduction Strategy for the Laguna de Santa Rosa, dated March 1, 1995. The Waste Reduction Strategy provided the assumptions and goals used to determine the best option to reduce impacts to the Laguna de Santa Rosa, and attain water quality goals and objectives. The Regional Water Board, however, found the Waste Reduction Strategy to be unenforceable and inadequate to address the declining dissolved oxygen issues in Laguna de Santa Rosa. In 2002, the Regional Water Board determined that dissolved oxygen objectives were being violated and that nutrient loads were on the rise. The Regional Water Board is in the process of developing a TMDL for the Laguna de Santa Rosa for nitrogen, phosphorus, dissolved oxygen, temperature and sediment. Due to the above findings and TMDL development efforts, the State Water Board has removed the Waste Reduction Strategy requirements in this Order.

***Shasta River Watershed Temperature & Dissolved Oxygen TMDL***

The Shasta River watershed includes all tributaries and Lake Shastina in Siskiyou County. The Shasta River Watershed Temperature and Dissolved Oxygen TMDL and Action Plan was adopted by the North Coast Regional Water Board on June 28, 2006. The Shasta River Watershed Temperature and Dissolved Oxygen TMDL was approved by U.S. EPA and became effective on January 26, 2007. The Shasta River TMDL Action Plan contains the goals and assumptions used to develop the wasteload allocations and conditions to be considered in conducting actions (in this case, storm water management) in the Shasta River watershed.

The North Coast Regional Water Board has determined that the City of Yreka, a Traditional Small MS4 permittee, is a source of “human activity” subject to this TMDL and must comply with the TMDL-requirements of this Order. The TMDL does not specify wasteload allocations for the City of Yreka, but does require the City of Yreka to develop and implement a plan to minimize and control pollutants of concern in urban storm water runoff. That plan was developed and submitted on June 24, 2013, as part of the City’s Notice of Intent for this Order. Attachment G of this Order requires the City to implement this plan no later than January 1, 2019. Therefore, the City will be required to implement the plan immediately. There are no current monitoring requirements for the City related to TMDL implementation.

## SAN FRANCISCO BAY REGIONAL WATER BOARD TMDLs

***Napa River Sediment TMDL***

The Napa River and its tributaries are listed as impaired due to excessive sediment. The river was listed on the Clean Water Act section 303(d) in response to concerns regarding adverse impacts to habitat for steelhead trout, chinook salmon, and other threatened species whose populations have declined substantially in recent decades. The Napa River Sediment TMDL and Habitat Enhancement Plan identify pollutant sources of concern, and specify actions to restore a healthy fishery in the watershed.

The Napa River Sediment TMDL identifies urban storm water runoff, specifically storm water runoff from State highways, and industrial and construction sites as a source of impairment. The Napa River Sediment TMDL names parties that should implement measures to control and/or prevent sediment discharges associated with urban storm water runoff (hereinafter

referred to as Implementing Parties). Attachment G of this Order assigns requirements to the Traditional Small MS4 designees identified as Implementing Parties within the Napa River Sediment TMDL.

*Wasteload Allocations (WLA):* The Napa River Sediment TMDL includes a WLA of 800 metric tons/year for storm water runoff discharges from stream crossings and storm water runoff discharges associated with operation of public and private roads, paved and unpaved within the watershed not otherwise covered by NPDES permits issued to Napa County and municipalities including the City of Napa, Town of Yountville, City of St. Helena, City of Calistoga, and City of American Canyon.

*Load Allocations (LA):* The Napa River Sediment TMDL also includes an LA of 27,000 metric tons/year that applies to a roads and streams crossings source category that Napa County and the City of Napa, Town of Yountville, City of St. Helena, City of Calistoga, and City of American Canyon share with Caltrans. Caltrans is responsible for runoff from State highways and associated construction activities. Discharges from State highways are regulated by the State Water Board's statewide municipal storm water permit issued to Caltrans; discharges of storm water from construction activities are regulated by the State Water Board's Statewide Storm Water Permit for Discharges Associated with Construction and Land Disturbance Activity.

Deliverables/Actions Required:

The TMDL-related requirements in this Order are based on the TMDL Implementation Plan. To implement the roads and stream crossings allocation, the TMDL Implementation Plan establishes a performance standard for roads as follows: road-related sediment delivery to channels should be ≤ 500 cubic yards per mile per 20 year period. The TMDL Implementation Plan also calls on entities responsible for paved roads to conduct a survey of stream-crossings associated with paved public roadways and develop a prioritized implementation plan for repair and/or replacement of high priority crossings/culverts to reduce road related erosion and protect stream-riparian habitat conditions. Napa County was timely in submitting an implementation plan by October 2014.

Attainment of water quality objectives will be evaluated at the confluence of Napa River with Soda Creek, which includes the downstream boundary of freshwater habitat for salmon and steelhead. Attainment of the water quality objectives will be evaluated over a 5-to-10-year averaging period.

***Sonoma Creek Sediment TMDL***

The Sonoma Creek Sediment TMDL includes a wasteload allocation that applies to storm water runoff discharges from stream crossings and public and private roads (paved and unpaved) within the watershed that are not otherwise covered by a Phase 1 NPDES MS4 permit issued to the County and/or City of Sonoma.

The Sonoma County Water Agency has been a voluntary participant with proactive storm water control efforts, including enrollment under the previous 2003 Small MS4 permit (Order 2003-0005-DWQ). The Sonoma County Water Agency owns and operates approximately 2,000 linear feet of stream channel within the Sonoma Creek watershed. Therefore, the Agency is subject to the TMDL, as expressed by the requirements in Attachment G.

Phase II Entities:

The Sonoma Creek Sediment TMDL identifies urban storm water runoff from Phase II entities, State highways, and industrial and construction storm water discharges, as a source of

impairment. The TMDL names parties that should implement measures to control and/or prevent sediment discharges associated with urban storm water runoff (hereinafter referred to as Implementing Parties). Attachment G of this Order assigns requirements to the designees identified as Implementing Parties within the TMDL.

Wasteload and Load Allocations:

The Sonoma Creek sediment TMDL assigns a wasteload allocation to municipal storm water and a load allocation for the roads source category. The sediment wasteload allocation is 600 tons/year and applies to storm water runoff discharges from Phase II permittees. The load allocation of 2,100 tons/year of sediment is for the road and stream crossings category and applies to stream crossings and storm water runoff discharges associated with operation of public and private roads (paved and unpaved) within the watershed not otherwise covered by an NPDES storm water permit.

Municipalities share the wasteload allocation with another entity (i.e., Caltrans). Caltrans is responsible for runoff from State highways and associated construction activities. Discharges from State highways are regulated by the State Water Board statewide municipal storm water permit issued to Caltrans; discharges of storm water from construction activities are regulated by the State Water Board Statewide Storm Water Permit for Discharges Associated with Construction and Land Disturbance Activity.

Deliverables/Actions Required:

The TMDL-related requirements in this Order are based on the TMDL Implementation Plan. To implement the roads and stream crossings allocation, the TMDL Implementation Plan establishes a performance standard for the design, construction, and maintenance of rural roads to minimize road-related sediment delivery to streams. The Implementation Plan also requires entities responsible for paved roads, such as the City and County of Sonoma, to: (1) adopt and implement best management practices for maintenance of unimproved (dirt/gravel) roads, (2) conduct a survey of stream-crossings associated with paved public roadways, (3) develop a prioritized implementation plan for repair and/or replacement of high priority crossings/culverts to reduce road related erosion, and (4) protect stream-riparian habitat conditions.

TMDL compliance, and water body attainment with the sediment water quality objectives, will be evaluated at the limit of tidal influence in the Sonoma Creek watershed, which approximates the downstream boundary of freshwater habitat for steelhead. Sonoma Creek has several tributaries that join the main stem below the tidal limit; therefore, several locations will be used to evaluate water body attainment. These locations are: (1) the main stem Sonoma Creek immediately downstream of the Fowler/Carriger Creek confluence, and (2) the freshwater portions (above tidal influence) of Schell, Ramos, Carneros, and Merazo Creeks. Attainment of the sediment water quality objectives will be evaluated over a 5-to-10-year averaging period.

This Order does not directly require the preparation and implementation of Storm Water Management Plans as required in the previous 2003 Storm Water Permit (Order 2003-0005-DWQ). However, the specific implementation actions for attenuation of peak flows and durations from new and redevelopment projects that were proposed by Permittees in the Storm Water Management Plans approved under the previous 2003 Storm Water Permit are incorporated herein by reference. The municipalities identified in this TMDL section shall continue to implement those specific actions to attenuate peak flows and durations from new

and redevelopment projects as stated in Attachment G. Municipalities may propose amendments to those actions by submitting an updated proposal for attenuation of peak flows and durations to the San Francisco Bay Regional Water Board.

***Napa River Pathogens TMDL***

The Napa River Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The San Francisco Water Board has determined that the Cities of American Canyon, Calistoga, St. Helena and Napa, the Town of Yountville and the County of Napa, Traditional Small MS4s, are sources of "municipal runoff" subject to this Order and are responsible for implementing the requirements of this TMDL.

Load Allocations:

The Napa River pathogens TMDL assigns a load allocation to municipal storm water as follows:

[All are in units of CFU per 100 milliliters]

| *E.coli* Geometric Mean | *E.coli* 90th percentile | Fecal coliform Geometric Mean | Fecal coliform 90th percentile | Total coliform Median | Total coliform Single Sample Max |
|---|---|---|---|---|---|
| <113 | <368 | <180 | <360 | <216 | 9,000 |

These allocations are applicable year-round and apply to any sources (existing or future) subject to regulation by NPDES permit.

Deliverables/Actions Required:

The TMDL-related requirements in this Order are derived from the TMDL Implementation Plan that was adopted with the TMDL. The Implementation Plan for the pathogen TMDL requires parties responsible for municipal runoff (i.e., Napa County and municipalities including the City of Napa, Town of Yountville, City of St. Helena, City of Calistoga, and City of American Canyon) to comply with storm water management plans previously developed. The municipalities' management plans must be updated and/or amended as necessary to include actions that will lead to compliance with the requirements of this Order. The management plans must address:(1) public participation and outreach, (2) pet waste management, (3) illicit sewage discharge detection and elimination to reduce and eliminate fecal coliform discharges to Sonoma Creek, and (4) pollution prevention strategies. The Implementation Plan also requires these municipalities to participate in evaluation of E. coli concentration trends in the Napa River and its tributaries and to report annually on water quality monitoring results and progress made on implementation of human and animal runoff reduction measures. The implementation actions are expected to build on existing programs. The Permittee must report on its implementation actions in the Annual Report.

***Sonoma Creek Pathogens TMDL***

The Sonoma Creek Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

The Sonoma County Water Agency has been a voluntary participant with early storm water control efforts, including enrollment under the previous Small MS4 permit (Order 2003-0005-DWQ). The Sonoma County Water Agency owns and operates approximately 2,000 linear feet of stream channel within its service area. The Agency is also enrolled under this Order and, as such, is subject to the TMDL, expressed as requirements in Attachment G.

Phase II Entities:
The San Francisco Water Board has determined that the City of Sonoma, the County of Sonoma, and the Sonoma County Water Agency, Traditional Small MS4 permittees, are sources of "municipal runoff" subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations:
The Sonoma Creek pathogens TMDL assigns a wasteload allocation to municipal storm water as follows:

[Units: CFU/100 milliliters]

| *E.coli* Geometric Mean | *E.coli* 90th percentile | Fecal coliform Geometric Mean | Fecal coliform 90th percentile | Total coliform Median | Total coliform Single Sample Max |
|---|---|---|---|---|---|
| <113 | <368 | <180 | <360 | <216 | 9,000 |

These allocations are applicable year-round and apply to any sources (existing or future) subject to regulation by NPDES permit.

Deliverables/Actions Required:
The TMDL-related requirements in this Order are derived from the TMDL Implementation Plan that was adopted with the TMDL. The Implementation Plan for the pathogen TMDL requires parties responsible for municipal runoff (i.e., City and County of Sonoma) to comply with storm water management plans previously developed. The municipalities' management plans must be updated and/or amended as necessary to include actions that will lead to compliance with the requirements of this Order. The management plans must address: (1) public participation and outreach, (2) pet waste management, (3) illicit sewage discharge detection and elimination to reduce and eliminate fecal coliform discharges to Sonoma Creek, and (4) pollution prevention strategies. The Implementation Plan also requires the City and County of Sonoma to participate in evaluation of E. coli concentration trends in Sonoma Creek and its tributaries and to report annually on water quality monitoring results and progress made on implementation of human and animal runoff reduction measures. The implementation actions are expected to build on existing programs. The Permittee must report on its implementation actions in the Annual Report.

For the Sonoma County Water Agency, the TMDL implementation requirements of this Order are incorporated by reference to the Storm Water Management Plan approved under the previous 2003 Storm Water Permit (Order 2003-0005-DWQ). The Sonoma County Water Agency must comply with the compliance dates established in its previously approved Storm Water Management Plans.

***Tomales Bay Pathogens TMDL***

The Tomales Bay Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The San Francisco Water Board has determined that the County of Marin is a source of municipal runoff subject to this Order and that the County is responsible for implementing the requirements of this TMDL.

Wasteload Allocations:

The Tomales Bay Pathogens TMDL assigns a wasteload allocation to municipal storm water as follows:

Note a: These allocations are applicable year-round and apply to any sources (existing or future) subject to regulation by NPDES permit.

Note b: Based on a minimum of five consecutive samples equally spaced over a 30-day period.

Note c: No more than 10% of total samples during any 30-day period may exceed this number.

**Fecal Coliform [Note a] (Most Probable Number per 100 milliliters)**

*For Direct Discharges to Tomales Bay*

Median [Note b]: <14

90th percentile [Note c]: <43

*For Discharges to Major Tomales Bay Tributaries*

Log Mean [Note b]: <200

Deliverables/Actions Required:

The TMDL-related requirements in this Order are derived from the TMDL Implementation Plan that was adopted with the TMDL. The Implementation Plan for the Pathogen TMDL requires parties responsible for municipal runoff (i.e., Marin County) to comply with storm water management plans previously developed. The municipalities' management plans must be updated and/or amended as necessary to include actions that will lead to compliance with the requirements of this Order. The management plans must address:(1) public participation and outreach, (2) pet waste management, (3) illicit sewage discharge detection and elimination to reduce and eliminate fecal coliform discharges to Tomales Bay and its tributaries including Olema, Lagunitas, and Walker Creeks, and (4) pollution prevention strategies. The Implementation Plan also requires these municipalities to participate in evaluation of E. coli concentration trends in Tomales Bay and its tributaries and to report annually on water quality monitoring results and progress made on implementation of human and animal runoff reduction measures. The Implementation Plan anticipates that dischargers (including Marin County) and stakeholders, in collaboration with the Water Board will conduct water quality monitoring to evaluate fecal coliform concentration trends in Tomales Bay and its tributaries.

The implementation actions are expected to build on existing local storm water management programs and ongoing efforts to reduce pathogen loads to Tomales Bay and its tributaries. The Permittee must report on its implementation actions in the Annual Report.

***Richardson Bay Pathogens TMDL***

The Richardson Bay Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The San Francisco Water Board has determined that the Cities of Belvedere, Mill Valley, Sausalito, Tiburon and the County of Marin, Traditional Small MS4s, are a source of "municipal runoff" subject to this TMDL and must comply with the requirements of the Richardson Bay Pathogens TMDL in this Order.

Wasteload Allocations:

The Richardson Bay Pathogens TMDL assigns a wasteload allocation to municipal storm water as follows:

Note a: These allocations are applicable year-round.
Note b: Based on a minimum of five consecutive samples equally spaced over a 30-day period.
Note c: No more than 10% of total samples during any 30-day period may exceed this number.

**Fecal Coliform note a, (Most Probable Number per 100 milliliters)**

Median note b: <14

90th percentile note c: <43

Deliverables/Actions Required:

The requirements in this Order are derived from the TMDL Implementation Plan that was adopted with the TMDL. The Implementation Plan for the pathogen TMDL requires parties responsible for municipal runoff (i.e., Marin County, City of Mill Valley, City of Tiburon, City of Belvedere, and City of Sausalito) to comply with storm water management plans previously developed. The municipalities' management plans must be updated and/or amended as necessary, to include actions that will lead to compliance with the requirements of this Order. The management plans must address: (1) public participation and outreach, (2) pet waste management, (3) illicit sewage discharge detection and elimination to reduce and eliminate fecal coliform discharges to Sonoma Creek, and (4) pollution prevention strategies. The Implementation Plan also requires these parties responsible for municipal runoff to report annually on progress made on implementation of human and animal runoff reduction measures.

The implementation actions are expected to build on existing local storm water management programs. The Permittee must report on its implementation actions in the Annual Report.

***Urban Creeks Diazinon and Pesticide Toxicity TMDL***

The Urban Creeks Diazinon and Pesticide TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below. This provision implements requirements of the TMDL for Diazinon and pesticide-related toxicity for Urban Creeks in the San Francisco Bay Region. Pesticides of concern include: organophosphorus pesticides (chlorpyrifos, diazinon, and malathion); pyrethroids (bifenthrin, cyfluthrin, beta-cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin, and tralomethrin); carbamates (e.g., carbaryl); and fipronil.

Phase II Entities:
The San Francisco Water Board has determined that the following municipalities are a source of "urban runoff" subject to this TMDL and must comply with the TMDL-related requirements of this Order: (1) the Cities of Belvedere, Larkspur, Mill Valley, Novato, Petaluma, San Rafael, Sausalito, and Sonoma, (2) the Towns of Corte Madera, Fairfax, Ross, San Anselmo, and Tiburon, and (3) the Counties of Marin and Sonoma, Traditional Small MS4 permittees.

Wasteload Allocations:

Diazinon: 100 nanograms/liter (ng/l) (one-hour average)
Toxicity: 1.0 Acute Toxicity Unit (TUa) and 1.0 Chronic Toxicity Unit (TUc)

Deliverables/Actions Required:
The requirements in this Order are derived from the TMDL Implementation Plan that was adopted with the TMDL. The Implementation Plan for the Urban Creeks and Diazinon and Pesticide Toxicity TMDL requires parties responsible for municipal runoff (i.e., Marin County, City of Belvedere, Town of Corte Madera, Town of Fairfax, City of Larkspur, City of Mill Valley, City of Novato, Town of Ross, Town of San Anselmo, City of San Rafael, City of Sausalito, Town of Tiburon, County of Sonoma, City of Sonoma, and City of Petaluma) to adopt an Integrated Pest Management Policy (IPM) or ordinance, as the basis of a Pesticide-Related Toxicity Program. Implementation actions of the Pesticide-Related Toxicity Program must include: a) training of all municipal employees who use or apply pesticides in the IPM practices and policy/ordinance, b) requiring contractors to implement IPM, c) keeping County Agricultural Commissioners informed of water quality issues related to pesticides, d) conducting outreach to residents and pest control applicators on less toxic methods for pest control, e) keeping records on pesticide use, and f) monitoring water and sediment for pesticides and associated toxicity in urban creeks via an individual or regional monitoring program.

The term "integrated pest management," as used for the purpose of this Order, refers to a process that includes setting action thresholds, monitoring and identifying pests, preventing pests, and controlling pests when necessary. Integrated pest management meets the following conditions:

- Pest control practices that focus on long-term pest prevention through a combination of techniques, such as biological control, habitat manipulation, and modification of cultural practices;
- Pesticides are used in response to monitoring indicating that pesticides are needed; Pesticide applications with the goal of removing only the target pest; and
- Pesticides are selected to minimize risks to human health, beneficial and non-target organisms, and the environment, including risks to aquatic habitats.

The term "less toxic pest control," as used for the purpose of this Order, refers to the use of pest control strategies selected to minimize the potential for pesticide-related toxicity in water and sediment.

Permittees are required to reduce discharges of pollutants, including pesticides, to the maximum extent practicable as required by this Order.

For All TMDLs Requiring Wasteload Allocation Attainment Programs

For TMDLs that identify municipal storm water as a contributor to water body impairment, MS4s must reduce their wasteload discharges in accordance with TMDLs. The Central Coast Regional Water Board requires MS4s to develop Wasteload Allocation Attainment Programs to achieve compliance with the TMDL. The TMDLs set forth the expectation that the MS4s achieve their wasteload allocations within specified timeframes. The Wasteload Allocation Attainment Program approach differs from the typical regulatory requirements applied to municipal storm water (BMP implementation per an iterative process of continual improvement for achieving water quality standards). The MS4s' contribution to the impairment of water bodies, combined with the TMDL expectation that municipalities achieve their wasteload allocations within specified timeframes, necessitates a systematic approach to program implementation as it relates to the discharge of pollutants associated with impairments.

Federal regulations indicate that such an approach is appropriate. The Preamble to the Phase II federal storm water regulations states: "Small MS4 permittees should modify their programs if and when available information indicates that water quality considerations warrant greater attention or prescriptiveness in specific components of the municipal program."[41]

The Central Coast Water Board developed the Wasteload Allocation Attainment Program approach as a means to systematically guide municipalities towards attainment of their wasteload allocations. Without a systematic approach of this type, attainment of wasteload allocations within an identified time period is unlikely. Local municipal storm water management programs typically include basic or minimum BMPs to be implemented to attain water quality objectives. While some BMPs provide effective treatment and management of urban runoff, the connection between BMP effectiveness and attainment of wasteload reductions is unclear. Municipalities have implemented BMPs, yet water body impairment continue due to the inability for BMPs implemented by MS4s to address all the water quality issues identified in TMDLs. The demonstration of BMP implementation in a non-systematic approach failing to address impairments indicates that a systematic approach, as represented by the Wasteload Allocation Attainment Programs, is warranted.

On a broader scale, existing storm water programs often do not provide and/or exhibit the rationale used for BMP selection, or draw connections between those BMPs selected and attainment of wasteload allocations. Without a programmatic level of planning and design, attainment of wasteload allocations within specified timeframes may not take place. The Wasteload Allocation Attainment Program requirements are expressly designed to ensure adequate planning is conducted so that MS4s' TMDL implementation efforts are effective to achieve regulatory compliance. Wasteload Allocation Attainment Program development and implementation include the following items on a TMDL-specific basis: (1) An implementation and assessment strategy; (2) source identification and prioritization; (3) BMP identification, prioritization, implementation (including schedule), analysis[42], and assessment; (4) monitoring

[41] 64 FR 68753

[42] This analysis must be a quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation achieved the MS4's wasteload allocation. This analysis will most likely incorporate modeling efforts.

program development and implementation (including schedule); (5) reporting and evaluation of progress towards complying with wasteload allocations; and (6) coordination with stakeholders. The United States Environmental Protection Agency (U.S. EPA) forwards similar approaches for TMDL implementation in its Draft TMDLs to Storm Water Permits Handbook, which discusses BMP review and selection, establishing linkages between BMP implementation and load reductions, effectiveness assessment, and BMP/outfall/receiving water monitoring.[43]

Ultimately, the Wasteload Allocation Attainment Programs place the responsibility for program development, assessment, improvement, and success on the municipalities since municipal storm water has been identified as contributing to the water quality impairment. The Regional Water Board will collectively assess the progress of the various pollutant sources towards achieving receiving water quality standards as part of its triennial Basin Planning review, but each source must be responsible for assessing its own progress towards achieving its wasteload allocation. The process of planning, assessment, and refinement outlined by the Wasteload Allocation Attainment Programs helps ensure continual improvement and ultimate attainment of water quality standards at impaired receiving waters.

This Order implements TMDLs that have either a past-due or upcoming attainment date. In such instances, the Regional Water Board may determine, based upon past and proposed future actions, that the method for a permittee to attain the wasteload allocations will include further assessment and improvement upon implementation of the Wasteload Allocation Attainment Plans. The Permittee may request a Time Schedule Order from its Regional Water Board to allow additional time for compliance with the TMDL requirements.

View Central Coast TMDLs online at:
http://www.waterboards.ca.gov/centralcoast/water_issues/programs/tmdl/303d_and_tmdl_projects.shtml

***Morro Bay and Chorro and Los Osos Creeks Pathogens TMDL***

The Morro Bay and Chorro and Los Osos Creeks Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below. Pennington Creek and Warden Creek are tributaries of Los Osos Creek, and are therefore included in the TMDL.

Although several waterbodies were named in the Attachment G of this Order, as adopted by the State Water Board on February 5, 2013, three waterbodies (San Bernardo, San Luisito, and Walters Creeks) have been removed (by this amendment) due to these waterbodies (and their watersheds) being outside the permitting boundary areas of the Phase II entities below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the City of Morro Bay and the County of San Luis Obispo, Traditional Small MS4 permittees, are a source of “urban runoff” subject to this TMDL, and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:

The City of Morro Bay and County of San Luis Obispo are assigned the following wasteload allocations:

[43] U.S. EPA. 2008. Draft TMDLs to Stormwater Permits Handbook. Chapters 5 and 6.

For discharges to Los Osos Creek, Chorro Creek, and their tributaries:

1) The fecal coliform geometric mean concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed 200 Most Probable Number/100 milliliters, and

2) The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number/100 milliliters.

For discharges to Morro Bay:

1) The fecal coliform geometric mean concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed 14 Most Probable Number/100 milliliters, and

2) The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 43 Most Probable Number/100 milliliters.[44]

Deliverables/Actions Required:

The numeric targets approved in the TMDL are expressed in terms of receiving water indicators, e.g. fecal coliform density measurements. Compliance with this TMDL is achieved through development and implementation of a Wasteload Allocation Attainment Program, per the requirements in Attachment G of this Order. By February 5, 2014 the City of Morro Bay and County of San Luis Obispo were required to develop, submit, and begin implementation of a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. Therefore, effective immediately, the MS4 shall implement the Wasteload Allocation Attainment Program.

The TMDL specifies that all wasteload allocations must be achieved by November 19, 2013. Since the deadline is past, the wasteload allocations are effective immediately. The Permittee may request a Time Schedule Order from its Regional Water Board to allow additional time for compliance with the TMDL requirements.

***Watsonville Slough Pathogens TMDL***

The Watsonville Slough Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the City of Watsonville and the County of Santa Cruz, Traditional Small MS4 permittees, are a source of “urban storm water” subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:

The City of Watsonville and the County of Santa Cruz are assigned the following concentration-based wasteload allocations:

[44] For all Central Coast Water Board fecal indicator bacteria and pathogens TMDLs, E. coli concentrations may be used as a surrogate for fecal coliform concentrations.

1) The fecal coliform log mean concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed 200 Most Probable Number/100 milliliters, and

2) The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number/100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The City of Watsonville is assigned the above wasteload allocations in the following water bodies: Watsonville, Struve, Harkins, Gallighan and Hanson Sloughs.

The County of Santa Cruz is assigned the above wasteload allocation in the following water bodies: Watsonville, Struve and Harkins Sloughs.

Deliverables/Actions Required:
Compliance with this TMDL is achieved through development and implementation of a Wasteload Allocation Attainment Program, as required in Attachment G of this Order.

The TMDL specifies that all allocation must be achieved by November 20, 2016. The Permittee may request a Time Schedule Order from its Regional Water Board to allow additional time for compliance with the TMDL requirements.

***Pajaro River, San Benito River, Llagas Creek, Tequesquita Slough, San Juan Creek, Carnadero/Uvas Creek, Bird Creek, Pescadero Creek, Tres Pinos Creek, Furlong (Jones) Creek, Santa Ana Creek, and Pachecho Creek Fecal Coliform TMDL***

The above-named Fecal Coliform TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the Cities of Gilroy, Hollister, Morgan Hill, Watsonville, and the Counties of Monterey, Santa Clara, and Santa Cruz, Traditional MS4 permittees, are a source of “MS4 discharges” subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:
The Cities of Hollister, Morgan Hill, Gilroy and Watsonville and the Counties of Monterey, Santa Clara and Santa Cruz are assigned the following concentration based wasteload allocations:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharges shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The Cities of Hollister, Morgan Hill, Gilroy and Watsonville and the Counties of Santa Cruz, Santa Clara and Monterey are assigned the above wasteload allocations in the following water bodies: Pajaro River, San Benito River, Llagas Creek and Tequesquita Slough.

Deliverables/Actions Required:
Compliance with this TMDL is achieved through development and implementation of a Wasteload Allocation Attainment Program, as required in Attachment G of this Order. The TMDL specifies that all allocations must be achieved by July 12, 2023.

***Morro Bay Sediment TMDL***
The Morro Bay Sediment TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Although San Bernardo and San Luisito Creeks were named in Attachment G of this Order as adopted by the State Water Board on February 5, 2013, the requirements of this Order are not applicable to these water bodies because the water bodies (and their watersheds) are outside the permit boundary areas of the Phase II entities, below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the County of San Luis Obispo, a Traditional MS4 permittee, is a source of “urban land use” subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:
The numeric targets approved in the TMDL are expressed in terms of receiving water indicators, e.g. pool residual volume, median diameter of spawning gravel, etc. The TMDL also expressed the sediment assimilative capacity and allocations required to achieve the numeric targets. The allocations require a 50% reduction of current loading (estimated in 2003) to achieve the numeric targets. The wasteload allocations assigned to the responsible parties in this permit represent a 50% reduction from 2003 loading estimates.

The County of San Luis Obispo is assigned a wasteload allocation of 5,137 tons/year of sediment. The aggregated sediment discharge from all storm water outfalls into Morro Bay, or any tributary that has the potential to discharge sediment to Morro Bay, shall not exceed the allocation.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The County of San Luis Obispo is assigned allocations in the following water bodies: Morro Bay, Los Osos Creek, Chorro Creek, Dairy Creek, Pennington Creek, and Warden Creek.

Deliverables/Actions Required:
Compliance with this TMDL is achieved through development and implementation of a Wasteload Allocation Attainment Program, laid out in detail in Attachment G of this Order.

The allocations shall be achieved by December 3, 2053.

***San Lorenzo River Sediment TMDL***
The San Lorenzo River Sediment TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the Cities of Santa Cruz, Scotts Valley and the County of Santa Cruz, Traditional MS4 permittees, are a source of "Other Urban and Rural Land" and "Public and Private Roads" subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:
The numeric targets approved in the TMDL are expressed in terms of receiving water indicators, e.g. pool residual volume, median diameter of spawning gravel, etc. The TMDL also expressed the sediment assimilative capacity and allocations required to achieve the numeric targets. The allocations require reductions of 24-27 percent of current sediment loading (estimated in 2002) to achieve the numeric targets. The wasteload allocations assigned to the responsible parties in this permit represent a 24-27 percent reduction from the 2003 loading estimates.

The County of Santa Cruz, City of Santa Cruz, and City of Scotts Valley are assigned the following wasteload allocations:

- The sediment discharge loading from public roads to the San Lorenzo River shall be reduced by 27%,
- The sediment discharge loading from public roads to Lompico Creek shall be reduced by 24%,
- The sediment discharge loading from public roads to Carbonera Creek shall be reduced by 27%,
- The sediment discharge loading from public roads to Shingle Mill Creek shall be reduced by 27%.

Deliverables/Actions Required:
Compliance with this TMDL is achieved through development and implementation of a Wasteload Allocation Attainment Program as required in Attachment G of this Order. The allocations shall be achieved by December 18, 2028.

***Pajaro River (including Llagas Creek, Rider Creek and San Benito River) Sediment TMDL***

The Pajaro River (including Llagas Creek, Rider Creek and San Benito River) Sediment TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below. The TMDL names "urban lands within NPDES Phase II urban boundaries" as a Land Use Source Category of sediment loading to the Corralitos Creek subbasin and assigns a wasteload allocation to this category.

Phase II Entities:
The Central Coast Water Board has determined that the Cities of Gilroy, Hollister, Morgan Hill and Watsonville, Traditional MS4 permittees, are sources of "municipal runoff" and must comply with the TMDL-related requirements of this Order.

The Santa Cruz County Fairgrounds is located within the Corralitos Creek subbasin (subbasin number 4) and constitutes "urban lands within NPDES Phase II urban boundaries." The Central Coast Water Board has additionally determined that the Santa Cruz County

Fairgrounds, a Non-Traditional MS4 permittee, must incorporate provisions for complying with the wasteload allocations described in the TMDL as part of its compliance with this Order.

Wasteload Allocations:
The numeric targets approved in the TMDL are expressed in terms of receiving water indicators, e.g. pool residual volume, median diameter of spawning gravel, etc. The TMDL also provides the sediment assimilative capacity and allocations required to achieve the numeric targets. The allocations require reductions of 90 percent from current sediment loading (estimated in 2005) to achieve the numeric targets. The wasteload allocations assigned to the responsible parties in this permit represent a 90 percent reduction of the 2005 loading estimate.

The City of Morgan Hill, City of Gilroy, City of Hollister, Santa Cruz County Fairgrounds, and the City of Watsonville shall not discharge sediment to the following water bodies in excess of the values shown:

| Major Subwatershed | Metric tons per year |
|---|---|
| Tres Pinos | 1 |
| San Benito River | 100 |
| Llagas Creek | 787 |
| Uvas Creek | 139 |
| Upper Pajaro River | 161 |
| Corralitos (including Rider Creek) | 284 |
| Mouth of Pajaro River | 191 |

Deliverables/Actions Required:
The Central Coast Water Board has determined that compliance with Phase II MS4 permit requirements tailored to focus on reduction of sediment discharges to the affected waterbodies is sufficient to achieve the wasteload allocations. The allocations shall be achieved by November 27, 2051.

***San Luis Obispo Creek Pathogens TMDL***
The San Luis Obispo Creek Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the City of San Luis Obispo and the County of San Luis Obispo, Traditional MS4 permittees, and the California Polytechnic (Cal Poly) State University, a Non-Traditional MS4 permittee, are a source of “Urban” and “Human” sources subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:
The City of San Luis Obispo, the County of San Luis Obispo, and the Cal Poly State University-San Luis Obispo, are assigned the following concentration-based wasteload allocation for fecal coliform:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The City of San Luis Obispo is assigned these allocations in San Luis Obispo Creek and Stenner Creek.

The County of San Luis Obispo is assigned these allocations in the San Luis Obispo Creek.

Cal Poly State University-San Luis Obispo is assigned these allocations in Stenner Creek and Brizziola Creek.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

Deliverables/Actions Required:
Compliance with this TMDL is achieved through development and implementation of a Wasteload Allocation Attainment Program per requirements in Attachment G of this Order. The TMDL specifies that all allocations must be achieved no later than July 25, 2015. The allocations are therefore effective immediately. A permittee with a past deadline may request a Time Schedule Order from the applicable Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the permittee to comply with the TMDL requirements that will supersede the deadlines referenced in this Order.

***San Luis Obispo Creek Nitrate-Nitrogen TMDL***
The San Luis Obispo Creek Nitrate-Nitrogen TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the City of San Luis Obispo and the County of San Luis Obispo, Traditional MS4 permittees, and Cal Poly State University, a Non-Traditional MS4 permittee, are a source of "Residential areas" subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:
Urban storm water from the City of San Luis Obispo, County of San Luis Obispo, and Cal Poly State University shall not cause an increase in the receiving water nitrate concentration greater than the increase in nitrate concentration resulting from their discharge in 2006 (when the TMDL became effective). In 2006, the nitrate concentration of storm water discharge was 0.3 mg/L-N.

The City of San Luis Obispo, County of San Luis Obispo, and Cal Poly State University were achieving their allocations at the time the TMDL became effective; these municipalities shall implement measures to assure continued attainment of their allocations.

Deliverables/Actions Required:
The Central Coast Water Board has determined that compliance with the requirements of this Phase II MS4 permit, tailored to focus on reduction of nutrient discharges to the affected water bodies, is sufficient to achieve the wasteload allocations.

The TMDL specifies that the target date to achieve the TMDL is during or before year 2012. The allocations are therefore effective immediately. A permittee is not in need of a Time Schedule Order from the applicable Regional Water Board since these permittees were achieving their allocations at the time the TMDL became effective, and are expected to continue implementing measures to assure continued attainment of their allocations.

***Corralitos and Salsipuedes Creeks Fecal Coliform TMDL***
The Corralitos and Salsipuedes Creeks Fecal Coliform TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below. The TMDL also names "Owners of private sewer laterals (Private sewer laterals connected to municipal sanitary sewer collection system)" as a responsible party and assigns a wasteload allocation.

Phase II Entities:
The Central Coast Regional Water Board has determined that the City of Watsonville and the County of Santa Cruz, Traditional MS4 permittees, and the Santa Cruz County Fairgrounds, a Non-Traditional MS4 permittee, are a source of "Storm drain discharges" subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:
The County of Santa Cruz and the City of Watsonville, and the Santa Cruz County Fairgrounds are assigned the following concentration-based wasteload allocation:

> The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and
>
> The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The County of Santa Cruz and the City of Watsonville and the Santa Cruz County Fairgrounds, are assigned the above allocations in the following water bodies: Corralitos Creek and Salsipuedes Creek.

Deliverables/Actions Required:
Compliance with this TMDL is dependent on developing and implementing a Wasteload Allocation Attainment Program, discussed in detail in Attachment G of this Order. All allocations shall be achieved no later than September 8, 2024.

***Lower Salinas River Watershed Fecal Coliform TMDL***
The Lower Salinas River Watershed Fecal Coliform TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the County of Monterey, a Traditional MS4 permittee, is a source of "Discharges from MS4s" subject to this TMDL and must comply with the TMDL-related requirements of this Order.

The County of Monterey is assigned allocations in the following water bodies:

The Lower Salinas River, the Old Salinas River Estuary, the Tembladero Slough, the Salinas Reclamation Canal, the Alisal Creek, the Gabilan Creek, the Salinas River Lagoon (North), and the Santa Rita Creek.

Wasteload Allocations:
The County of Monterey is assigned the following concentration based wasteload allocation for fecal coliform:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

Deliverables/Actions Required:
Compliance with this TMDL is dependent on developing and implementing a Wasteload Allocation Attainment Program per the requirements in Attachment G of this Order. All allocations shall be achieved no later than December 20, 2024.

***San Lorenzo River Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek and Lompico Creek Pathogens TMDL***

The San Lorenzo River Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek and Lompico Creek Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the Cities of Santa Cruz and Scotts Valley and the County of Santa Cruz, Traditional MS4 permittees, are a source of "Discharges from MS4s" subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations:
The City of Santa Cruz, County of Santa Cruz and the City of Scotts Valley are assigned the following concentration based wasteload allocation for fecal coliform:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The City of Santa Cruz is assigned the above allocations in the San Lorenzo River Estuary, the San Lorenzo River, the Branciforte Creek, and the Carbonera Creek.

The County of Santa Cruz is assigned the above allocations in the San Lorenzo River, the Branciforte Creek, the Lompico Creek, and the Carbonera Creek,

The City of Scotts Valley is assigned above allocations in the Camp Evers Creek and the Carbonera Creek.

Deliverables/Actions Required:
Compliance with this TMDL is dependent on developing and implementing a Wasteload Allocation Attainment Program as required in detail in Attachment G of this Order. All allocations shall be achieved no later than June 8, 2024.

***Soquel Lagoon, Soquel Creek and Noble Gulch Pathogens TMDL***
The Soquel Lagoon, Soquel Creek and Noble Gulch Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the City of Capitola and the County of Santa Cruz, Traditional MS4 permittees, are a source of “Discharges from MS4s” subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations:
The City of Capitola and the County of Santa Cruz are assigned the following concentration-based wasteload allocation for fecal coliform:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The City of Capitola is assigned the above allocations in Soquel Lagoon.

The County of Santa Cruz is assigned the above allocations in Soquel Creek and Noble Gulch.

Deliverables/Actions Required:
Compliance with this TMDL is dependent on developing and implementing a Wasteload Allocation Attainment Program per the requirements in Attachment G of this Order. All allocations shall be achieved by September 15, 2023.

***Aptos Creek, Valencia Creek and Trout Gulch Pathogens TMDL***

The Aptos Creek, Valencia Creek and Trout Gulch Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the County of Santa Cruz, a Traditional MS4 permittee, is a source of "Discharges from MS4s" subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:

The County of Santa Cruz is assigned the following concentration based wasteload allocation for fecal coliform:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The County of Santa Cruz is assigned the above allocations in Aptos Creek, Valencia Creek, and Trout Gulch.

Deliverables/Actions Required:

Compliance with this TMDL is dependent on developing and implementing a Wasteload Allocation Attainment Program per the requirements in Attachment G of this Order. All allocations shall be achieved October 29, 2023.

***Santa Maria River Watershed Fecal Indicator Bacteria TMDL***

The Santa Maria River Watershed Fecal Indicator Bacteria TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Cities of Guadalupe and Santa Maria and the Counties of Santa Barbara and San Luis Obispo, Traditional MS4 permittees, and the Santa Maria Fairpark, a Non-Traditional MS4 permittee, are sources of "Discharges from MS4s" subject to this TMDL and must comply with the TMDL-related requirements in this Order. The Santa Maria Fairpark is assigned wasteload allocation in the Main Street Canal; however the Central Coast Water Board has determined that the Santa Maria Fairpark's BMPs and monitoring effectively implement a Wasteload Allocation Attainment Program; therefore no further TMDL-related requirements in this Order are needed for the Santa Maria Fairpark.

Wasteload Allocations:

The Central Coast Water Board has determined that the City of Santa Maria, the City of Guadalupe, the County of Santa Barbara, and the County of San Luis Obispo are assigned the following concentration-based wasteload allocation:

(1) The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

(2) Based on a statistically sufficient number of samples (generally not less than five samples equally spaced over a 30-day period), the geometric mean of E. coli densities shall not exceed 126 Most Probable Number per 100 milliliters, and no sample shall exceed a one-sided confidence limit (C.L.) for contact recreation (90% C.L.) = 409 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The City of Santa Maria is assigned the above wasteload allocations in the following water bodies: the Santa Maria River, the Main Street Canal, the Blosser Channel, and the Bradley Channel.

The County of Santa Barbara is assigned the above wasteload allocations in Orcutt Creek.

The County of San Luis Obispo is assigned the above wasteload allocations in Nipomo Creek.

The City of Guadalupe is assigned the above wasteload allocations in the Santa Maria River and Estuary.

Deliverables/Actions Required:
Compliance with this TMDL is dependent on the development and implementation of a Wasteload Allocation Attainment Program, or other integrated plan, per the requirements in Attachment G of this Order.

These wasteload allocations are receiving water allocations that must be attained by February 21, 2028 in accordance with a Wasteload Allocation Attainment Plan or other integrated plan. All wasteload allocations shall be achieved by February 21, 2028.

## ***Lower Santa Maria River Watershed and Tributaries to Oso Flaco Lake Nitrogen Compounds and Orthophosphate TMDL***

The Lower Santa Maria River Watershed and Tributaries to Oso Flaco Lake Nitrogen Compounds and Orthophosphate TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the Cities of Guadalupe and Santa Maria, and the Counties of Santa Barbara and San Luis Obispo, Traditional MS4 permittees, are sources of “Urban runoff” subject to this TMDL and must comply with the TMDL-related requirements of this TMDL.

Wasteload Allocations:
The City of Santa Maria, County of Santa Barbara, County of San Luis Obispo, and City of Guadalupe are assigned the following concentration-based wasteload allocations:

*(Continued on Next Page)*

**Lower Santa Maria River Watershed Final Wasteload Allocations (WLAs) Table**

| Waterbody the Responsible Party is Discharging to 1, 2 | Party Responsible for Allocation & NPDES/WDR number | Receiving Water Nitrate as N WLA (mg/L) | Receiving Water Orthophosphate as P WLA (mg/L) | Receiving Water Unionized Ammonia as N WLA (mg/L) |
|---|---|---|---|---|
| Santa Maria River (upstream from Highway 1), Blosser Channel, Bradley Channel, Main Street Canal, North Main Street Channel | City of Santa Maria (Storm drain discharges to MS4s) NPDES No. CAS000004 City of Guadalupe (Storm drain discharges to MS4s) (NPDES No. CAS000004) | Allocation-4 (see descriptions of allocations at bottom of this table) | Not Applicable | Allocation-3 |
| Santa Maria River (downstream from Highway 1) | City of Guadalupe (Storm drain discharges to MS4s) (NPDES No. CAS000004) | Allocation-1 | Allocation-2 | Allocation-3 |
| Nipomo Creek | County of San Luis Obispo (Storm drain discharges to MS4s) (NPDES No. CAS000004) | Allocation-4 | Not Applicable | Allocation-3 |
| Orcutt Creek | County of Santa Barbara (Storm drain discharges to MS4s) (NPDES No. CAS000004) | Allocation-1 | Allocation-2 | Allocation-3 |

**Lower Santa Maria River Watershed Description of Allocations Table**

Note A: Federal and State anti-degradation requirements apply to all wasteload and load allocations.

Note B: Achievement of final wasteload and load allocations to be determined on the basis of the number of measured exceedances and/or other criteria set forth in Section 4 of the *Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List* (Listing Policy - State Water Resources Control Board, Resolution No. 2004-0063,

adopted September 2004) or as consistent with any relevant revisions of the Listing Policy promulgated in the future.

| ***Allocation*** [Note A] | **Compound** | **Concentration (mg/L)** [Note B] |
|---|---|---|
| **Allocation 1** | Nitrate as N | Dry Season (May 1 – Oct. 31): **4.3**<br>Wet Season (Nov 1 – Apr 30): **8.0** |
| **Allocation 2** | Orthophosphate as P | Dry Season (May 1 – Oct 31): **0.19**<br>Wet Season (Nov 1 – Apr 30): **0.3** |
| **Allocation 3** | Unionized Ammonia as N | Year-round: **0.025** |
| **Allocation 4** | Nitrate as N | Year-round: **10** |

1 Responsible parties shall meet allocations in all receiving surface waterbodies of the responsible parties' discharges.
2 All reaches and tributaries unless otherwise noted.

## Lower Santa Maria River Watershed Interim Wasteload Allocations (WLAs) Table

* Responsible parties shall meet allocations in all receiving surface waterbodies of the responsible parties' discharges.

| **Waterbody the Responsible Party is Discharging to** | **Party Responsible for Allocation (Source)** | **First Interim WLA** | **Second Interim WLA** |
|---|---|---|---|
| All waterbodies the responsible party is assigned wasteload allocations (WLAs) in Table IX R-1 | City of Santa Maria (Storm drain discharges to MS4s) Storm Water Permit NPDES No. CA00049981<br>City of Guadalupe (Storm drain discharges to MS4s) (NPDES Permit Pending)<br>County of San Luis Obispo (Storm drain discharges to MS4s) (NPDES No. CAS000004)<br>County of Santa Barbara (Storm drain discharges to MS4s) (NPDES No. CAS000004) | Achieve MUN standard-based and Unionized Ammonia objective-based allocations:<br>Allocation-3<br>Allocation-4<br>By May 22, 2026 | Achieve Wet Season (Nov. 1 to Apr. 30) Biostimulatory target-based TMDL allocations:<br>Allocation-1<br>Allocation-2<br>By May 22, 2034 |

The above wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The TMDL includes WLAs for Permittees for controllable sources. The TMDL also includes WLAs for non-controllable sources, but are not assigned to Permittees. Therefore, the parties responsible for the allocation to controllable sources are not responsible for the allocation to natural sources. Allocations to non-controllable sources are not included in this Order.

Deliverables/Actions Required:
Compliance with this TMDL is dependent on the development and implementation of a Wasteload Allocation Attainment Program, or other integrated plan, per the requirements in Attachment G of this Order. All wasteload allocations shall be achieved by May 22, 2044.

***Lower Salinas River and Reclamation Canal Basin and the Moro Cojo Slough Subwatershed Nitrogen Compounds and Orthophosphate TMDL***

The Lower Salinas River and Reclamation Canal Basin and the Moro Cojo Slough Subwatershed Nitrogen Compounds and Orthophosphate TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the County of Monterey, a Traditional MS4 permittee, is a source of "Urban runoff" subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:
The County of Monterey is assigned the following interim and final wasteload allocations:

## County of Monterey Final Wasteload Allocations (WLAs) Table

Note A: Lower Salinas River: all reaches from downstream of Spreckels (downstream of monitoring site 309SSP) to the confluence with the Pacific Ocean including Salinas River Lagoon (North)
Note B: Santa Rita Creek: all reaches and tributaries, from the confluence with the Reclamation Canal to the uppermost reach of the waterbody.
Note C: Reclamation Canal: all reaches and tributaries, which includes from confluence with Tembladero Slough, to upstream confluence with Alisal Creek.
Note D: Gabilan Creek: all reaches and tributaries downstream of Crazy Horse Rd.
Note E: Natividad Creek: all reaches and tributaries, from the confluence with Carr Lake to the uppermost reach of the waterbody.
Note F: Alisal Creek: all reaches and tributaries from the confluence with the Reclamation Canal to the uppermost reach of the waterbody.

| Waterbody the responsible party is discharging to | Receiving Water Nitrate as N WLA (mg/L) | Receiving Water Orthophosphate as P WLA (mg/L) | Receiving Water Unionized Ammonia as N WLA (mg/L) |
|---|---|---|---|
| Lower Salinas River downstream of Spreckels, CA Note A | Allocation-1 *(see description of allocations below)* | Allocation-2 | Allocation-5 |

| Waterbody the responsible party is discharging to | Receiving Water Nitrate as N WLA (mg/L) | Receiving Water Orthophosphate as P WLA (mg/L) | Receiving Water Unionized Ammonia as N WLA (mg/L) |
|---|---|---|---|
| Santa Rita Creek Note B, Reclamation Canal Note C | Allocation-3 | Allocation-4 | Allocation-5 |
| Gabilan Creek Note D | Allocation-6 | Allocation-2 | Allocation-5 |
| Natividad Creek Note E Alisal Creek Note F | Allocation-6 | Allocation-2 | Allocation-5 |

## County of Monterey Description of Allocations Table

Note A: Federal and state anti-degradation requirements apply to all wasteload and load allocations.

Note B: Achievement of final wasteload and load allocations to be determined on the basis of the number of measured exceedances and/or other criteria set forth in Section 4 of the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (Listing Policy - State Water Resources Control Board, Resolution No. 2004-0063, adopted September 2004), or as consistent with any relevant revisions of the Listing Policy promulgated in the future pursuant to Government Code section 11353.

| Allocation Note A | Compound | Concentration (milligrams per liter) Note B |
|---|---|---|
| Allocation 1 | Nitrate as N | Dry Season (May 1 – Oct 31): 1.4<br>Wet Season (Nov 1 – Apr 30): 8.0 |
| Allocation 2 | Orthophosphate as P | Dry Season (May 1 – Oct 31): 0.07<br>Wet Season (Nov 1 – Apr 30): 0.3 |
| Allocation 3 | Nitrate as N | Dry Season (May 1 – Oct 31): 6.4<br>Wet Season (Nov 1 – Apr 30): 8.0 |
| Allocation 4 | Orthophosphate as P | Dry Season (May 1 – Oct 31): 0.13<br>Wet Season (Nov 1 – Apr 30): 0.3 |
| Allocation 5 | Unionized Ammonia as N | Year-round: 0.025 |
| Allocation 6 | Nitrate as N | Dry Season (May 1 – Oct 31): 2.0<br>Wet Season (Nov 1 – Apr 30): 8.0 |
| Allocation 7 | Nitrate as N | Dry Season (May 1 – Oct 31): 3.1<br>Wet Season (Nov 1 – Apr 30): 8.0 |
| Allocation 8 | Total Nitrogen as N | Dry Season (May 1 – Oct 31): 1.7<br>Wet Season (Nov 1 – Apr 30): 8.0 |
| Allocation 9 | Nitrate as N | Year-round: 10 |

**County of Monterey Interim Wasteload Allocations (WLAs) Table**

| Waterbody | First Interim WLA | Second Interim WLA |
|---|---|---|
| All waterbodies given wasteload allocations (WLAs) as identified in Final Wasteload Allocations Table | Achieve MUN standard-based and Unionized Ammonia objective-based allocations:<br>Allocation-5; Allocation-9<br>12 years after effective date of the TMDL (June 7, 2026) | Achieve Wet Season (Nov. 1 to Apr. 30) Biostimulatory target-based TMDL allocations:<br>Wet Season Allocation/Waterbody combinations as identified in Final Wasteload Allocations Table<br>20 years after effective date of the TMDL (June 7, 2034) |

The County of Monterey shall meet the above wasteload allocations in all the receiving surface waterbodies receiving the County's municipal storm water discharges.

The TMDL includes WLAs for Permittees for controllable sources. The TMDL also includes WLAs for non-controllable sources, but are not assigned to Permittees. Therefore, the parties responsible for the allocation to controllable sources are not responsible for the allocation to natural sources. Allocations to non-controllable sources are not included in this Order.

Deliverables/Actions Required:
Compliance with this TMDL is dependent on the development and implementation of a Wasteload Allocation Attainment Program as required in Attachment G of this Order. All wasteload allocations shall be achieved by May 7, 2044.

## ***Santa Maria River Watershed Toxicity and Pesticides TMDL***

Municipalities throughout the state are challenged with controlling pesticides in their urban storm water. Urban pesticide use is regulated by the California Department of Pesticide Regulation (DPR) and U.S. EPA. MS4 permittees have minimal to no authority over commercial and residential pesticide applications. The TMDL-related requirements in Attachment G of this Order reflect this constraint.

Phase II Entities:
The Central Coast Regional Water Board has determined that the Cities of Guadalupe and Santa Maria, and the County of Santa Barbara, Traditional MS4 permittees, are sources of "Urban storm water" subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations:
The City of Santa Maria, County of Santa Barbara, and City of Guadalupe are assigned the following wasteload allocations:

**Santa Maria River Watershed Wasteload Allocations Table**

| Responsible Parties | Source | Allocation |
|---|---|---|
| City of Santa Maria — NPDES No. CAS000004<br>County of Santa Barbara — NPDES No. CAS000004<br>City of Guadalupe | Urban Storm Water | 3, 4 & 5 |

**Allocation-3: Additive Toxicity TMDL for Pyrethroid Pesticides:**

Pyrethroid pesticides contribute to additive toxicity in aquatic sediments; The numeric target for additive toxicity for pyrethroid pesticides is:

$$\frac{C\ (Pyrethroid\ 1)}{NLC(Pyrethroid\ 1)} + \frac{C\ (Pyrethroid\ 2)}{NLC\ (Pyrethroid\ 2)} = S;\ where\ S\ \leq 1$$

Where:

C = the concentration of a pesticide measured in sediment.
NLC = the numeric LC50 for each pesticide present (Table 1).
S = the sum; a sum exceeding one (1.0) indicates that beneficial uses may be adversely affected.

The additive toxicity numeric target formula shall be applied when pyrethroid pesticides are present in the sediment.

**Table 1: Pyrethroid Sediment LC50s[45]**

*Median lethal concentration (LC50) for amphipods (Hyalella azteca) organic carbon normalized concentrations (micrograms per gram OC)

| Chemical | LC50 ng/g (ppb) | LC50 µg/g OC*(ppm) |
|---|---|---|
| Bifenthrin | 12.9 | 0.52 |
| Cyfluthrin | 13.7 | 1.08 |
| Cypermethrin | 14.87 | 0.38 |
| Esfenvalerate | 41.8 | 1.54 |
| Lambda-Cyhalothrin | 5.6 | 0.45 |
| Permethrin | 200.7 | 10.83 |

**Allocation-4: Aquatic Toxicity TMDLs (refer to Table 2)**

**Table 2: Standard Aquatic Toxicity Tests**

| Parameter | Test | Biological Endpoint Assessed |
|---|---|---|
| Water Column Toxicity | Water Flea – Ceriodaphnia (6-8 day chronic) | Survival and Reproduction |
| Sediment Toxicity | Hyalella Azteca (10-day chronic) | Survival |

[45] LC50 = a measure of toxicity representing the concentration that will kill 50 percent of the sample population of a test species.

**Allocation-5: Organochlorine Pesticide TMDLs (refer to Table 3, Table 4, Table 5)**

### Table 3: DDT Sediment Chemistry TMDLs

Note A: All reaches of all surface waters in the Santa Maria River watershed, including those listed.
Note B: All values are organic carbon normalized concentrations.
[All values are in units of microgram per kilogram]

| Waterbodies Assigned TMDLs Note A | DDD, 4,4-(p,p-DDD) | DDE, 4,4-(p,p-DDE) | DDT, 4,4-(p,p-DDT) | Total DDT |
|---|---|---|---|---|
| Blosser Channel | 9.1 | 5.5 | 6.5 | 10 |
| Bradley Channel | 9.1 | 5.5 | 6.5 | 10 |
| Greene Valley Creek | 9.1 | 5.5 | 6.5 | 10 |
| Little Oso Flaco Creek | 9.1 | 5.5 | 6.5 | 10 |
| Main Street Canal | 9.1 | 5.5 | 6.5 | 10 |
| Orcutt Creek | 9.1 | 5.5 | 6.5 | 10 |
| Oso Flaco Creek | 9.1 | 5.5 | 6.5 | 10 |
| Oso Flaco Lake | 9.1 | 5.5 | 6.5 | 10 |
| Santa Maria River | 9.1 | 5.5 | 6.5 | 10 |

### Table 4: Santa Maria River Watershed Additional Organochlorine Pesticide Sediment Chemistry TMDLs (all units in micrograms per kilogram)

Note A: All reaches of all surface waters in the Santa Maria River watershed, including those listed.
Note B: All organochlorine pesticides by organic carbon normalized concentrations
Note C: Waterbody is currently achieving the TMDL.

| Waterbodies Assigned TMDLs Note A | Chlordane | Dieldrin | Endrin | Toxaphene |
|---|---|---|---|---|
| Oso Flaco Lake | 1.7 | 0.14 | 550 | 20 |
| Santa Maria River | 1.7 | 0.14 | 550 | 20 |
| Orcutt Creek | 1.7 | 0.14 | 550 | 20 |

### Table 5: Santa Maria River Watershed Fish Tissue TMDLs for Organochlorine Pesticides

*ng/g: i.e., nanograms of pollutant per grams of fish tissue (e.g., a fillet).
(ppb stands for parts per billion)

| Waterbodies Assigned TMDLs | Chlordane ng/g* (ppb) | DDTs ng/g* (ppb) | Dieldrin ng/g* (ppb) | Toxaphene ng/g* (ppb) |
|---|---|---|---|---|
| Oso Flaco Lake | 5.6 | 21 | | |
| Oso Flaco Creek | 5.6 | 21 | | |
| Santa Maria River | 5.6 | 21 | 0.46 | 6.1 |
| Orcutt Creek | 5.6 | 21 | 0.46 | 6.1 |

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

Deliverables/Actions Required:
Central Coast Water Board staff recognizes that attainment of the TMDL wasteload allocations will depend on the effectiveness of statewide pesticide programs and regulations by DPR and U.S. EPA to control pesticides. The statewide program described in the California Pesticide Management Plan for Water Quality, February 1997 (California Pesticide Plan) is an implementation plan of the Management Agency Agreement between DPR and the California Water Boards. The Cities of Guadalupe and Santa Maria, and the County of Santa Barbara should describe in the Wasteload Allocation Attainment Program or integrated plan how they plan to support and engage in the statewide efforts. The Cities of Guadalupe and Santa Maria, and the County of Santa Barbara are encouraged to use mitigation measures developed in the DPR surface water regulations as storm water Best Management Practices in the Wasteload Allocation Attainment Program or integrated plan.

The target date to achieve the TMDLs for pyrethroids is November 1, 2029. This estimate is based on the widespread availability of pyrethroids, including consumer usage, and current limited regulatory oversight. The target date to achieve the TMDLs for organochlorine pesticides (DDT, DDD, DDE, chlordane, eldrin, toxaphene, dieldrin) is November 1, 2044.

## *LOS ANGELES REGIONAL WATER BOARD TMDLs*

The Los Angeles Regional Water Board has adopted two Phase I MS4 permits regulating discharges within the coastal watersheds of Los Angeles County, including 85 municipalities, Los Angeles County, and the Los Angeles Flood Control District (Order No. R4-2012-0175 as amended by State Water Board Order No. 2015-0075 and Order No. R4-2014-0024). Additionally, the Los Angeles Regional Water Board is in the process of reissuing the Phase I permit that regulates municipal storm water discharges within the coastal watersheds of Ventura County including 10 municipalities, Ventura County, and the Ventura County Watershed Protection District.

These Phase I MS4 permits regulate all traditional Small MS4 permittees within the Los Angeles Region with the exception of the City of Avalon, located on Catalina Island. The Phase I MS4 permits contain TMDL-related requirements for applicable Small MS4 permittees. Therefore, with the exception of the City of Avalon, the only permittees in the jurisdiction of the Los Angeles Regional Water Board regulated under this Order are Non-traditional MS4 permittees.

To simplify this Order, TMDLs (and corresponding water bodies) that do not have Non-traditional MS4 permittee within the watershed, were removed from Attachment G. These TMDLs include the Upper Santa Clara River Chloride TMDL, the Santa Clara River Nitrogen Compounds TMDL, the Malibu Creek Bacteria TMDL, the Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Bacteria TMDL, the Santa Clara Reach 3 Chloride TMDL, the Malibu Creek Nutrients TMDL, the Ballona Creek Wetlands TMDL, and the Malibu Creek Trash TMDL.

The Los Angeles Regional Water Board has determined that the stormwater and non-stormwater discharges from MS4 permittees, including those from small MS4 permittees listed in the Los Angeles Regional Water Board TMDLs below, contribute to the impairment of the

water bodies subject to the TMDLs. Therefore, the designated entities listed below (and in Appendix G) are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to one of the Los Angeles Region's Phase I MS4 permits.

The Regional Water Board determined that since these TMDL requirements, with the notable exception of the Avalon Beach TMDL, are new to the non-traditional entities, they should be given time to evaluate their programs and be allowed to make the choice of the two options presented. Therefore, a one-year timeframe was proposed to either: 1) develop and start implementing a plan; or 2) to enter into a cooperative agreement.

***Avalon Beach Bacteria TMDL***

This Order incorporates the MS4-specific requirements established by Cease and Desist Order R4-2012-0077, which includes implementation requirements and timelines for the City of Avalon to comply with the TMDL established for Avalon Beach.

Phase II Entities:

Through the adoption of Cease and Desist Order R4-2012-0077, the Los Angeles Regional Water Board has determined that MS4 discharges from the City of Avalon, a Traditional MS4, are a source of impairment to surface water bodies in its watershed, and must comply with the following wasteload allocations:

Wasteload Allocations:

The following WLAs are receiving water allocations. Geometric mean values shall be calculated based on a minimum of 5 samples during any 30 day period. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean.

*Geometric Mean Limits*

Total coliform concentration shall not exceed 1,000/100 ml
Fecal coliform density shall not exceed 200/100 ml
Enterococcus density shall not exceed 35/100 ml

*Single Sample Limits*

Total coliform density shall not exceed 10,000/100 ml
Fecal coliform density shall not exceed 400/100 ml
Enterococcus density shall not exceed 104/100 ml
Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal to total coliform exceeds 0.1

For the Single Sample Limits, TMDL compliance focuses on the number of days that any single sample exceeds the limits set forth above, based on the time of year. This focus is expressed as Single Sample Allowable Exceedances, shown below.

*Single Sample Allowable Exceedances*

Summer Dry Weather shall not exceed 0 Allowable Exceedance Days*
Winter Dry Weather shall not exceed 9 Allowable Exceedance Days*

Wet Weather shall not exceed 17 Allowable Exceedance Days*

*= The Allowable Exceedance Day is defined as the number of days (per year) a monitoring location is allowed to exceed any of the single sample targets.

A storm year is defined as the period from November 1 through October 31. The geometric mean limits may not be exceeded.

Deliverables/Actions Required:
This Order implements some of the requirements that are stipulated in Cease and Desist Order R4-2012-0077. Cease and Desist Order R4-2012-077 is enforceable through this Order by reference, including timelines for the City of Avalon to achieve compliance with this TMDL. The Los Angeles Regional Water Board has determined that the City of Avalon's compliance with the permit requirements of this Order and compliance with the MS4-specific requirements of Cease and Desist Order R4-2012-0077 is consistent with the assumptions, and will satisfy the requirements, of the MS4-specific provisions of the TMDL.

***Santa Monica Bay Beaches Bacteria TMDL***
The Santa Monica Bay Beaches Bacteria TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Los Angeles Regional Water Board has determined that the State Department of Parks and Recreation (Point Dume State Beach, Leo Carrillo State Beach, and Robert H Meyer Memorial State Beach), a Non-traditional MS4 permittee, is a source of "Storm water" and "Non-storm water discharges" subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations:
The following WLAs are receiving water allocations. Geometric mean values shall be calculated based on a minimum of 5 samples during any 30 day period. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean.

*Geometric Mean Limits*

*The rolling 30-day geometric mean* of the total coliform concentration shall not exceed 1,000/100 ml;

*The rolling 30-day geometric mean* of the Fecal coliform density shall not exceed 200/100 ml;

*The rolling 30-day geometric mean* of the Enterococcus density shall not exceed 35/100 ml;

*Single Sample Limits*

The total coliform density of a single sample shall not exceed 10,000/100 ml;

The fecal coliform concentration of a single sample shall not exceed 400/100 ml;

The enterococcus concentration of a single sample shall not exceed 104/100 ml;

The total coliform concentration of a single sample shall not exceed 1,000/100 ml, if the ratio of fecal to total coliform exceeds 0.1;

For the Single Sample Limits, TMDL compliance focuses on the number of days that any single sample exceeds the limits set forth above, based on the time of year. This focus is expressed as Single Sample Allowable Exceedances, shown below.

*Single Sample Allowable Exceedances* Wasteload Allocations in the Receiving Water:*

Point Dume State Beach:
Dry weather: 0 days (based on both daily and weekly sampling),
Wet Weather: 3 days (daily sampling) or 1 day (weekly sampling).
Robert H Meyer Memorial State Beach:
Dry weather: 0 days (based on both daily and weekly sampling),
Wet Weather: 3 days (daily sampling) or 1 day (weekly sampling).

*= The Allowable Exceedance Day is defined as the number of days (per year) a monitoring location is allowed to exceed any of the single sample targets.

A storm year is defined as the period from November 1 through October 31. The geometric mean limits may not be exceeded.

Deliverables/Actions Required:
The State Department of Parks and Recreation is required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the target dates to achieve the wasteload allocations are July 15, 2006 (to achieve dry weather WLAs during the summer period from April 1 – October 31); November 1, 2009 (to achieve dry weather WLAs during the winter period from November 1 – March 31); and July 15, 2021 (to achieve the wet weather WLAs). The dry weather allocations are therefore effective immediately. The State Department of Parks and Recreation may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

***Los Angeles River Nitrogen and Related Effects TMDL***
The Los Angeles River Nitrogen and Related Effects TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Los Angeles Regional Water Board has determined that the California State University Los Angeles and California State University Northridge, Non-traditional MS4 permittees, are dischargers of storm water and non-storm water subject to this TMDL and must comply with the TMDL-related requirements of this Order.

The California State University Los Angeles and California State University Northridge are assigned the following Wasteload Allocations (WLAs):

**WLAs for CSU Los Angeles and CSU Northridge Table**

[All units are in milligrams per liter]

| Waterbodies Assigned TMDLs | Ammonia 1-hr average | Ammonia 30-day average | Nitrate 30-day average | Nitrate 30-day average | Nitrate + Nitrite 30-day average |
|---|---|---|---|---|---|
| LA River above Los Angeles-Glendale Water Reclamation Plant (LAG) | 4.7 | 1.6 | 8.0 | 1.0 | 8.0 |
| LA River below LAG | 8.7 | 2.4 | 8.0 | 1.0 | 8.0 |
| LA River Tributaries | 10.1 | 2.3 | 8.0 | 1.0 | 8.0 |

Deliverables/Actions Required:

The California State University Los Angeles and California State University Northridge are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the target date to achieve the wasteload allocations assigned to MS4 permittees is March 23, 2004. The allocations are therefore effective immediately. The California State University Los Angeles and/or California State University Northridge may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

***Los Angeles Harbor (including Cabrillo Beach and Main Shop Channel) Bacteria TMDL***

The Los Angeles Harbor (including Cabrillo Beach and Main Shop Channel) Bacteria TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the Federal Correctional Institution Terminal Island and California State University Dominguez Hills, Non-traditional MS4 permittees, are sources of storm water and non-storm water subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations (WLAs):

The following WLAs are receiving water allocations. Geometric mean values shall be calculated based on a minimum of 5 samples during any 30 day period. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean.

*Rolling 30 day Geometric Mean Limits*

Total coliform density shall not exceed 1,000/100 ml

Fecal coliform density shall not exceed 200/100 ml
Enterococcus density shall not exceed 35/100 ml

*Single Sample Limits*

Total coliform density shall not exceed 10,000/100 ml
Fecal coliform density shall not exceed 400/100 ml
Enterococcus density shall not exceed 104/100 ml
Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal to total coliform exceeds 0.1

For the Single Sample Limits, TMDL compliance focuses on the number of days that any single sample exceeds the limits set forth above, based on the time of year. This focus is expressed as Single Sample Allowable Exceedances, shown below.

*Single Sample Allowable Exceedances* Wasteload Allocations in the Receiving Water:*

Summer Dry Weather: 0 days (based on both daily and weekly sampling)
Winter Dry Weather: 8 days (daily sampling) or 1 day (weekly sampling)
Wet Weather: 15 days (daily sampling) or 3 days (weekly sampling)

*= The Allowable Exceedance Day is defined as the number of days (per year) a monitoring location is allowed to exceed any of the single sample targets.

A storm year is defined as the period from November 1 through October 31. The geometric mean limits may not be exceeded.

Deliverables/Actions Required:

The Federal Correctional Institution Terminal Island and California State University Dominguez Hills are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the target date to achieve the wasteload allocations is March 10, 2010. The allocations are therefore effective immediately. The Federal Correctional Institution Terminal Island and/or California State University Dominguez Hills may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

***Calleguas Creek Watershed Toxicity TMDL***

The Calleguas Creek Watershed Toxicity TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the Naval Base Ventura County (Point Mugu), California State University Channel Islands, and Department of Parks and Recreation (Point Mugu State Park), Non-traditional MS4 permittees, are sources of stormwater and non-stormwater discharges subject to this Order and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLA):
The Calleguas Creek Watershed Toxicity TMDL assigns the following WLAs as receiving water allocations.

Toxicity: 1.0 TUc
Chlorpyrifos (Final WLA, µg/L): 0.014
Diazinon (Final WLA, µg/L): 0.10

Deliverables/Actions Required:
The Naval Base Ventura County (including Port Hueneme and Point Mugu), California State University Channel Islands, and Department of Parks and Recreation (Point Mugu State Park) are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs are to be achieved by March 24, 2008. The allocations are therefore effective immediately. The Naval Base Ventura County (including Port Hueneme and Point Mugu), California State University Channel Islands, and/or Department of Parks and Recreation (Point Mugu State Park) may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

***Calleguas Creek Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation TMDL***

The Calleguas Creek Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:
The Los Angeles Regional Water Board has determined that the Naval Base Ventura County (Point Mugu), California State University Channel Islands, and Department of Parks and Recreation (Point Mugu State Park), Non-traditional MS4 permittees, are sources of storm water and non-storm water discharges subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLA):
The Calleguas Creek Organochlorine Pesticides, Polychlorinated Biphenyls and Siltation TMDL assigns the following interim and final WLAs as receiving water allocations.

Interim WLAs (ng/g), in-stream annual average at base of watershed:

| | |
|---|---|
| Chlordane: | 17.0 |
| 4,4-DDD: | 66.0 |
| 4,4-DDE: | 470.0 |
| 4,4-DDT: | 110.0 |
| Dieldrin: | 3.0 |
| PCBs: | 3800.0 |

Toxaphene: 260.0

Final WLAs (ng/g), in-stream annual average at base of watershed:

| | |
|---|---|
| Chlordane: | 3.3 |
| 4,4-DDD: | 2.0 |
| 4,4-DDE: | 1.4 |
| 4,4-DDT: | 0.3 |
| Dieldrin: | 0.2 |
| PCBs: | 120.0 |
| Toxaphene: | 0.6 |

Siltation WLA: 2,496 tons/year reduction in yield to Mugu Lagoon.

Deliverables/Actions Required:
The Naval Base Ventura County (including Port Hueneme and Point Mugu), California State University Channel Islands, and Department of Parks and Recreation (Point Mugu State Park) are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs are to be achieved 20 years after the effective date of the TMDL (March 24, 2006). Therefore, the final WLAs shall be achieved by March 24, 2026.

***Calleguas Creek Metals and Selenium TMDL***
The Calleguas Creek Metals and Selenium TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:
The Los Angeles Regional Water Board has determined that the Naval Base Ventura County (Point Mugu), California State University Channel Islands, and Department of Parks and Recreation (Point Mugu State Park), Non-traditional MS4 permittees, are sources of storm water and non-storm water discharges subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLA):
The Calleguas Creek Metals and Selenium TMDL assigns the following interim and final WLAs as receiving water allocations.

## Interim WLAs:

Where Dry CMC/Dry CCC/ Wet CMC stands for, respectively:

Dry Weather Criterion Maximum Concentrations (Acute criteria),
Dry Weather Criterion Continuous Concentrations (Chronic criteria), and
Wet Weather Criterion Maximum Concentrations (Acute criteria).

***Calleguas and Conejo Creeks (micrograms per liter) Table***

| Total Recoverable | Dry CMC | Dry CCC | Wet CMC |
|---|---|---|---|
| Copper | 23 | 19 | 204 |

| Total Recoverable | Dry CMC | Dry CCC | Wet CMC |
|---|---|---|---|
| Nickel | 15 | 13 | |
| Selenium | | | |

***Revolon Slough (micrograms per liter) Table***

| Total Recoverable | Dry CMC | Dry CCC | Wet CMC |
|---|---|---|---|
| Copper | 23 | 19 | 204 |
| Nickel | 15 | 13 | |
| Selenium | 14 | 13 | |

Final WLAs:

Where: Q = Daily Storm volume
WER = Water Effects Ratio

***Calleguas and Conejo Creeks***

*Dry Weather; Total Recoverable (pounds per day)*

| Metal | Low Flow | Average Flow | Elevated Flow |
|---|---|---|---|
| Copper | 0.04×WER -0.02 | 0.12×WER -0.02 | 0.18×WER -0.03 |
| Nickel | 0.100 | 0.120 | 0.440 |
| Selenium | | | |

***Revolon Slough***

*Dry Weather; Total Recoverable (pounds per day)*

| Metal | Low Flow | Average Flow | Elevated Flow |
|---|---|---|---|
| Copper | 0.03×WER -0.01 | 0.06×WER -0.03 | 0.13×WER -0.02 |
| Nickel | 0.050 | 0.069 | 0.116 |
| Selenium | 0.004 | 0.003 | 0.004 |

***Calleguas and Conejo Creeks***

| Metal | Wet Weather Final WLA; Total Recoverable (lbs/day) |
|---|---|
| Copper | $(0.00054 \times Q^2 \times 0.032 - 0.17) \times WER - 0.06$ |
| Nickel | $0.014 \times Q^2 + 0.82 \times Q$ |
| Selenium | |

***Revolon Slough***

| Metal | Wet Weather Final WLA; Total Recoverable (lbs/day) |
|---|---|
| Copper | $(0.0002 \times Q^2 \times 0.0005 \times Q) \times WER$ |
| Nickel | $0.027 \times Q^2 + 0.47 \times Q$ |
| Selenium | $0.027 \times Q^2 + 0.47 \times Q$ |

*Interim Limits and Final WLAs for Mercury in Suspended Sediment*

Final WLAs are set at 80% reduction of hydrologic simulation program – FORTRAN (HSPF) load estimates. Interim limits for mercury in suspended sediment are set equal to the highest annual load within each flow category, based on HSPF output for the years 1993-2003.

**WLAs for Mercury (pounds per year) in Suspended Sediment Table**

| Flow Range | Calleguas Creek Interim | Calleguas Creek Final | Revolon Slough Interim | Revolon Slough Final |
|---|---|---|---|---|
| 0 – 15,000 million gallons per year (MG/yr) | 3.3 | 0.4 | 1.7 | 0.1 |
| 15,000 – 25,000 MG/yr | 10.5 | 1.6 | 4 | 0.7 |
| Above 25,000 MG/yr | 64.6 | 9.3 | 10.2 | 1.8 |

Deliverables/Actions Required:

The Naval Base Ventura County (including Port Hueneme and Point Mugu), California State University Channel Islands, and Department of Parks and Recreation (Point Mugu State Park) are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs are to be achieved 15 years after the effective date of the TMDL (March 26, 2007). Therefore, the final WLAs shall be achieved by March 26, 2022.

***Ballona Creek Bacteria TMDL***

The Ballona Creek Bacteria TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the University of California Los Angeles and Veteran Affairs of the Greater Los Angeles Healthcare System, Non-traditional MS4 permittees, are sources of non-storm water and storm water discharges subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLAs):
The following WLAs are receiving water allocations. Geometric mean values shall be calculated based on a minimum of 5 samples during any 30 day period. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean.

*Rolling 30-day Geometric Mean Limits*

Total coliform density shall not exceed 1,000/100 ml
Fecal coliform density shall not exceed 200/100 ml
Enterococcus density shall not exceed 35/100 ml

*Single Sample Limits*

Total coliform density shall not exceed 10,000/100 ml
Fecal coliform density shall not exceed 400/100 ml
Enterococcus density shall not exceed 104/100 ml
Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal to total coliform exceeds 0.1

For the Single Sample Limits, TMDL compliance focuses on the number of days that any single sample exceeds the limits set forth above, based on the time of year. This focus is expressed as Single Sample Allowable Exceedances, shown below.

*Single Sample Allowable Exceedances* Wasteload Allocations in the Receiving Water:*

Dry weather: 5 days (based on daily sampling) or 1 day (based on weekly sampling)
Wet Weather: 15 days (based on daily sampling) or 2 days (based on weekly sampling)

*= The Allowable Exceedance Day is defined as the number of days (per year) a monitoring location is allowed to exceed any of the single sample targets.

A storm year is defined as the period from November 1 through October 31. The geometric mean limits may not be exceeded

Deliverables/Actions Required:
The University of California Los Angeles and Veteran Affairs of the Greater Los Angeles Healthcare System are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs are to be achieved during dry weather by April 27, 2013, while the final WLAs during wet weather are to be achieved by July 15, 2021. Therefore, the final WLAs for dry weather are effective immediately. The University of California Los Angeles and/or Veteran Affairs of the Greater Los Angeles Healthcare System may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

***Santa Monica Bay Marine Debris TMDL***

The Santa Monica Bay Marine Debris TMDL assigns a load allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the Department of Parks and Recreation (Point Dume State Beach and Robert H. Meyer Memorial State Beach), a Non-traditional MS4 permittee, is a source of storm water and non-storm water discharges subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Load Allocations (LA):

The following LA is a receiving water allocation.

Trash = 0

Zero trash is defined as no trash (debris greater than 5mm in size) discharged into waterbodies within the Santa Monica Bay Watershed Management Area (WMA) and then into Santa Monica Bay or on the shoreline of Santa Monica Bay.

Deliverables/Actions Required:

The Los Angeles Regional Board has determined that dischargers may achieve the Load Allocations by implementing a Minimum Frequency of Assessment and Collection Program (MFAC)/BMP program approved by the Executive Officer. Responsible entities will be deemed in compliance with the LAs if an MFAC/BMP program, approved by the Executive Officer, demonstrates that there is no accumulation of trash, as defined by the LA.

The Department of Parks and Recreation (Point Dume State Beach and Robert H. Meyer Memorial State Beach) shall develop a Trash Monitoring and Reporting Plan (TMRP) for Executive Officer approval that describes the methodologies that will be used to assess and monitor trash in their responsible areas within the Santa Monica Bay WMA or along Santa Monica Bay.

The TMDL specifies that the final LAs are to be achieved 5 years after the effective date of the TMDL (March 20, 2012). Therefore, the final LAs shall be achieved by March 20, 2017. The Department of Parks and Recreation (Point Dume State Beach and Robert H. Meyer Memorial State Beach) may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

***Los Angeles and Long Beach Harbors Toxics and Metals TMDL***

The Los Angeles and Long Beach Harbors Toxics and Metals TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the Federal Correctional Institution Terminal Island, Community Corrections Management Long Beach, and California State University Dominguez Hills, Non-traditional MS4 permittees, are sources of storm water and non-storm water discharges subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLA):
The Federal Correctional Institution Terminal Island, Community Corrections Management Long Beach, and California State University Dominguez Hills are assigned the following (receiving water) wasteload allocations:

Toxicity WLA: 1 $TU_c$

*Metals WLAs for Dominguez Channel (wet weather only) (grams per day):*

Mass-based WLA is shared and divided between MS4 permittees and Caltrans.

Total Copper: 1485.1
Total Lead: 6548.8
Total Zinc: 10685.5

### Metals and PAH Compounds WLAs for Greater Harbor Waters Table

TMDL values are in units of kilogram per year

| Waterbodies Assigned TMDLs | Total Copper TMDL | Total Lead TMDL | Total Zinc TMDL | Total PAHs TMDL |
|---|---|---|---|---|
| Dominguez Channel Estuary | 22.4 | 54.2 | 271.8 | 0.134 |
| Consolidated Slip | 2.73 | 3.63 | 28.7 | 0.0058 |
| Inner Harbor | 1.7 | 34.0 | 115.9 | 0.088 |
| Outer Harbor | 0.91 | 26.1 | 81.5 | 0.105 |
| Fish Harbor | 0.00017 | 0.54 | 1.62 | 0.007 |
| Cabrillo Marina | 0.0196 | 0.289 | 0.74 | 0.00016 |
| San Pedro Bay | 20.3 | 54.7 | 213.1 | 1.76 |
| LA River Estuary | 35.3 | 65.7 | 242.0 | 2.31 |

*Sediment Wasteload Allocations for Dominguez Channel Estuary, Consolidated Slip and Fish Harbor (mg/kg dry sediment):*

Cadmium: 1.2
Chromium: 81
Mercury: 0.15

### Bioaccumulative Compounds Wasteload Allocations Table

TMDL values are in units of gram per year

| Waterbodies Assigned TMDLs | DDT Total TMDL | PCBs Total TMDL |
|---|---|---|
| Dominguez Channel Estuary | 0.250 | 0.207 |
| Consolidated Slip | 0.009 | 0.004 |
| Inner Harbor | 0.051 | 0.059 |
| Outer Harbor | 0.005 | 0.020 |
| Fish Harbor | 0.0003 | 0.0019 |
| Cabrillo Marina | 0.000028 | 0.000025 |
| Inner Cabrillo Beach | 0.0001 | 0.0003 |
| San Pedro Bay | 0.049 | 0.44 |
| LA River Estuary | 0.100 | 0.324 |

Deliverables/Actions Required:
The Federal Correctional Institution Terminal Island, Community Corrections Management Long Beach, and California State University Dominguez Hills are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs are to be achieved 20 years after the effective date of the TMDL (March 23, 2012). Therefore, the final WLAs shall be achieved by March 23, 2032.

***Los Angeles River Bacteria TMDL***
The Los Angeles Regional Board has determined that the Los Angeles River Bacteria TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:
The Los Angeles Regional Water Board has determined that the California State University Los Angeles and California State University Northridge, Non-traditional MS4 permittees, are sources of storm water and non-storm water discharges subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLA):
The following WLAs are receiving water allocations. Geometric mean values shall be calculated based on a minimum of 5 samples during any 30 day period. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean.

*Geometric Mean Limits*
E. coli density shall not exceed 126/100 ml

*Single Sample Limits*
E. coli density shall not exceed 235/100 ml

For the Single Sample Limits, TMDL compliance focuses on the number of days that any single sample exceeds the limits set forth above, based on the time of year. This focus is expressed as Single Sample Allowable Exceedances, shown below.

*Single Sample Allowable Exceedances* Wasteload Allocations in the Receiving Water:*
Summer Dry Weather: 5 days (based on daily sampling), or 1 day (based on weekly sampling)
Waters not subject to the High Flow Suspension:
Wet Weather: 15 days (daily sampling), or 2 days (weekly sampling)
Waters subject to the High Flow Suspension:
Wet Weather: 10 days (daily sampling), or 2 (weekly sampling)

* = The Allowable Exceedance Day is defined as the number of days (per year) a monitoring location is allowed to exceed any of the single sample targets.

A storm year is defined as the period from November 1 through October 31. The geometric mean limits may not be exceeded

Deliverables/Actions Required:
The California State University Los Angeles and California State University Northridge are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final wet-weather WLAs are to be achieved 25 years after the effective date of the TMDL. Therefore, the final wet weather WLAs are to be achieved by March 23, 2037. The TMDL also specifies several final dry weather achievement dates based upon where in the watershed the discharge(s) occur. Therefore, the final dry weather WLAs are to be achieved according to the table below.

| Waterbody Segment | Achieve Final dry weather WLA by: |
|---|---|
| Segment B (upper and middle Reach 2) | March 23, 2022 |
| Segment B Tributaries (Rio Hondo & Arroyo Seco) | September 23, 2023 |
| Segment A (lower Reach 2 and Reach 1) | March 23, 2024 |
| Segment A Tributaries (Compton Creek) | September 23, 2025 |
| Segment E (Reach 6) | March 23, 2025 |
| Segment E Tributaries (Dry Canyon, McCoy and Bell Creeks, and Aliso Canyon Wash) | March 23, 2029 |
| Segment C (lower Reach 4 and Reach 3) | September 23, 2030 |
| Segment C Tributaries (Tujunga Wash, Burbank Western Channel and Verdugo Wash) | September 23, 2030 |
| Segment D (Reach 5 and upper Reach 4) | September 23, 2030 |
| Segment D Tributaries (Bull Creek) | September 23, 2030 |

***Los Angeles River and Tributaries Metals TMDL***
The Los Angeles River and Tributaries Metals TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:
The Los Angeles Regional Water Board has determined that the California State University Los Angeles and California State University Northridge, Non-traditional MS4 permittees, are sources of storm water and non-storm subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLA):
Dry-Weather WLAs (total recoverable metals)

### Dry-Weather WLAs (Total recoverable metals) Table

All values are in units of micrograms per liter

| Waterbodies Assigned TMDLs | Copper TMDL | Lead TMDL | Zinc TMDL | Selenium TMDL |
|---|---|---|---|---|
| LA River Reach 5,6 and Bell Creek | 30 | 170 | | 5 |
| LA River Reach 4 | 103 | 83 | | |

| Waterbodies Assigned TMDLs | Copper TMDL | Lead TMDL | Zinc TMDL | Selenium TMDL |
|---|---|---|---|---|
| Tujunga Wash | 166 | 83 | | |
| LA River Reach 3 above LA-Glendale WRP | 91 | 102 | | |
| Verdugo Wash | 50 | 102 | | |
| LA River Reach 3 below LA-Glendale WRP | 103 | 100 | | |
| Burbank Western Channel (above WRP) | 124 | 126 | | |
| Burbank Western Channel (below WRP) | 90 | 75 | | |
| LA River Reach 2 | 87 | 94 | | |
| Arroyo Seco | 29 | 94 | | |
| LA River Reach 1 | 91 | 102 | | |
| Compton Creek | 64 | 73 | | |
| Rio Hondo Reach 1 | 126 | 37 | 131 | |
| Monrovia Canyon | | | 66 | |

*Wet-Weather WLAs (total recoverable metals) (micrograms per liter)*

Cadmium = 3.1
Copper = 67.5
Lead = 94
Zinc = 159

Deliverables/Actions Required:
The California State University Los Angeles and California State University Northridge are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final dry weather WLAs shall be achieved by January 11, 2024, and the final wet weather WLAs shall be achieved by January 11, 2028.

***Ballona Creek Metals TMDL***
The Ballona Creek Metals TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:
The Los Angeles Regional Water Board has determined that the University of California Los Angeles and the Veteran Affairs of the Greater Los Angeles Healthcare System, Non-traditional MS4s, are sources of storm water and non-storm discharges subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):
*Dry-Weather WLAs (total recoverable metals) (shared) (grams per day):*

| | | | |
|---|---|---|---|
| Ballona Creek: | Copper: 1,457.6 | Lead: 805.0 | Zinc: 18,302.1 |
| Sepulveda Channel: | Copper: 540.6 | Lead: 298.7 | Zinc: 6,790.8 |

*Wet-Weather WLAs (total recoverable metals) (shared) (grams per day):*

| | |
|---|---|
| Copper: | $1.297 \times 10^{-5} \times L$ |
| Lead: | $7.265 \times 10^{-5} \times L$ |
| Zinc: | $9.917 \times 10^{-5} \times L$ |

Where L = daily storm volume (liters)

Deliverables/Actions Required:
The University of California Los Angeles and the Veteran Affairs of the Greater Los Angeles Healthcare System are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs during dry weather are to be achieved by January 11, 2016. The final WLAs during wet weather shall be achieved by January 11, 2021. The final WLAs during dry weather are therefore effective immediately. The University of California Los Angeles and/or the Veteran Affairs of the Greater Los Angeles Healthcare System may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

***San Gabriel River Metals and Selenium TMDL***
The San Gabriel River Metals and Selenium TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Los Angeles Regional Water Board has determined that the California State Polytechnic University, Pomona, a Non-traditional MS4, is a source of urban runoff subject to this Order and is responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):
The San Gabriel River Metals and Selenium TMDL assigns WLAs to urban runoff in Walnut and San Jose Creeks, tributaries to the San Gabriel River for entities within the city of Pomona, which includes California State Polytechnic University, Pomona. Therefore, only WLAs assigned to Walnut and San Jose Creeks will be included in this Order.

Selenium allocation for San Jose Creek Reach 1 and Reach 2 (total recoverable metals):

| | |
|---|---|
| Point Sources: | Municipal Stormwater |
| Waste Load Allocation: | 5 micrograms per liter |

Deliverables/Actions Required:
The California State Polytechnic University, Pomona is required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA; or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an

approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL does not specify a final attainment date.

***San Gabriel River Indicator Bacteria TMDL***

The San Gabriel River Indicator Bacteria TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the California State Polytechnic University, Pomona, a Non-traditional MS4, is a source of wet- and dry-weather discharges from MS4s subject to this Order and is responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):

The San Gabriel River Indicator Bacteria TMDL assigns WLAs to urban runoff in the San Gabriel River and its tributaries.

The following WLAs are receiving water allocations. Geometric mean values shall be calculated weekly as a rolling geometric mean using a minimum of 5 samples, for six week periods starting all calculation weeks on Sunday. Geometric mean limits may not be exceeded at any time.

*Geometric Mean Limits*

E. coli density shall not exceed 126/100 ml

*Single Sample Limits*

E. coli density shall not exceed 235/100 ml

For the Single Sample Limits, TMDL compliance focuses on the number of days that any single sample exceeds the limits set forth above, based on the time of year. This focus is expressed as Single Sample Allowable Exceedances, shown below.

*Single Sample Allowable Exceedances* Wasteload Allocations in the Receiving Water:*

Summer Dry Weather: 5 days (based on daily sampling), or 1 day (based on weekly sampling)

Waters not subject to the High Flow Suspension:

Wet Weather: 17 days (daily sampling), or 3 days (weekly sampling)

Waters subject to the High Flow Suspension:

Wet Weather: 11 days (daily sampling), or 2 (weekly sampling)

* = The Allowable Exceedance Day is defined as the number of days (per year) a monitoring location is allowed to exceed any of the single sample limits.

A storm year is defined as the period from November 1 through October 31.

Deliverables/Actions Required:

The California State Polytechnic University, Pomona is required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA; or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an

approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs are to be achieved for single sample objectives and during dry weather by June 14, 2026, while the final WLAs during wet weather are to be achieved by June 14, 2036.

***Los Cerritos Channel Metals TMDL***

The Los Cerritos Channel Metals TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the California State University Long Beach and Long Beach Veterans' Affairs Medical Center, Non-traditional MS4s, are sources of storm water and non-storm water discharges subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):

*Dry-Weather WLA (total recoverable metals) (shared) (g/day):*

Copper: 67.2

*Wet-Weather WLAs (total recoverable metals) (shared) (g/day based on flow of 40 cfs):*

Copper: 461.4
Lead: 2,631.5
Zinc: 4,510.7

Deliverables/Actions Required:

The California State University Long Beach and Long Beach Veterans' Affairs Medical Center are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs during dry weather shall be achieved by September 30, 2023. The final WLAs during wet weather shall be achieved by September 30, 2026.

***Ballona Creek Estuary Toxic Pollutants TMDL***

The Ballona Creek Estuary Toxic Pollutants TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the University of California Los Angeles and the Veteran Affairs of the Greater Los Angeles Healthcare System, Non-traditional MS4s, are sources of storm water and non-storm water discharges subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):

WLAs are expressed as shared allocations amongst the MS4 permittees in the Ballona Creek watershed.

| | | |
|---|---|---|
| Cadmium: | 8.0 | kg/yr |
| Copper: | 227.3 | kg/yr |
| Lead: | 312.3 | kg/yr |
| Silver: | 6.69 | kg/yr |
| Zinc: | 1003 | kg/yr |
| Chlordane: | 8.69 | g/yr |
| DDTs: | 12.70 | g/yr |
| Total PCBs: | 21.40 | g/yr |

Deliverables/Actions Required:
The University of California Los Angeles and the Veteran Affairs of the Greater Los Angeles Healthcare System are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs shall be achieved by January 11, 2021.

***Ballona Creek Trash TMDL***
The Ballona Creek Trash TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Los Angeles Regional Water Board has determined that the University of California Los Angeles and the Veteran Affairs of the Greater Los Angeles Healthcare System, Non-traditional MS4s, are sources of storm water discharges subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):
Final WLA is zero trash.

Deliverables/Actions Required:
The Los Angeles Regional Water Board has determined that the contribution by these non-traditional MS4s is significant. In order for the permittees to meet their obligation to ensure that the WLA is met, the permittees will be required to implement either 1) Full Capture Systems, 2) partial capture devices and the application of institutional controls, or 3) a scientifically based alternative attainment approach.

1) A Full Capture System is any device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate (Q) resulting from a one-year, one hour, storm in the subdrainage area. The Rational Equation is used to compute the peak flow rate:

$$Q = C * I * A$$

Where:

Q = design flow rate (cubic foot per second)
C = runoff coefficient
I = design rainfall intensity (inches per hour)
A = subdrainage area (acres)

2) Permittees employing partial capture devices or institutional controls shall use a mass balance approach based on the trash daily generation rate (DGR)[46], to demonstrate compliance.

   The DGR shall be reassessed annually. Permittees may request a less frequent assessment of its DGR when the final WLA has been met (as described below) and the responsible jurisdiction continues to implement at the same level of effort partial capture devices and institutional controls for Executive Officer approval. A return to annual DGR calculation shall be required for a period of years to be determined by the Executive Officer after significant land use changes.

   Permittees employing institutional controls or a combination of full capture systems, partial capture devices, and institutional controls shall be deemed in attainment of the final WLAs when the reduction of trash from the jurisdiction's baseline load, is between 99% and 100% as calculated using a mass balance approach, and the full capture systems and partial capture devices are properly sized, operated, and maintained.

   Alternatively, permittees may request that the Executive Officer make a determination that a 97% to 98% reduction of the baseline load as calculated using a mass balance approach, constitutes full attainment of the final WLA if all of the following criteria are met:

   a. The agency submits to the Regional Board a report for Executive Officer approval, including, two or more consecutive years of data showing that the Permittee's attainment was at or above a 97% reduction in its baseline trash load;

   b. An evaluation of institutional controls in the jurisdiction demonstrating continued effectiveness and any potential enhancements; and

   c. Demonstration that opportunities to implement partial capture devices have been fully exploited.

3) Permittees employing an alternative attainment approach shall conduct studies of institutional controls and partial capture devices for their particular subwatershed(s) or demonstrate that existing studies are representative and transferable to the implementing area for Executive Officer approval. Permittees shall also provide a schedule for periodic, compliance effectiveness demonstration and evaluation. Full capture systems and partial capture devices shall be properly sized, operated, and maintained consistent with sizing, operation, and maintenance schedules used to determine their effectiveness.

The TMDL specifies that the final WLA (0% of the baseload discharged) is to be achieved by September 30, 2015. The WLA is therefore effective immediately.

[46] The DGR is the average amount of trash deposited during a 24-hour period, as measured in a specified drainage area.

***Los Angeles River Trash TMDL***

The Los Angeles River Trash TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the California State University Los Angeles and California State University Northridge, Non-traditional MS4s, are sources of storm water discharges subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):

Final WLA is zero trash.

Deliverables/Actions Required:

The Los Angeles Regional Water Board has determined that the contribution by these non-traditional MS4s is significant. In order for the permittees to meet their obligation to ensure that the WLA is met, the permittees will be required to implement either 1) Full Capture Systems, 2) partial capture devices and the application of institutional controls, or 3) a scientifically based alternative attainment approach.

1) A Full Capture device is any device that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate (Q) resulting from a one-year, one hour, storm in the subdrainage area. The Rational Equation is used to compute the peak flow rate:

$$Q = C * I * A$$

Where:

Q = design flow rate (cubic foot per second)
C = runoff coefficient
I = design rainfall intensity (inches per hour)
A = subdrainage area (acres)

2) Permittees employing partial capture devices or institutional controls shall use a mass balance approach based on the trash daily generation rate (DGR)[47], to demonstrate compliance.

The DGR shall be reassessed annually. Permittees may request a less frequent assessment of its DGR when the final WLA has been met (as described below) and the responsible jurisdiction continues to implement at the same level of effort partial capture devices and institutional controls for Executive Officer approval. A return to annual DGR calculation shall be required for a period of years to be determined by the Executive Officer after significant land use changes.

Permittees employing institutional controls or a combination of full capture systems, partial capture devices, and institutional controls shall be deemed in attainment of the final WLAs when the reduction of trash from the jurisdiction's baseline load, is between 99% and

[47] The DGR is the average amount of trash deposited during a 24-hour period, as measured in a specified drainage area.

100% as calculated using a mass balance approach, and the full capture systems and partial capture devices are properly sized, operated, and maintained.

Alternatively, permittees may request that the Executive Officer make a determination that a 97% to 98% reduction of the baseline load as calculated using a mass balance approach, constitutes full attainment of the final WLA if all of the following criteria are met:

a. The agency submits to the Regional Board a report for Executive Officer approval, including, two or more consecutive years of data showing that the Permittee's attainment was at or above a 97% reduction in its baseline trash load;

b. An evaluation of institutional controls in the jurisdiction demonstrating continued effectiveness and any potential enhancements; and

c. Demonstration that opportunities to implement partial capture devices have been fully exploited.

3) Permittees employing an alternative attainment approach shall conduct studies of institutional controls and partial capture devices for their particular subwatershed(s) or demonstrate that existing studies are representative and transferable to the implementing area for Executive Officer approval. Permittees shall also provide a schedule for periodic, compliance effectiveness demonstration and evaluation. Full capture systems and partial capture devices shall be properly sized, operated, and maintained consistent with sizing, operation, and maintenance schedules used to determine their effectiveness.

The TMDL specifies that the final WLA (0% of the baseload discharged) is to be achieved by September 30, 2016. The WLA is therefore effective immediately.

***Ventura River Estuary Trash TMDL***

The Ventura River Estuary Trash TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the Ventura County Fairgrounds (Seaside Park and Ventura County Fairgrounds), a Non-traditional MS4, is a source of storm water discharges subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):

Final WLA is zero trash.

Deliverables/Actions Required:

The Los Angeles Regional Water Board has determined that the contribution by these non-traditional MS4s is significant. In order for the permittees to meet their obligation to ensure that the WLA is met, the permittees will be required to implement one of two options for the control of trash. The TMDL allows permittees to meet the WLA by either: 1) installing and maintaining Full Capture Systems, or 2) with Regional Water Board Executive Officer approval, implement a program for minimum frequency of assessment and collection (MFAC) in conjunction with BMPs.

1) A Full Capture device is any device that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate (Q) resulting from a

one-year, one hour, storm in the subdrainage area. The Rational Equation is used to compute the peak flow rate:

$$Q = C * I * A$$

Where:

Q = design flow rate (cubic foot per second)
C = runoff coefficient
I = design rainfall intensity (inches per hour)
A = subdrainage area (acres)

2) Attainment of the WLA through the MFAC program in conjunction with BMPs may be proposed to the Regional Water Board's Executive Officer for approval. The MFAC program must include requirements equivalent to those described in the Conditional Waiver set forth in the TMDL. The due date for submittal of the required information to select this option was October 2008. Therefore, this option is no longer available for permittees under this Order and was included only for completeness.

The TMDL specifies that the final WLA is to be achieved by March 6, 2016. The final WLA therefore is effective immediately.

## *CENTRAL VALLEY REGIONAL WATER BOARD TMDLS*

***Lower San Joaquin River Diazinon & Chlorpyrifos TMDL***

The Lower San Joaquin River Diazinon & Chlorpyrifos TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Valley Regional Water Board has determined that the City of Patterson, a Traditional MS4, is a source of "NPDES permitted discharges" subject to this Order and is responsible for implementing the requirements of this TMDL.

Many of the permittees listed in Attachment G of the permit adopted on February 5, 2013, have been removed. These permittees are not specifically assigned allocations in the TMDL adopted by the Central Valley Regional Water Board. The removed permittees do not discharge directly to the San Joaquin River. An impaired water body segment must have TMDL-specific requirements under the TMDL. Through development of this Amendment the Central Valley Water Board has determined that only the City of Patterson, which discharges directly to the San Joaquin River, is responsible for implementing the requirements of this TMDL.

Wasteload Allocations:

The wasteload allocations for NPDES permitted municipal storm water Permittees shall not exceed the sum (S) of one (1) as defined below:

$$S = \frac{C_D}{WQO_D} + \frac{C_C}{WQO_C} \leq 1.0$$

Where:

$C_D$ = diazinon concentration in micrograms per liter of point source discharge

$C_C$ = chlorpyrifos concentration in micrograms per liter of point source discharge
$WQO_D$ = acute or chronic diazinon water quality objective (0.160 and 0.100 micrograms per liter, respectively)
$WQO_C$ = acute or chronic chlorpyrifos water quality objective. (0.025 and 0.015 micrograms per liter, respectively)

For the purpose of calculating the sum (S) above, non-detectable concentrations are considered to be zero. In determining compliance with the effluent limitations in Section C.1 of this Order related to the attainment of these wasteload allocations, the Central Valley Regional Water Board will consider data or information submitted by the Permittee regarding diazinon and chlorpyrifos inputs from sources that are outside of the jurisdiction of the permitted discharge, and any applicable provisions in this Order requiring the Permittee to reduce the discharge of pollutants to the maximum extent practicable.

Deliverables/Actions Required:
To create a path towards compliance with this TMDL, the permittees are being directed to conduct an assessment of the waterbody. The assessment will be used to ascertain the loads from urban runoff, whether the waterbody is meeting its objectives, whether or not an alternative constituent is the cause of impairment and whether a synergistic effect is present. As an alternative, the permittees may participate in the Bay Delta Regional Monitoring Program, upon the Central Valley Regional Water Board Executive Officer approval.

The deadline for attainment of WLAs was December 1, 2010. Therefore, the WLA is to be achieved immediately.

***Sacramento and San Joaquin Delta Diazinon & Chlorpyrifos TMDL***
The Sacramento and San Joaquin Delta Diazinon & Chlorpyrifos TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Valley Regional Water Board has determined that the Cities of Lathrop, Lodi, Manteca, Rio Vista, Tracy, and West Sacramento and the County of San Joaquin, Traditional MS4s, are sources of “NPDES permitted dischargers” subject to this Order and are responsible for implementing the requirements of this TMDL.

The Cities of Davis, Dixon, French Camp, Morada, Vacaville, and Woodland, listed in the original permit adopted on February 5, 2013, have been removed from this TMDL. These permittees are not specifically assigned allocations in the TMDL adopted by the Central Valley Regional Water Board. The Central Valley Water Board determined that they were erroneously listed since they do not discharge directly to the Sacramento and San Joaquin Delta. The Cities of Lathrop, Lodi, Manteca, Rio Vista, Tracy and West Sacramento and the County of San Joaquin discharge directly to the Sacramento and San Joaquin Delta.

Wasteload Allocations:
The wasteload allocations for NPDES permitted municipal storm water Permittees shall not exceed the sum (S) of one (1) as defined below:

$$S = \frac{C_D}{WQO_D} + \frac{C_C}{WQO_C} \leq 1.0$$

Where:

$C_D$ = diazinon concentration in micrograms per liter of point source discharge

$C_C$ = chlorpyrifos concentration in micrograms per liter of point source discharge

$WQO_D$ = acute or chronic diazinon water quality objective (0.160 and 0.100 micrograms per liter, respectively)

$WQO_C$ = acute or chronic chlorpyrifos water quality objective. (0.025 and 0.015 micrograms per liter, respectively)

For the purpose of calculating the sum (S) above, non-detectable concentrations are considered to be zero. In determining compliance with the effluent limitations in Section C.1 of this Order related to the attainment of these wasteload allocations, the Central Valley Regional Water Board will consider data or information submitted by the Permittee regarding diazinon and chlorpyrifos inputs from sources that are outside of the jurisdiction of the permitted discharge, and any applicable provisions in this Order requiring the Permittee to reduce the discharge of pollutants to the maximum extent practicable.

Deliverables/Actions Required:

To create a path towards compliance with this TMDL, the permittees are being directed to conduct an assessment of the waterbody. The assessment will be used to ascertain the loads from urban runoff, whether the waterbody is meeting its objectives, whether or not an alternative constituent is the cause of impairment and whether a synergistic effect is present. As an alternative, the permittees may participate in the Bay Delta Regional Monitoring Program, upon Executive Officer approval.

The deadline for attainment of WLAs was December 1, 2011. Therefore, the WLA is to be achieved immediately.

***Sacramento and Feather Rivers Diazinon & Chlorpyrifos TMDL***

The Sacramento and Feather Rivers Diazinon & Chlorpyrifos TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Valley Regional Water Board has determined that the Cities of Anderson, Marysville, Red Bluff, Redding and Yuba City, the Counties of Colusa, Shasta, Sutter and Yuba, Traditional MS4s, are sources of “Urban storm water runoff” subject to this Order and are responsible for implementing the requirements of this TMDL.

The Cities of Chico, Live Oak, Lincoln, Loomis, Roseville and Rocklin and the County of Butte, listed in the original permit adopted on February 5, 2013, have been removed from this TMDL. These permittees are not specifically assigned allocations in the TMDL adopted by the Central Valley Regional Water Board. The Central Valley Water Board determined that they were erroneously listed since they do not discharge directly to the Sacramento and/or Feather rivers. The Cities of Anderson, Colusa, Marysville, Red Bluff, Redding and Yuba City, and the Counties of Colusa, Shasta and Sutter discharge directly to the Sacramento and/or Feather rivers.

Wasteload Allocations:

The wasteload allocations for NPDES permitted municipal storm water Permittees shall not exceed the sum (S) of one (1) as defined below:

$$S = \frac{C_D}{WQO_D} + \frac{C_C}{WQO_C} \leq 1.0$$

Where:

$C_D$ = diazinon concentration in micrograms per liter of point source discharge

$C_C$ = chlorpyrifos concentration in micrograms per liter of point source discharge

$WQO_D$ = acute or chronic diazinon water quality objective (0.160 and 0.100 micrograms per liter, respectively)

$WQO_C$ = acute or chronic chlorpyrifos water quality objective. (0.025 and 0.015 micrograms per liter, respectively)

For the purpose of calculating the sum (S) above, non-detectable concentrations are considered to be zero. In determining compliance with the effluent limitations in Section C.1 of this Order related to the attainment of these wasteload allocations, the Central Valley Regional Water Board will consider data or information submitted by the Permittee regarding diazinon and chlorpyrifos inputs from sources that are outside of the jurisdiction of the permitted discharge, and any applicable provisions in this Order requiring the Permittee to reduce the discharge of pollutants to the maximum extent practicable.

Deliverables/Actions Required:

To create a path towards compliance with this TMDL, the permittees are being directed to conduct an assessment of the waterbody. The assessment will be used to ascertain the loads from urban runoff, whether the waterbody is meeting its objectives, whether or not an alternative constituent is the cause of impairment and whether a synergistic effect is present. As an alternative, the permittees may participate in the Bay Delta Regional Monitoring Program, upon Executive Officer approval.

The deadline for attainment of WLAs was August 11, 2008. Therefore, the WLA is to be achieved immediately. The Cities of Anderson, Marysville, Red Bluff, Redding and Yuba City, the Counties of Colusa, Shasta, Sutter and Yuba may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

*Demonstration of Attainment of Diazinon and Chlorpyrifos Wasteload Allocations for ALL Diazinon and Chlorpyrifos TMDLs*

Attainment of the diazinon and chlorpyrifos wasteload allocations may be demonstrated by any one of the following methods:

a. Submission of receiving water monitoring and/or other information, as authorized by the Executive Officer, that reasonably demonstrates attainment with the WLA.
b. Attainment of WLAs within the discharge (monitoring representative of the MS4 discharge may be used with Executive Officer approval).
c. Permanent cessation of discharges from the Permittee's MS4 to receiving waters.

For those Permittees that have not demonstrated achievement of WLA by the attainment date (shown above), implementation of BMPs consistent with an Executive Officer-approved Management Plan that outlines BMPs and a schedule to reduce discharges of diazinon and

chlorpyrifos and that are capable of ultimately attaining the WLA is required. Management Plans shall be developed pursuant to the implementation schedules stated in Attachment G.

***Lower San Joaquin River, San Joaquin River and Stockton Deep Water Ship Channel (DWSC) Organic Enrichment and Low Dissolved Oxygen TMDL***

The Lower San Joaquin River, San Joaquin River and Stockton DWSC Organic Enrichment and Low Dissolved Oxygen TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:[48]

The Central Valley Regional Water Board has determined that the Cities of Atwater, Ceres, Delhi, Hughson, Lathrop, Livingston, Los Banos, Manteca, Merced, Oakdale, Patterson, Ripon, Riverbank and Turlock, the Counties of Merced, San Joaquin and Stanislaus, Traditional MS4s, are sources of "Storm water discharges" subject to this Order and are responsible for implementing the requirements of this TMDL.

The CDPs of French Camp and Winton, listed in the originally adopted permit, have been removed from this TMDL. These permittees were removed because they exist within existing MS4 areas subject to this permit (i.e. the counties they are located in). Therefore, it was determined that these permittees should not have been included in Appendix G under this TMDL and thus have been removed.

Wasteload Allocations:

The San Joaquin River Dissolved Oxygen Control Program set the wasteload allocations for NPDES-permitted discharges of oxygen demanding substances and their precursors as the effluent limitations that were applicable on 28 January 2005. On 28 January 2005, the 2003 Phase II MS4 permit stated the following for effluent limitations in section C.1. Effluent Limitations: Permittees must implement BMPs that reduce pollutants in storm water to the technology-based standard of MEP. This Order applies these limitations to discharges from MS4s maintained by the Phase II Entities listed above. In determining compliance with permit requirements related to attainment of these wasteload allocations, credit will be given for control measures implemented after 12 July 2004.

The San Joaquin River Dissolved Oxygen Control Program defines oxygen demanding substances and their precursors as any substance or substances that consume, have the potential to consume, or contribute to the growth or formation of substances that consume or have the potential to consume oxygen from the water column.

Deliverables/Actions Required:

To comply with the WLAs established in this TMDL, the Phase II entities shall comply with the provisions of this Order. Specific actions taken to comply with this TMDL will be documented in the Annual Report along with a discussion on the effectiveness of the BMPs implemented and actions taken to improve the effectiveness in meeting the WLAs.

The permittees will also conduct monitoring to show compliance with the TMDL based upon a submitted Monitoring Plan. As an alternative, the permittees may participate in the Bay Delta

[48] The Fact Sheet is not consistent with the final amendment adopted by the State Water Board. (See Attachment G) The cities of Escalon and Newman should have been named here and the city of Delhi should have been removed.

Regional Monitoring Program, upon Central Valley Regional Water Board Executive Officer approval.

The deadline for attainment of WLAs was December 31, 2011. Therefore, the WLA is to be achieved immediately. The Cities of Atwater, Ceres, Escalon, Hughson, Lathrop, Livingston, Los Banos, Manteca, Merced, Newman, Oakdale, Patterson, Ripon, Riverbank and Turlock, the Counties of Merced, San Joaquin and Stanislaus may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

*Demonstration of Compliance with Effluent Limitations Associated with Wasteload Allocations for Oxygen Demanding Substances and Their Precursors*

Compliance with the effluent limitations in Section C.1 of this permit associated with the wasteload allocations for oxygen demanding substances and their precursors may be demonstrated by any one of the following methods:

a. Receiving water monitoring and/or other information, as authorized by the Executive Officer, that reasonably demonstrates attainment with the WLA.
b. Permanent cessation of discharges from the Permittee's MS4 to receiving waters.

For those Permittees that have not demonstrated achievement of WLA by the attainment date (shown above), implementation of BMPs consistent with an Executive Officer-approved Management Plan that outlines BMPs and a schedule to reduce discharges of oxygen demanding substances and their precursors to attain the WLA is required. Management Plans shall be developed within twelve months after adoption of this Attachment G. It is not the intention of the State Water Board or the Central Valley Water Board to take enforcement action against Permittees for violation of Section C.1 effluent limitations related to the WLA while the Plan is being developed and implemented, provided the Permittee develops the Plan in accordance with applicable implementation schedules. The Permittee may also request a time schedule order incorporating the implementation measures and compliance schedule of the Management Plan.

***Delta Methylmercury TMDL***

On April 22, 2010, the Central Valley Regional Water Board adopted Resolution No. R5-2010-0043 to amend the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan) to include a methylmercury TMDL and an implementation plan for the control of methylmercury and total mercury in the Sacramento-San Joaquin Delta Estuary (Delta Mercury Control Program). The Basin Plan amendment includes the addition of: (1) site-specific numeric fish tissue objectives for methylmercury; (2) the commercial and sport fishing (COMM) beneficial use designation for the Delta and Yolo Bypass; (3) methylmercury load allocations for non-point sources and wasteload allocations for point sources; and (4) an implementation plan that includes adaptive management to address mercury and methylmercury in the Delta and Yolo Bypass.

The Delta TMDL covers the Counties of Alameda, Contra Costa, Sacramento, San Joaquin, Solano and Yolo both within legal Delta boundary defined by California Water Code Section 12220 and the Yolo Bypass, a 73,300-acre floodplain on the west side of the lower Sacramento River.

The Delta is on the Clean Water Act Section 303(d) List of Impaired Water Bodies because of elevated levels of mercury in fish. Beneficial uses of the Delta that are impaired due to the elevated methylmercury levels in fish are wildlife habitat (WILD) and human consumption of aquatic organisms. The Delta provides habitat for warm and cold-water species of fish and their associated aquatic communities. Additionally, the Delta and its riparian areas provide valuable wildlife habitat. There is significant use of the Delta for fishing and collection of aquatic organisms for human consumption. Further, water is diverted from the Delta for statewide municipal (MUN) and agricultural (AGR) use.

Mercury in the Central Valley comes primarily from historic mercury and gold mines and from resuspension of contaminated material in stream beds and banks downstream of the mines, as well as from modern sources such as atmospheric deposition from local and global sources, waste water treatment plants, and urban runoff. Methylmercury, the most toxic form of mercury, forms primarily by sulfate reducing bacteria methylating inorganic mercury. Sources of methylmercury include methylmercury flux from sediment in open water and wetland habitats, urban runoff, irrigated agriculture, and waste water treatment plants. Water management activities, including water storage, conveyance, and flood control, can affect the transport of mercury and the production and transport of methylmercury.

Phase II Entities:

The Delta Mercury Control Program assigns mass-based methylmercury TMDL allocations to all sources of methylmercury in the Delta and Yolo Bypass, including urban runoff from Phase I and Phase II MS4s. In the Delta and Yolo Bypass, the TMDL assigns individual methylmercury wasteload allocations to the following small urban runoff agencies:

City of Lathrop
City of Lodi
City of Rio Vista
County of San Joaquin
City of West Sacramento
County of Yolo
City of Tracy

The County of Solano is being removed from this TMDL. The Delta TMDL was based on information available at the time of its development. The Delta Methylmercury TMDL Staff Report calculated urban runoff methylmercury allocations using the Department of Water Resources' land use designations for urban and other land uses within the legal Delta boundary. A recent review of Solano County's 2003 Storm Water Management Plan, which is relevant because this plan was in effect when the Delta TMDL was developed, revealed a discrepancy between the acreages used to assess urban areas. The County's Storm Water Management Plan indicated that the MS4 permit jurisdiction only applied to the County's urbanized areas defined by the 2000 Census. The County's maps indicate there are no urbanized areas within the legal Delta boundaries.

While methylmercury from urbanized areas covered by the County's Phase II MS4 program does discharge to the Delta, the methylmercury allocations included in the TMDL should have been assigned only to the County's MS4 urbanized areas within the Delta and Yolo Bypass. Based on the 2003 Storm Water Management Plan, the urban acreage is zero and subsequently there should not be an allocation assigned to this area. This discrepancy will be

corrected when the Central Valley Regional Water Board conducts a full review of the TMDL in 2020.

Therefore, at this time the Solano County MS4 program is not subject to the Delta Mercury Control Program requirements, including attainment of the allocations or compliance with mercury exposure reduction program (MERP) requirements.

Wasteload Allocations:
The methylmercury wasteload allocations are as follows:

**Methylmercury Wasteload Allocations Table**

| Municipality | Wasteload Allocations, Methylmercury (grams per year) |
|---|---|
| City of Lathrop | 0.097 |
| City of Lodi | 0.053 |
| City of Rio Vista | 0.0078 |
| City of Tracy | 0.65 |
| City of West Sacramento (Sacramento River subarea) | 0.36 |
| City of West Sacramento (Yolo Bypass subarea) | 0.28 |
| County of San Joaquin (Central Delta subarea) | 0.57 |
| County of San Joaquin (Mokelumne River subarea) | 0.016 |
| County of San Joaquin (Sacramento River subarea) | 0.11 |
| County of San Joaquin (San Joaquin River subarea) | 0.79 |
| County of Yolo (Sacramento River subarea) | 0.041 |
| County of Yolo (Yolo Bypass subarea) | 0.083 |

Deliverables/Actions Required:
Mercury is often attached to sediment, and the formation of methylmercury is linked in part to the concentration of mercury concentrations in sediment. Reductions in mercury concentrations will result in methylmercury reductions and subsequently methylmercury levels in fish. To comply with the TMDL, the agencies are required to implement best management practices to control erosion and sediment discharges with the goal of reducing mercury discharges. Methylmercury wasteload allocations for MS4 dischargers in the Delta and Yolo Bypass shall be met as soon as possible, but no later than December 31, 2030, unless the Central Valley Regional Water Board modifies the implementation schedule and final attainment date. Compliance will be determined by the method(s) described further in this document.

*Demonstration of Attainment of Methylmercury Wasteload Allocations:*
Compliance with the effluent limitations in Section C.1 of this permit associated with methylmercury wasteload allocations may be demonstrated by any one of the following methods:

a. Management Plans shall be developed within one year after the Central Valley Regional Water Board's review of the Delta Mercury Control Program or October 20, 2022, whichever date occurs first. For those MS4 Permittees that have not demonstrated achievement of WLA by December 31, 2030, the MS4s shall implement BMPs consistent with an approved updated Management Plan that shall outline BMPs and schedule to reduce discharges of methylmercury to ultimately attain the WLA.
b. Receiving water monitoring and/or other information, as authorized by the Executive Officer, that reasonably demonstrates attainment with the WLA.
c. Attainment of WLAs within the discharge (monitoring representative of the MS4 discharge may be used with Executive Officer approval).
d. Permanent cessation of discharges from the Permittee's MS4 to receiving waters.

***Clear Lake Nutrients TMDL***

The Clear Lake Nutrients TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Valley Regional Water Board has determined that the Cities of Clearlake and Lakeport, and the County of Lake, Traditional MS4s, are sources of "storm water" subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations:

The County of Lake, City of Clearlake and City of Lakeport have a combined wasteload allocation of 2,000 kg phosphorus/yr, as an average annual load (five year rolling average).

Deliverables/Actions Required:

To comply with the WLAs established in this TMDL, the Phase II entities shall comply with the provisions of this Order. Specific actions taken to comply with this TMDL will be documented in the Annual Report along with a discussion on the effectiveness of the BMPs implemented and actions taken to improve the effectiveness in meeting the WLAs.

The permittees will also conduct monitoring to show compliance with the TMDL based upon a submitted Monitoring Plan. As an alternative, the permittees may participate in a regional monitoring program, upon Executive Officer approval.

The deadline for attainment of WLAs is June 19, 2017. Therefore, the WLA are effective immediately. The Cities of Clearlake and Lakeport, and the County of Lake may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

*Demonstration of Compliance with Effluent Limitations Associated with Phosphorus Wasteload Allocations*

Compliance with the effluent limitations in Section C.1 of this permit associated with the phosphorus wasteload allocation may be demonstrated by any one of the following methods:

a. Receiving water monitoring and/or other information, as authorized by the Executive Officer, that reasonably demonstrates attainment with the WLA.
b. Attainment of WLA within the discharge (monitoring representative of the MS4 discharge may be used with Executive Officer approval).
c. Permanent cessation of discharges from the Permittee's MS4 to receiving waters.

d. For those Permittees that have not demonstrated achievement of WLA by the attainment date (shown above), implementation of BMPs consistent with an Executive Officer-approved Management Plan that outlines BMPs and a schedule to reduce discharges of phosphorus to ultimately attain the WLA is required. Management Plans shall be developed by [Hard Date: 12 months from Adoption]. The Central Valley Regional Water Board Executive Officer may require revisions to the Management Plan if the Management Plan is not likely to attain the waste load allocations.

## *LAHONTAN REGIONAL WATER BOARD TMDLs*

***Middle Truckee River Watershed and Placer, Nevada and Sierra Counties Sediment TMDL***

The Middle Truckee River Watershed and Placer, Nevada and Sierra Counties Sediment TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Lahontan Regional Water Board has determined that the City of Truckee and the County of Placer, Traditional MS4s, are sources of “Urban areas” subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations:

The following wasteload allocations are applicable:

*Urban Areas Wasteload Allocations:*

4,936 tons per year of total suspended sediment load.

*Non-urban Wasteload Allocations:*

35,392 tons per year of total suspended sediment load.

Deliverables/Actions Required:

To comply with the WLAs of this TMDL, the permittees will be required to track and report on the amount of road sand, used for de-icing, used and recovered. The permittees will also rehabilitate old dirt roads to control erosion and to prevent erosion from legacy sites. They will also implement an Education and Outreach program for ski areas within their jurisdiction for sediment and erosion control. They will also be required to continue implementation of their municipal monitoring program.

Attainment of wasteload allocations will be determined based on a target of 25 milligrams per liter, or less, of suspended sediment. The estimated time frame for meeting the numeric targets and achieving the TMDL is 20 years (i.e. 2028).

## *SANTA ANA REGIONAL WATER BOARD TMDLs*

***San Diego Creek, Upper and Lower Newport Bay Organochlorine Compounds TMDL***

The Newport Bay watershed is a highly urbanized watershed. The two nontraditional MS4s in this watershed, Orange County Fairgrounds and University of California - Irvine, are both tributary to traditional MS4s that discharge to the Santa Ana Delhi Channel and San Diego Creek Reach 1, respectively. The implementation requirements and wasteload allocations assigned to the traditional MS4s in the TMDLs that have been established for the Newport Bay

watershed, including both Regional Board adopted and USEPA promulgated TMDLs that are still in effect, therefore apply to these two nontraditional MS4s.

Phase II Entities:

The Santa Ana Regional Water Board has determined that the University of California, Irvine and the Orange County Fairgrounds, Non-Traditional MS4s, are sources of "Urban runoff" subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations:

Not Applicable

Deliverables/Actions Required:
The Santa Ana Regional Board has determined that the contribution by these non-traditional MS4s into the MS4 systems currently owned and operated by agencies implementing storm water programs regulated by Phase I permits are minimal in comparison. Therefore, the Santa Ana Regional Water Board has determined that for these non-traditional entities, consultation with Regional Water Board staff is needed to determine proposed actions and evaluations that will satisfy the goals and assumptions of the TMDL.

The TMDL specifies that the final WLAs are to be achieved by December 31, 2020.

***Lake Elsinore and Canyon Lake Nutrients TMDL***
The former March Air Reserve Base was downsized and became known as March ARB. March ARB is an active military base that covers 2,300 acres. Activities in the base proper includes military activities such as air refueling, air cargo, air reconnaissance, military interceptors, military housing, recreational and dining facilities, commercial air cargo, training facilities, schools, operations centers for troop transport and industrial, including airport operations. Land use activities are under Base commander authority. The Base is currently covered under an individual industrial storm water permit for their industrial operations and is a stakeholder under the Lake Elsinore/Canyon Lake TMDL. In addition to industrial permit monitoring, the Base monitors their compliance with the TMDL. Regional Water Board staff determined that Phase II permit coverage is an appropriate permit to address the pollutants and flows generated from Base operations. Development and redevelopment post construction controls are of particular importance to be incorporated into the base's storm water program through Phase II permit coverage.

Phase II Entities:

The Santa Ana Regional Water Board has determined that the March ARB, a Non-Traditional MS4, is a source of "Urban discharges" subject to this Order and is responsible for implementing the requirements of this TMDL.

Wasteload Allocations: (shared for all Urban discharges)
Final WLA for Total Phosphorus (expressed as 10 year rolling average):
124 kilograms per year

Final WLA for Total Nitrogen (expressed as 10 year rolling average):
349 kilograms per year

Deliverables/Actions Required:
March ARB has already committed to cooperative implementation actions, monitoring actions, special studies and implementation actions jointly with other responsible agencies as an active

paying member of the Lake Elsinore/Canyon Lake TMDL Task Force. Therefore, continuation of this commitment will be required as part of this TMDL.

The TMDL specifies that the final WLAs are to be achieved by December 31, 2020.

***Middle Santa Ana River Bacterial Indicator TMDL***

The Middle Santa Ana River Bacterial Indicator TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

The University of California, Riverside, the California Institute for Women and the California Institute for Men are nontraditional MS4s that are tributary to traditional MS4s that discharge to the Middle Santa Ana River (MSAR). The Regional Board adopted a Total Maximum Daily Load for bacterial indicators (E. coli) in 2005 that requires the Cities' and Counties' MS4 systems tributary to the MSAR to develop and implement Comprehensive Bacterial Reduction Plans (CBRP) to achieve attainment of the Wasteload allocations contained in the TMDL. A wide variety of entities, from traditional MS4s, to dairies, Caltrans and water and wastewater agencies have formed a stakeholder group that conduct the Regional TMDL compliance monitoring and conduct studies on the effectiveness of the BMPs implemented through the CBRP.

Phase II Entities:

The Santa Ana Regional Water Board has determined that the California State Polytechnic University, Pomona[49], the University of California, Riverside, the California Institute for Men, the California Institute for Women, and the California Rehab Center, Non-Traditional MS4s, are sources of "Urban runoff" subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations:

The following are receiving water allocations. Logarithmic mean values shall be calculated based on a minimum of 5 samples during any 30 day period.

Dry Season (April 1 through October 31) to be achieved by December 31, 2015:

*E. coli*

5–sample/30–day Logarithmic Mean less than 113 organisms per 100 milliliters, and not more than 10% of the samples exceed 212 organisms per 100 milliliters for any 30–day period.

Wet Season (November 1 through March 31) to be achieved by December 31, 2025:

*E. coli*

5–sample/30–day Logarithmic Mean less than 113 organisms per 100 milliliters, and not more than 10% of the samples exceed 212 organisms per 100 milliliters for any 30–day period.

Deliverables/Actions Required:

In order to meet the goals and assumptions of this TMDL, Regional Water Board staff has determined that the entities listed may either: 1) develop and implement a facility-specific

[49] The Fact Sheet is not consistent with the final amendment adopted by the State Water Board. (See Attachment G) California State Polytechnic, Pomona should have been removed.

CBRP or 2) participate in an updated watershed-based CBRP. The CBRP will discuss the various BMPs that will be employed and whether or not they are effective in meeting the WLA for both the dry and wet seasons.

The implementation of a Regional Water Board approved facility-specific or watershed-based CBRP will constitute compliance with the TMDL.

## *SAN DIEGO REGIONAL WATER BOARD TMDLs*

Attachment G provides specific provisions for implementing the load allocations (LAs) and wasteload allocations (WLAs) of Total Maximum Daily Loads (TMDLs) adopted by the San Diego Water Board and approved by OAL and USEPA in which Phase II dischargers are identified as responsible for discharges and subject to the requirements of the TMDLs. Each TMDL for which Phase II dischargers are identified as responsible for discharges was publicly noticed as part of the TMDL development and adoption. Additionally, San Diego Water Board staff met with each enrolled Phase II discharger to discuss the requirements of the Phase II permit and their responsibilities for compliance with the TMDLs. Therefore, Phase II dischargers were informed that their responsibilities for compliance with the TMDL will be implemented through their enrollment in the Phase II Permit.

The following requirements for implementing the TMDLs in this Order are based on and consistent with the assumptions and requirements of any available adopted and approved TMDLs that have been incorporated into the San Diego Regional Water Board's Basin Plan.

A modification to a TMDL in the Basin Plan requires a Basin Plan amendment, which includes a separate public process. If and when the TMDLs are modified in the Basin Plan, the San Diego Regional Water Board will notify the State Water Board of the need to revise the requirements of Order 2013-0001-DWQ in accordance with the Basin Plan amendment as soon as possible.

The Chollas Creek Dissolved Metals TMDL was removed from this Order because all named entities in Attachment G, as adopted, were Phase I entities and thus not subject to the requirements of this Order.

### ***Bacteria Project I TMDL – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)***

The Bacteria Project I Total Maximum Daily Load (Bacteria I TMDL) addresses the Clean Water Act section 303(d) bacteria impairment listings for 20 impaired water quality limited segments within the following watersheds or portions of watersheds: Laguna/San Joaquin, San Juan, San Clemente, San Luis Rey, San Marcos, San Dieguito River, Miramar Creek, Scripps HA, Tecolate HA, San Diego River, and Chollas Creek.

The greatest causes of waterbody impairments in the San Diego Region in 2002 were elevated bacteria levels and subsequent beach closures. The presence of pathogens and the probability of disease are directly correlated with the presence of human waste sources and currently measured by the density of indicator bacteria (fecal coliform, total coliform, and enterococcus) in waters used for recreation. When the Bacteria I TMDL wasteload allocations (WLAs) are achieved, health risks associated with pathogens are expected to be minimal.

Phase I and Phase II municipal dischargers are the most significant controllable sources of bacteria. With respect to Phase II dischargers, the Bacteria I TMDL is "implemented primarily

by requiring compliance with the existing general WDRs and NPDES requirements that have been issued for Phase II MS4 discharges." Section F.5 of this Order requires dischargers within the impaired water quality segments identified in the Bacteria I TMDL to develop and/or implement a Storm Water Pollution Prevention Plans (SWPPP). This Order also requires enrolled Phase II dischargers to identify all potential bacteria contributions from their site and implement pollutant control strategies and BMPs to reduce bacteria. Non-storm water discharges are not authorized unless they meet the requirements as set forth in section B of this Order.

Because Phase II dischargers are required to develop SWPPPs with BMP implementation strategies to reduce the bacteria loads in accordance with the TMDL implementation schedule, Phase II MS4 dischargers that are enrolled and in compliance with the provisions of this Order are deemed in compliance with the Bacteria I TMDL unless they are identified as a significant source of bacteria as discussed below. The legally responsible parties (LRPs) must demonstrate that the discharges from the Phase II facility do not contribute to the bacteria wet and dry mass load impairments through monitoring data. The Regional Water Boards retain the authority to require Phase II MS4 dischargers to revise their SWPPPs, EPA Reports, or monitoring programs as well as to direct a discharger to obtain an individual NPDES permit if additional controls are necessary.

Phase II Entities:

The Bacteria Project I TMDL identifies responsible dischargers contributing to indicator bacteria exceedances in REC-1 designated receiving waters for 20 listings of beaches and inland water bodies. The specific Phase II entities within the impaired water quality segments identified in the Bacteria I TMDL are: the United States Marine Corps Base Camp Pendleton, the University of California, San Diego, San Diego State University, California State University, San Marcos, the 22nd Agricultural Association, the Marine Corps Air Station Miramar, the North County Transit District and the San Diego Veterans Administration Medical Center, all Non-Traditional MS4s.

Wasteload Allocations:

The Bacteria Project I TMDL basin plan amendment assigned the total WLA for each indicator bacteria for wet and dry mass loading to receiving waters to all identified Phase II dischargers.

The allowable load consists of two parts: 1) the bacteria load that is calculated based on the San Diego Regional Water Board's REC-1 WQOs and, 2) the bacteria load that is associated with the allowable exceedance frequency (i.e. allowable exceedance days). Allowable exceedance days are calculated based on the allowable exceedance frequency and total number of wet days in a year.

Dry Weather WLA

The Bacteria I TMDL assumes no discharge of surface runoff or bacteria from agricultural, open space, and CalTrans land uses. As such, the dry weather WLA was assigned entirely to the Municipal MS4s (Phase I and Phase II). Table, below, excerpts the dry weather WLAs assigned for Municipal MS4s (Phase I and Phase II) within the impaired water quality segments identified in the Bacteria I TMDL.

Wet Weather WLA

The Wet Weather TMDL discharges of surface runoff and bacteria was assigned to all land use allocations. The WLAs for Caltrans, agricultural, and open space were set to the existing

bacteria loads predicted for wet weather. The remainder of the wasteload allocation was assigned to Municipal MS4s (Phase I and Phase II). Table, below, excerpts the wet weather WLAs assigned for Municipal MS4s (Phase I and Phase II) within the impaired water quality segments identified in the Bacteria I TMDL.

**Table 1: Excerpts of Wasteload Allocations (WLAs)**

[All units are Billion Most Probable Number/year]

| Watershed | Fecal Coliform Wet Weather | Fecal Coliform Dry Weather | Enterococcus Wet Weather | Enterococcus Dry Weather | Total Coliform Wet Weather | Total Coliform Dry Weather |
|---|---|---|---|---|---|---|
| San Joaquin Hills /Laguna Beach HSAs (901.11 and 901.12) | 37,167 | 227 | 66,417 | 40 | 880,652 | 1,134 |
| Aliso HSA (901.13) | 477,069 | 242 | 735,490 | 40 | 8,923,264 | 1,208 |
| Dana Point HSA (901.14) | 152,446 | 92 | 219,528 | 16 | 3,404,008 | 462 |
| Lower San Juan HSA (901.27) | 1,156,419 | 1,665 | 1,385,094 | 275 | 16,093,160 | 8,342 |
| San Clemente HA (901.30) | 192,653 | 192 | 295,668 | 33 | 3,477,739 | 958 |
| San Luis Rey HU (903.00) | 914,026 | 1,058 | 1,300,235 | 185 | 14,373,954 | 5,289 |
| San Marcos HA (904.50) | 6,558 | 26 | 23,771 | 5 | 298,430 | 129 |
| San Dieguito HU (905.50) | 798,175 | 1,293 | 1,763,603 | 226 | 16,660,538 | 6,468 |
| Miramar Reservoir HA (906.10) | 6,703 | 7 | 8,109 | 1 | 171,436 | 36 |
| Scripps HA (906.30) | 101,253 | 119 | 232,035 | 21 | 3,447,764 | 594 |
| Tecolote HA (906.5) | 126,806 | 234 | 471,211 | 39 | 5,136,598 | 1,171 |
| Mission San Diego/Santee HSAs (907.11 and 907.12) | 221,117 | 1,506 | 890,617 | 248 | 10,790,520 | 7,529 |

| Watershed | Fecal Coliform Wet Weather | Fecal Coliform Dry Weather | Enterococcus Wet Weather | Enterococcus Dry Weather | Total Coliform Wet Weather | Total Coliform Dry Weather |
|---|---|---|---|---|---|---|
| Chollas HSA (908.22) | 252,479 | 398 | 802,918 | 66 | 9,880,784 | 1,991 |

Deliverables/Actions Required:
Implementation actions applicable to Phase II dischargers and the relevant attainment deadlines set forth in the TMDL are provided below.

### Bacteria Project I TMDL Actions and Deadlines Table

Note A: Wet: single sample maximum REC-1 WQOs Dry: 30-day geometric mean REC-1 WQOs. The percent reduction for each compliance year applies to the total number of samples taken that comply with Resolution No. R9-2010-0001. The maximum allowable percent exceedance frequency for the single sample maximum (wet weather days only) is 22% (Resolution No. R9-2010-0001, Finding 10). For dry weather days, there is no maximum allowable exceedance and it is set at 0%. The Compliance Year percent reductions are based on the total number of samples taken. For Example: If in Year 5 of the compliance schedule, 100 samples are taken, only 50% of those samples can exceed the single sample maximum for wet weather by 22% of the maximum allowable percent exceedance frequency for the single sample maximum. By Year 10+, no samples can exceed the Exceedance Frequency. Baseline years for wet and dry days shall be as identified in Order No R9 2015-0001 Attachment E for the Bacteria I TMDL.
Note B: Priorities are defined in Resolution No. R9-2010-0001, Attachment A, pg. 63-65.
Note C: Phase II MS4 enrolled under the State General Permit for Small MS4s or issued an individual NPDES permit, are considered a Municipal Discharger along with Phase I MS4s in this Implementation Milestone item.

| Implementation Action | Responsible Party | Date |
|---|---|---|
| Submit annual progress reports or Update SWPPPs/SWMPS/LRPS in accordance with RB Accepted LRPs | Phase II Permittees | Upon Enrollment in General Permit |
| Meet Wet and Dry Weather Frequency Exceedance Milestones | Phase II MS4s | |
| 50% Reductions Notes A, C – Priority Note B 1 | Phase II MS4s | April 4, 2016 |
| 50% Reductions Notes A, C – Priority Note B 2 | Phase II MS4s | April 4, 2017 |
| 50% Reductions Notes A, C – Priority Note B 3 | Phase II MS4s | April 4, 2018 |
| 100% Reductions Notes A, C – Priority Note B 1,2,3 | Phase II MS4s | April 2, 2021+ |

The Bacteria I TMDL also requires Phase II dischargers to take other actions to control their risk of bacteria discharges such as monitoring. Because Phase I MS4s often discharge directly into the receiving waters addressed by the TMDL, the Bacteria I TMDL states that Phase I MS4s are primarily responsible for conducting the TMDL compliance monitoring. However, Phase II MS4s are also responsible for monitoring to identify sources that may need additional controls to reduce bacteria loads. Enrollment in this Order satisfies these monitoring obligations because all Phase II MS4 dischargers assigned a WLA in a TMDL are required to conduct the monitoring in Attachment G pursuant to section F.5.i.

The Phase II Entities, listed above, must be in compliance with the final TMDL requirements according to the following attainment dates:

*The Wet Weather TMDL Attainment Date in parenthesis in the table below applies if the applicable Storm Water Pollution Prevention Plan does not include load reduction programs for other constituents (e.g. metals, pesticides, trash, nutrients, sediment, etc.) together with bacteria load reduction requirements of this TMDL.

| Constituent | Dry Weather TMDL Attainment Date | Wet Weather TMDL Attainment Date* |
|---|---|---|
| Total Coliform; Fecal Coliform; *Enterococcus* | April 4, 2021 | April 4, 2031 (April 4, 2021) |

A Storm Water Pollution Prevention Plan that includes a bacteria load reduction program is expected to include information similar to what is described in the section called Bacteria Load Reduction Plan Outline in Appendix P of the Final Technical Report to Order No. 2010-0001. A Storm Water Pollution Prevention Plan that includes a load reduction program for multiple constituents together with bacteria load controls is expected to include information similar to what is described in the section called Comprehensive Load Reduction Plan Outline in Appendix P of the Final Technical Report to Order No. 2010-0001. Some of the components described in both outlines may be satisfied through collaboration with the Phase I MS4 dischargers, as their efforts to comply with the Bacteria TMDL include implementing controls, monitoring, and reporting.

***Los Peñasquitos Lagoon Sediment TMDL***

The Los Peñasquitos watershed area (Hydrologic Unit (HU) 906.00) includes the Los Peñasquitos Lagoon, the Carroll Canyon Creek, Los Peñasquitos Creek, and Carmel Creek. The Los Peñasquitos Lagoon Sediment TMDL addresses the Clean Water Act section 303(d) sediment impairment for the lagoon for impacts resulting from rapid sedimentation and habitat loss.

Sediment is particulate organic and inorganic matter that is mobilized by erosion due to wind, precipitation or anthropogenic causes and carried by water. Sediment is a natural occurrence found in runoff from all locations in the watershed in varying concentrations. Concentrated flow with intensified velocities or volumes has the capability to magnify erosion rates resulting in rill erosion, gully erosion, and channel incision which correlates to an increased sediment supply into the Lagoon. Impacts from sediment in the Lagoon include reduced tidal mixing in lagoon channels, degraded and/or net loss of salt marsh vegetation, increased potential for flooding surrounding areas, increased turbidity, and constricted wildlife corridors.

Reducing erosion and concentrated flows by utilizing Best Management Practices (BMPs) that stabilize loose soil sources and/or retaining storm water onsite will decrease the impacts from excessive and rapid sediment transport into the lagoon.

Phase II Entities:

The San Diego Regional Water Board has determined that the Marine Corps Air Station, Miramar, the North County Transit District, the San Diego Veterans Administration Medical Center and the University of California, San Diego, Non-Traditional MS4s, are “Phase II MS4 permittees” subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations:
The Los Peñasquitos Lagoon TMDL basin plan amendment assigned interim and final WLAs to all identified responsible parties. WLAs are expressed in effluent limitations. Interim effluent limitations are described in **Error! Reference source not found.** with a final effluent limitation of 2,580 tons/year assigned to all identified responsible parties. Responsible parties are jointly responsible for meeting these wasteload reduction allocations. As such, Phase II dischargers within the Los Peñasquitos watershed are required to either reduce site sediment loads to the receiving water body or demonstrating that the site discharges are not causing exceedances of the water quality based effluent limitations in **Error! Reference source not found.** (interim WQBELs) and the final WQBEL of 2,580 tons/year. Phase II dischargers are also required to sample for total suspended solids (TSS) concentrations and representative, or estimated, flow rates from discharge locations in addition to quantify contributions of sediment loads from their sites that cause or threaten to cause an exceedance of the effluent limitations in **Error! Reference source not found.** or the final WLA.

*Interim WLAs:*

**Interim Water Quality Based Effluent Sediment Limitations Expressed as a Wet Season Load in MS4 Discharges from the Watershed to Los Peñasquitos Lagoon Table**

*Phase I MS4s, Phase II MS4s, Caltrans, and general construction and industrial permit dischargers are jointly responsible for achieving the interim and final effluent limitations.

| | |
|---|---|
| Interim Effluent Limitation #1 | 6,691 tons/wet season |
| Interim Effluent Limitation #2 | 5,663 tons/wet season |
| Interim Effluent Limitation #3 | 4,636 tons/wet season |
| Interim Effluent Limitation #4 | 3,608 tons/wet season |

*Final WLAs:*
The final Watershed Wasteload Allocation (Watershed WLA) of 2,580 tons/year is assigned collectively to all of the responsible parties identified in the TMDL and represents all current point and nonpoint sources of sediment from the watershed to the Lagoon. Attainment of the Final Watershed WLA requires a 67% total load reduction of sediment from the watershed.

Deliverables/Actions Required:
The implementation actions applicable to Phase II dischargers and the relevant compliance deadlines set forth in the TMDL are provided below.

| Implementation Action | Responsible Party | Date |
|---|---|---|
| Revision of SWPPPs | Construction, Industrial, and Phase II Permittees | July 14, 2015 |

| Implementation Action | Responsible Party | Date |
|---|---|---|
| Meet Additional Monitoring Requirements:<br>• Provide total suspended solids (TSS) concentrations and estimate of a representative flow rate from their facility discharge points during each wet season for one storm event of 0.5 inches or greater | Phase II MS4s, and general construction and industrial NPDES enrollees, and other WDR and NPDES permittees in the watershed. | July 14, 2015 |
| Meet Additional Reporting Requirements:<br>• Submit TSS concentrations and the representative flow estimate as a PDF attachment to SMARTS entitled *Los Peñasquitos Lagoon Sediment TMDL Monitoring* annually on July 14 | All Phase II MS4s, general construction and industrial NPDES enrollees, and other WDR and NPDES permittees in the watershed. | July 14, 2015 |
| Meet Interim Milestones:<br>• 6,691 tons/wet season<br>• 5,663 tons/wet season<br>• 4,636 tons/wet season<br>• 3,608 tons/wet season | All Phase I, Phase II MS4s, Caltrans, and general construction and industrial NPDES enrollees, and other WDR and NPDES permittees in the watershed. | December 31, 2019<br>December 31, 2023<br>December 31, 2027<br>December 31, 2029 |
| Meet Final Milestone:<br>• 2,580 tons/wet season | All Phase I, Phase II MS4s, Caltrans, and general construction and industrial NPDES enrollees, and other WDR and NPDES permittees in the watershed. | July 14, 2034 |

The Los Peñasquitos Lagoon Sediment TMDL requires all responsible parties to submit a Load Reduction Plan. All enrolled dischargers must identify all potential sediment contributions from their site, implement BMPs to reduce sediment and erosion, and sample discharges for flow rate and total suspended solids (TSS) to assess the facility's effect on the receiving water body and to inform the Phase I Watershed Management Area Water Quality Improvement Plan. A discharger's development or an update of a SWPPP in accordance with section F.5.f.4 satisfies the TMDL requirement to prepare a Load Reduction Plan because this Order requires enrolled dischargers to take actions to control their risk of sediment discharges. Additionally, non-storm water discharges are not authorized unless they meet the requirements as set forth in section B of this Order.

In addition to the monitoring requirements in sections E.13 (b) and E.15 (d) of the Order, Phase II dischargers are required to provide TSS concentrations and an estimate of a representative flow rate from their facility during each wet season for one storm event of 0.5 inches or greater. The Phase II discharger shall submit the TSS concentrations and representative flow estimates as a PDF attachment to SMARTS entitled Los Peñasquitos Lagoon Sediment TMDL Monitoring annually on July 14.

Monitoring and Reporting

The Los Peñasquitos Lagoon Sediment TMDL requires all Responsible Parties to contribute information regarding the amount of sediment discharged from their facilities[50]. This monitoring must address, at a minimum, representative flow rates and TSS concentrations whenever long-term discharges[51] occur. The monitoring program set forth in sections E.13 (b) and E.15 (d) of the General Permit only partially meets these requirements because the General Permit does not require dischargers to monitor for representative flow rates. Therefore, dischargers must conduct additional monitoring to that required in sections E.13 (b) and E.15 (d) of the General Permit to be in compliance with the Los Peñasquitos Lagoon Sediment TMDL.

Representative flow rate can be determined by using one of the following methods: 1) flow meter or 2) the float method. The float method is a field calculated estimate in accordance with the US EPA's NPDES Storm Water Sampling Guidance Document[52] for estimating flow rates[53]. To conduct the float method, the Discharger determines the cross sectional area of the representative discharge by estimating the flow depth and flow width in feet. The flow path must be a minimum of five feet in length. For ponded or no flow, a discharger shall record a flow rate of zero. The velocity[54] is estimated by measuring the time it takes the float (e.g. a floatable object, such as an orange peel or similar object), to float between point A and point B[55]. The flow rate shall be estimated for two 15 minute intervals.

The purpose of determining the flow rate is to calculate[56] the amount (i.e. load) of sediment being discharged from the site and informing a discharger as to whether their discharge is in compliance with the watershed WQBEL. Determination of the TSS concentrations and flow rate shall be conducted at a discharger's site during the wet season (October 1 through April 30) during one storm event of 0.5 inches or greater. Regardless of the method used to

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[50] Resolution No. R9-2012-0033, Technical Report, p. A-9

[51] The TMDL does not define the duration of a rainfall event that would result in a "long term discharge" that is required to be monitored. Based on the TMDL's findings and source identification, increased flow and sedimentation impact the lagoon primarily during wet weather rainfall events. The San Diego Water Board has determined that the definition of "a long term discharge" is equivalent to a storm event that is 0.5 inches or greater because this size of a rain event is likely to result in the type of discharge that impacts the lagoon.

[52] USEPA. NPDES Storm Water Sampling Guidance Document, http://www3.epa.gov/npdes/pubs/owm0093.pdf, EPA 833-8-92-001, July 1992, pp.49-50, sections 3.2.2 - 3.2.4, Estimating Total Flow Volumes for the Sampled Rain Event, exhibits 3-8,3-9, Estimating Flow Rates – Float Method

[53] Flow rate (cubic foot per second) = velocity (foot per second) x Area (square foot); cubic foot per second = cubic foot per second; Area = flow depth (foot) by flow width (foot).

[54] Velocity = length from point A to point B divided by time of travel

[55] Example: flow length = 5 foot; time of travel from point A to point B = 30 seconds. Flow depth is equal to 0.5 foot. Flow width = 1 foot. V= 5 foot per 30 seconds = 0.17 foot per second. Area=0.5 foot times 1.0 foot = .5 square foot. Flow rate = Q = 0.17 foot per second x 0.5 square foot = 0.085 cubic foot per second

[56] Load, or mass of a pollutant, is calculated by multiplying flow (Q) cubic foot per second times pollutant concentration (milligram per liter); US EPA NPDES Permit Writer's Manual, pp. 6.24 -6.25

determine a representative flow rate, flow rates shall be completed concurrently with the TMDL's required TSS sampling.

Dischargers shall report results of all required monitoring annually as part of their Annual Report. Specifically, flow and TSS data shall be reported as a PDF attachment to SMARTS with the Annual Report entitled Los Peñasquitos Lagoon Sediment TMDL Monitoring. Pursuant to section E.16, as amended, of this General Permit, Annual Reports are due on or before October 15. Submittal of the General Permit Annual Report meets the TMDL requirement to inform the Phase I MS4s in the Los Peñasquitos Watershed Management Area their efforts to achieve attainment of the watershed WLA and support restoration of the Lagoon salt marsh.

Compliance Determination

The Los Peñasquitos Lagoon Sediment TMDL includes interim attainment milestones for Phase II dischargers, in addition to the final attainment milestone date of July 14, 2034. The Los Peñasquitos Lagoon TMDL staff report states that "it is the responsibility of the Phase I MS4 Copermittees to assume the lead role in coordinating and carrying out the necessary actions, compliance monitoring requirements, and successful implementation of the adaptive management framework required as part of this TMDL." Therefore, Phase II MS4 dischargers in the Los Peñasquitos watershed "are assumed to be in compliance with the TMDL and their contribution to the total WLA if they:

1) Are enrolled in this Order; and
2) Have updated their SWPPP to include the BMPS to be implemented with monitoring required to assess the facility or property effects on the WLA; and
3) Are in compliance with this Order, and
4) Are conducting facility and monitoring assessments as required by this Order and that monitoring shows the Phase II MS4 responsible party discharges are not contributing to the sediment impairment in the Lagoon.

Phase II dischargers are encouraged to coordinate with Phase I Copermittees to meet the applicable TMDL load reduction requirements in Attachment G using an adaptive framework approach. Phase I Copermittees described the adaptive framework approach for each Watershed Management Area in the San Diego Region in a watershed specific Water Quality Improvement Plan. Coordinated efforts by both Phase I and Phase II dischargers will accomplish the wasteload reductions required in the TMDLs faster and achieve the ultimate goal of improving water quality as soon as possible.

Moreover, the San Diego Regional Water Board retains the authority to require Phase II dischargers within the Los Peñasquitos watershed to revise their SWPPPs, ERA Reports, or monitoring programs as well as to direct a discharger to obtain an individual NPDES permit if additional controls are necessary to meet the requirements of this TMDL.

## XIV. STORM WATER MANAGEMENT PROGRAM FOR NON-TRADITIONAL MS4

*Differences between Traditional and Non-traditional MS4s*

Because of the differences between Traditional and Non-traditional MS4s this Order includes Section F to address their specific management structure.

Non-Traditional Small MS4s required to comply with this Order are identified in Attachment B.

Non-traditional MS4s differ from cities and counties, because most potential sources of illicit discharges and storm water pollution are associated with activities under their direct operational control.

Some Non-traditional MS4s may also lack the legal authority or employ a different type of enforcement mechanism than a city/county government to implement their storm water program.

Certain Non-traditional Small MS4s such as Department of Defense and Department of Corrections and Rehabilitation Permittees required exemption from certain provisions due to security risks and/or compromised facility security.

**Program Management – Applicable to all Non-traditional MS4 Categories** Legal Authority: Clean Water Act § 40 CFR 122.26(d)(2)(i) and 40 CFR 122.34(b)(3)(ii)(B), (b)(4)(ii)(A), and (b)(5)(ii)(B).
MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001; MS4 Program Evaluation Guidance, U.S. EPA, EPA-833-R-07-003

*Program Management*
Program Management is essential to ensure that all elements of the storm water program are implemented on schedule and consistent with the Order requirements.

See Online Annual Reporting for further discussion later in this section.

*Legal Authority*
Legal authority to control discharges into a Permittee's storm sewer system is critical for compliance. Most Non-traditional MS4s lack the legal authority or employ a different type of enforcement mechanism than a city or county government to implement its storm water program. To the extent allowable under State and federal law, this Order requires each Non-traditional MS4 to operate with sufficient legal authority to control discharges into and from its MS4. The legal authority may be demonstrated by a combination of statutes, permits, contracts, orders, and interagency agreements. Non- traditional MS4 Permittees also do not generally have the authority to impose a monetary penalty. Although these differences exist, just like Traditional MS4s, Non- traditional MS4s must have the legal authority to develop, implement, and enforce the program.

*Coordination*
This Order allows Non-traditional MS4s to coordinate their storm water programs with other entities within or adjacent to their MS4 and allows the concept of a Separate Implementing Entity. A Separate Implementing Entity allows Permittees to leverage resources and skills. Additional information regarding SIEs is discussed later in this section.

**Education and Outreach Program**
Legal Authority: Clean Water Act § 40 CFR 122.34(b)(1).

MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001

Because the population served by most Non-traditional MS4s will generally be served by the public education and outreach efforts of the local jurisdiction, the most useful supplement to those education and outreach efforts would be to label the Non-traditional MS4 catch basins. However, some Non-traditional MS4s such as universities have tenants and residents that may not be as effectively served by the local jurisdiction's public education and outreach program,

therefore a separate education and outreach program may be needed. Where the local jurisdiction's public education and outreach efforts do effectively target and reach these tenant and resident populations, the Non- traditional MS4s are not expected to duplicate those efforts.

Some Non-traditional MS4s are well suited for regional education and outreach. For example, school districts often have several schools located with a watershed or regional boundary. This Order allows Non-traditional MS4s to comply with the Education and Outreach provisions through a regional collaborative effort.

Regional outreach and collaboration requires the Permittees to define a uniform and consistent message, deciding how best to communicate the message, and how to facilitate behavioral changes.

**Public Involvement and Participation**
Legal Authority: Clean Water Act § 40 CFR 122.34(b)(2)).

MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001

Non-traditional MS4s have the same responsibilities as Traditional MS4s to ensure the storm water program is publicized and must involve the population they serve in the development of the program. However, the most effective BMP for Non-traditional MS4s is to provide up-to-date information about the storm water program online if the Non-traditional MS4 maintains a website, or the Non-traditional MS4 Permittee may choose to post information about their program on the local jurisdiction's website.

**Illicit Discharge Detection and Elimination Program**
Legal Authority: Clean Water Act § 40 CFR 122.26(d)(2)(iv)(B)

MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001

The federal Phase II regulations require all MS4s to develop a process to trace the source of illicit discharges and eliminate them. The regulations also state that appropriate enforcement procedures and actions must be included in this process.

Unlike Traditional MS4s, Non-traditional MS4s have direct control of their own staff and contractors. Therefore, the enforcement provisions identified in the Illicit Discharge Detection and Elimination program are often not applicable to Non-traditional MS4 Permittees. Non-traditional MS4 Permittees should address illicit non-storm water discharges through the implementation of a Spill Response Plan However, Non- traditional MS4 Permittees often comply with existing state/federal regulations that required a Spill Response Plan or Hazardous Materials plan that identifies notification procedures for other operators or local agencies and includes details that are similar if not the same as a Spill Response Plan. Therefore, to leverage resources and maximize efficiencies the requirements in this Order recommend utilizing existing documents if that document contains the same information.

**Construction Site Storm Water Runoff Control and Outreach Program**
The purpose of this program component is to prevent sediment and other pollutants from entering the Non-traditional MS4 during the construction phase of development projects. In general, Non-traditional MS4 Permittees will obtain coverage under, and comply with, the CGP for their own construction projects. To the extent that they have the legal authority, Non-traditional MS4s must also require other entities discharging to their MS4 to obtain coverage under and comply with the CGP during the construction phase of their projects.

This Order relieves Non-traditional MS4 Permittees from development and implementation of a complete construction storm water runoff control program. This Order does require education and outreach to staff, construction site operators and contractors on how to control construction storm water runoff.

The CGP is inherently a robust permit with stringent reporting requirement for any construction project disturbing one acre or more in California. Often, Non-traditional MS4s have a few construction projects occurring at once such as those in a City or County. There are, however, very few Non-traditional MS4s that have dozens of active construction sites. Further, Non-traditional MS4 Permittees are often both the owner and contractor of a construction project. Finally, municipal governments must review and approve erosion and sediment control plans prior to the issuance of grading permits. Most all Non-traditional MS4s do not require approval from local municipalities prior to construction activity. Conditioning of a construction project is usually conducted in-house by Non-traditional MS4 Permittee staff. If contractors are brought in to conduct construction activity, this Order requires Non-traditional MS4 Permittees to include “bullet proof” contract language ensuring construction operators or contractors comply with the CGP and implement appropriate BMPs.

**Pollution Prevention and Good Housekeeping Program**
Legal Authority: Clean Water Act § 40 CFR 122.34(b)(6)

MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001

Non-traditional MS4s have the same responsibilities as Traditional MS4s to prevent or reduce storm water pollution generated by their own operations, to train employees about pollution prevention/good housekeeping practices, and to identify appropriate measures to prevent or reduce the amount of storm water generated by their operations.

**Post-Construction Storm Water Management Program**
Legal Authority: Clean Water Act § 402(p)(3)(b); 40 C.F.R. § 122.34(b)(5).

MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001; U.S. EPA Incorporating Environmentally Sensitive Development into Municipal Stormwater Programs, EPA 833-F-07-011

This Order has specific site design and LID requirements for all projects. The LID requirements emphasize landscape-based site design features that are already required elsewhere (e.g., the California Water Efficient Landscape Ordinance). The goal during this permit term is to develop runoff retention and hydromodification control criteria that are keyed to watershed processes. Watershed management zones will be delineated by the State Board during this permit term. The Watershed management zones will be used to identify applicable areas and appropriate criteria for runoff retention and hydromodification control. Regional Boards that have approved watershed process- based criteria for post-construction will be permitted to continue requiring Permittees to implement these criteria.

**Total Maximum Daily Load (TMDL)**
The Order includes Attachment G, which identifies only those approved TMDLs in which storm water or urban run-off is listed as a source. In addition, Attachment G identifies Permittees subject to TMDLs or assigned waste load allocation. If Non-traditional MS4 Permittees have been identified in Attachment G, they must implement the specific TMDL permit requirements.

**Program Effectiveness Assessment**
Non-traditional MS4s have the same responsibilities as Traditional MS4s to conduct quantitative evaluation of their storm water program.

**Online Annual Reporting**
Non-traditional MS4s have the same responsibilities as Traditional MS4s to submit online Annual Reports via SMARTS.

**Separate Implementing Entity**
Legal Authority: Clean Water Act § 40 CFR 122.35

This Order allows a Regulated MS4s to rely on a Separate Implementing Entity to meet permit requirements, as allowed by U.S. EPA in the Phase II regulations. Reliance on Separate Implementing Entity may be particularly beneficial for Non-Traditional MS4s. An example is a community service district that is charged with creating and implementing a municipal storm water program.

Co-application and cooperative implementation of the storm water program by any Permittee with another Permittee can maximize efficiency and reduce overall costs. Non-traditional MS4s are encouraged to co-apply with local jurisdictions and utilize shared resources to implement the storm water program. Additionally, co-application and cooperative storm water program implementation can achieve watershed-wide consistency.

A Permittee may rely on a Separate Implementing Entity to implement one or more program elements, if the Separate Implementing Entity can appropriately and adequately address the storm water issues of the Permittee. To do this, both entities must agree to the arrangement, and the Permittee must comply with the applicable parts of the Separate Implementing Entity's program.

In accordance with 40 Code of Federal Regulations, section 122.35(a)(3), the Permittee remains responsible for compliance with its permit obligations if the Separate Implementing Entity fails to implement the control measure(s) or any component thereof. Therefore, the entities are encouraged to enter into a legally binding agreement to minimize any uncertainty about compliance with the permit.

If the Non-traditional MS4 Permittee relies on a Separate Implementing Entity to implement all program elements and the Separate Implementing Entity also has a storm water permit, the Permittee relying on Separate Implementing Entity must still file an NOI via SMARTS, submit the appropriate fee and file online Annual Reports. Both parties must also submit to the appropriate Regional Water Board a certification of the arrangement. The arrangement is subject to the approval of the Regional Water Board Executive Officer prior to filing an electronic NOI via SMARTS.

School districts present an example of where a Separate Implementing Entity arrangement may be appropriate, either by forming an agreement with a city or with an umbrella agency, such as the County Office of Education. Because schools provide a large audience for storm water education the two entities may coordinate an education program. An individual school or a school district may agree to provide a one-hour slot for all second and fifth grade classes during which the city would make its own storm water presentation. Alternatively, the school could agree to teach a lesson in conjunction with an outdoor education science project, which may also incorporate a public involvement component. Additionally, the school and the city or

Office of Education may arrange to have the school's maintenance staff attend the other entity's training sessions.

## XV. RELATIONSHIP BETWEEN THE ORDER AND THE STATEWIDE GENERAL PERMIT FOR DISCHARGES OF STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITY

In some cases, certain Non-traditional MS4s will be subject to both this Order and the IGP. The intent of both of these permits is to reduce pollutants in storm water, but neither permit's requirements totally encompass the other. This Order requires that Non- traditional MS4 operators address storm water program elements, while the IGP requires the development and implementation of a SWPPP for certain "industrial" activities as well as requiring specific visual and chemical monitoring.

In the Preamble to the Phase II regulations, U.S. EPA notes that for a combination permit to be acceptable, it must contain all of the requirements for each permit. Further, "when viewed in its entirety, a combination permit, which by necessity would need to contain all elements of otherwise separate industrial and MS4 permit requirements, and require NOI information for each separate industrial activity, may have few advantages when compared to obtaining separate MS4 and industrial general permit coverage." (64 Fed. Reg. 68781.) Where the permits do overlap, one program may reference the other. More specifically, the Good Housekeeping for Permittee Operations program element requires evaluation of Permittee operations, some of which may be covered under the IGP. The development and implementation of the SWPPP under the IGP will likely satisfy the Good Housekeeping requirements for those industrial activities. The Non-traditional MS4 storm water program may incorporate by reference the appropriate SWPPP.

There may be instances where a Non-traditional MS4 has, under the IGP, obtained coverage for the entire facility (rather than only those areas where industrial activities occur) and has developed a SWPPP that addresses all the program elements required by this Order. In these instances, the Non-traditional MS4 is not required to obtain coverage under this Order. The entity should, in such cases, provide to the appropriate Regional Water Board documentation that its SWPPP addresses all program elements.

## XVI. USE OF PARTNERSHIPS IN MS4 PERMITS

Since the Phase II Rule applies to all small MS4s within an urbanized area regardless of political boundaries it is very likely that multiple governments and agencies within a single geographic area are subject to NPDES permitting requirements. For example, a city government that operates a small MS4 within an urbanized area may obtain permit coverage under this Order while other MS4s in the same vicinity (such as a County, other cities, public university, or military facility) may also be covered under this Order. All MS4s are responsible for permit compliance within their jurisdiction.

Given the potential for overlapping activities in close proximity, the State Water Board encourages MS4s in a geographic area to establish cooperative agreements in implementing their storm water programs, especially with receiving water monitoring. Partnerships and agreements between Permittees and/or other agencies can minimize unnecessary duplication of effort and result in efficient use of available resources.

Sharing resources can allow MS4s to focus their efforts on high priority program components. By forming partnerships, water quality can be examined and improved on a consolidated, efficient, watershed-wide scale rather than on a piece-meal, site-by-site basis.

## XVII. REGIONAL BOARD DESIGNATIONS

Designation of additional Small MS4s outside of Urbanized Areas as Regulated Small MS4s may be made by the Regional Water Boards on a case by case basis. Case by case determinations of designation are based on the potential of a Small MS4's discharges to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts. The tables below includes designations recommend by the Regional Water Boards prior to adoption of this Order. The Regional Water Boards may continue to make case by case determinations of designation during the permit term by notification to the discharger (which shall include a statement of reasons for the designation) and following an opportunity for public review and comment.

**Traditional Small MS4s**

| Place name | County | Regional Board | Justification |
|---|---|---|---|
| Crescent City | Del Norte | 1 | 7500 population and in urbanized area |
| Bayview CDP | Humboldt | 1 | Adjacent to, but outside of Eureka city limits located in southern Humboldt Bay, in unincorporated Humboldt County. Designation of these areas is needed to address pollutant sources of urbanized and urbanizing areas within 303(d) listed watersheds |
| Cutten CDP | Humboldt | 1 | Adjacent to, but outside of Eureka city limits located in southern Humboldt Bay, in unincorporated Humboldt County. Designation of this area is needed to address pollutant sources of urbanized and urbanizing areas within 303(d) listed watersheds |
| Humboldt Hill CDP | Humboldt | 1 | Adjacent to, but outside of Eureka city limits located in southern Humboldt Bay, in unincorporated Humboldt County. Designation of this area is needed to address pollutant sources of urbanized and urbanizing areas within 303(d) listed watersheds |
| Myrtletown CDP | Humboldt | 1 | Adjacent to, but outside of Eureka city limits located in southern Humboldt Bay, in unincorporated Humboldt County. Designation of this area is needed to address pollutant sources of urbanized and urbanizing areas within 303(d) listed watersheds |
| Pine Hills CDP | Humboldt | 1 | Adjacent to, but outside of Eureka city limits located in southern Humboldt Bay, in unincorporated Humboldt County. Designation of this area is needed to address pollutant sources of urbanized and urbanizing areas within 303(d) listed watersheds |
| Ridgewood Heights USSA | Humboldt | 1 | Adjacent to, but outside of Eureka city limits located in southern Humboldt Bay, in unincorporated Humboldt County. Designation of these areas is needed to address pollutant sources of urbanized and urbanizing areas within 303(d) listed watersheds |
| Rosewood USSA | Humboldt | 1 | Adjacent to, but outside of Eureka city limits located in southern Humboldt Bay, in unincorporated Humboldt County. Designation of this area is needed to address pollutant sources of urbanized and urbanizing areas within 303(d) listed watersheds |

| Place name | County | Regional Board | Justification |
|---|---|---|---|
| Cloverdale CDP | Sonoma | 1 | There are urbanized areas within the County of Sonoma not covered under the Phase I Permit. These areas are located within the Russian River watershed, a 303(d) listed watershed. Currently, there is only limited storm water management in these areas, allowing the discharge of pollutants to the impacted water body. Storm water management is needed in these areas to reduce the pollutant loads and for early TMDL implementation |
| Forestville CDP | Sonoma | 1 | There are urbanized areas within the County of Sonoma not covered under the Phase I Permit. These areas are located within the Russian River watershed, a 303(d) listed watershed. Currently, there is only limited storm water management in these areas, allowing the discharge of pollutants to the impacted water body. Storm water management is needed in these areas to reduce the pollutant loads and for early TMDL implementation |
| Guerneville CDP | Sonoma | 1 | There are urbanized areas within the County of Sonoma not covered under the Phase I Permit. These areas are located within the Russian River watershed, a 303(d) listed watershed. Currently, there is only limited storm water management in these areas, allowing the discharge of pollutants to the impacted water body. Storm water management is needed in these areas to reduce the pollutant loads and for early TMDL implementation |
| Monte Rio | Sonoma | 1 | There are urbanized areas within the County of Sonoma not covered under the Phase I Permit. These areas are located within the Russian River watershed, a 303(d) listed watershed. Currently, there is only limited storm water management in these areas, allowing the discharge of pollutants to the impacted water body. Storm water management is needed in these areas to reduce the pollutant loads and for early TMDL implementation |
| Occidental CDP | Sonoma | 1 | There are urbanized areas within the County of Sonoma not covered under the Phase I Permit. These areas are located within the Russian River watershed, a 303(d) listed watershed. Currently, there is only limited storm water management in these areas, allowing the discharge of pollutants to the impacted water body. Storm water management is needed in these areas to reduce the pollutant loads and for early TMDL implementation |
| Yreka City | Siskiyou | 1 | Discharges to a TMDL listed waterbody and identified on Attachment G |
| Gonzalez City | Monterey | 3 | Greater than 5,000 population |

| Place name | County | Regional Board | Justification |
|---|---|---|---|
| Moss Landing CDP | Monterey | 3 | Proximity to ocean areas (Monterey Bay National Marine Sanctuary, including Elkhorn slough) |
| Blacklake CDP | San Luis Obispo | 3 | Proximity to urbanized area (Oceano, Arroyo Grande, Grover Beach and Nipomo) |
| Cayucos CDP | San Luis Obispo | 3 | Greater than 2,000 population and proximity to Pacific Ocean |
| Lake Nacimiento CDP | San Luis Obispo | 3 | Greater than 2,000 population and proximity to Lake Nacimiento (drinking water source) |
| San Miguel | San Luis Obispo | 3 | Greater than 2,000 population High Growth Rate (16.8%) |
| Shandon CDP | San Luis Obispo | 3 | High Growth Rate (31.3%) |
| Guadalupe City | Santa Barbara | 3 | Incorporated area exceeding 5,000 population |
| Hope Ranch CDP | Santa Barbara | 3 | Proximity to urbanized area |
| Mission Canyon CDP | Santa Barbara | 3 | Proximity to urbanized area |
| Mission Hills CDP | Santa Barbara | 3 | Proximity to urbanized area |
| Toro Canyon CDP | Santa Barbara | 3 | Proximity to urbanized area |
| Live Oak CDP | Santa Cruz | 3 | Greater than 5,000 population Discharges to a TMDL listed waterbody and identified on Attachment G |
| City of Avalon | Los Angeles | 4 | Proximity to sensitive water body |
| Colusa County | Colusa | 5S | Discharges to a TMDL listed waterbody and identified on Attachment G |

| Place name | County | Regional Board | Justification |
|---|---|---|---|
| Amador County | Amador | 5S | Currently, there is only limited storm water management in this area, allowing discharge of pollutants to waters of the State already impacted with multiple constituents and parameters. Storm water management is needed in these areas to reduce the pollutant loads prior to adoption of any TMDLs, which are typically not estimated to be completed until 2020 or thereafter in many cases.<br>Additionally, several waterbodies or waterbody segments within or bounding Amador County are 303(d) listed for invasive species (Cosumnes River, above Michigan Bar), mercury (Pardee Reservoir, Camanche Reservoir), pH - High (Amador Lake, Bear River from Allen to Upper Bear River Reservoir), copper (Camanche Reservoir), and zinc (Camanche Reservoir) according to the 2010 CWA 303(d) list. Camanche Reservoir drains to Lower Mokelumne River. The Lower Mokelumne River (in Delta Waterways, eastern portion) is 303(d) listed for chlorpyrifos, copper, mercury, dissolved oxygen, unknown toxicity, and zinc. Both the Cosumnes and Mokelumne Rivers drain to the San Joaquin River, which is 303(d) listed for these same constituents and parameters. Many of these constituents are known to bind to various size sediment particles migrating into surface waters. |

**Non-Traditional Small MS4s**

| Place name | Category | Regional Board | Justification |
|---|---|---|---|
| Petaluma Coast Guard Training Center | Defense, Department of | 1 | Activities that could impact water quality, fueling, maintenance. Personnel that should be educated on how their activities effect water quality. |
| Alameda-Contra Costa Transit District (AC Transit) | Special District | 2 | The Alameda-Contra Costa Transit District (AC Transit) is a large special transit district like the Valley Transit Authority (VTA) and BART which are both already designated. In order to fully regulate both large bus storage and maintenance facilities and new development related to bus stops and plazas they need to be fully regulated under the Phase II stormwater permit, as they do not fall under the local city regulatory jurisdiction for all aspects of their operations. |
| AMTRAK | Special District | 2 | Within urbanized area |
| Bay Area Rapid Transit | Special District | 2 | Within urbanized area |
| CalTrain | Special District | 2 | Within urbanized area |
| Golden Gate Bridge, Highway and Transportation District | Special District | 2 | Within urbanized area |
| Valley Transit Authority | Special District | 2 | Within urbanized area |
| Port of Oakland | Port | 2 | Within urbanized area |
| Port of Redwood City | Port | 2 | Within urbanized area |
| San Jose Airport | Airport | 2 | Within urbanized area |
| Oceano Community Services District | Community Services District | 3 | Within urbanized area |
| Fort Ord Reuse Authority | Local Agency | 3 | Adjacent to urbanized area, Planned annexation into urbanized area |
| Fort Hunter Ligget, Army Garrison | Defense, Department of | 3 | Within urbanized area |

| Place name | Category | Regional Board | Justification |
|---|---|---|---|
| March Air Reserve Base | Defense, Department of | 8 | The former March Air Reserve Base was downsized and became known as March ARB. March ARB is an active military base that covers 2,300 acres. Activities in the base proper includes military activities such as air refueling, air cargo, air reconnaissance, military interceptors, military housing, recreational and dining facilities, commercial air cargo, training facilities, schools, operations centers for troop transport and industrial, including airport operations. Land use activities are under Base commander authority. The base is currently covered under an individual industrial storm water permit for their industrial operations and is a stakeholder under the Lake Elsinore/Canyon Lake TMDL. In addition to industrial permit monitoring, the Base monitors their compliance with the TMDL. We believe Phase II permit coverage is an appropriate permit to address the pollutants and flows generated from Base operations. Development and redevelopment post construction controls are of particular importance to be incorporated into the base's storm water program through Phase II permit coverage. |

| Place name | Category | Regional Board | Justification |
|---|---|---|---|
| March Joint Powers Authority[1] | March Joint Powers Commission | 8 | The March JPA is a federally recognized reuse authority for the former March Air Force base. It encompasses most of the 6, 500 acres of the former active duty March Air Force Base area and approximately 450 acres adjacent to the base in the industrial area of the City of Moreno Valley. March JPA also assumed the following authorities:<br>1 - Land Use Authority - Land use authority was transferred to March JPA from the County of Riverside, City of Riverside, and City of Moreno Valley. The March JPA has adopted development and building codes and standards. The March JPA General Plan has been developed by the March JPA in accordance with state statutes, as well as the associated Master Environmental Impact Report. The March JPA General Plan is designed to implement the March Final Reuse Plan and related activities.<br>2 - Airport Authority - March Inland Port Airport Authority (MIPAA), is a governing body under the governance umbrella of the March JPA. MIPAA is responsible for the development and operation of the March Inland Port (MIP), a joint use aviation facility targeted for air cargo operations.<br>The developments approved by the March JPA to date included residential, commercial and industrial sources of pollutants. About 1/8th of the area has been developed. March JPA has the authority to develop its own MS4s within their jurisdiction and connect to MS4s owned/operated by Phase 1 permittees. Many of the functions resemble that of a local agency. Therefore, March JPA should be subject to the Phase II (or they can join our Phase 1). |

[1] Note: This discharger was not designated in the final version of Attachment B of the Order adopted by the Board on February 5, 2013.

| Place name | Category | Regional Board | Justification |
|---|---|---|---|
| Miramar Marine Corps Air Station | Defense, Department of | 9 | Within urbanized area |
| General Services Administration Facilities (GSA)[2] | Federal Facility | 9 | The site is the General Services Administration Facilities (GSA), located at 801 E. San Ysidro Blvd., San Ysidro, CA 92173 and is a federal facility. They are the owner and operator of a series of lateral drains which tie into a main open- trunk running and discharging along the border fence. They are responsible for the storm drains, including the new trunk slated for construction, and the entire system acts as a MS4. Additionally, GSA is the landlord of the world's busiest Land Port of Entry (LPOE). Located between San Diego and Tijuana, the San Ysidro LPOE supports 24 northbound vehicle lanes into the United States and six southbound lanes into Mexico.<br>Every day, this land port serves over 50,000 northbound vehicles and 25,000 northbound pedestrians. GSA maintains border crossing services, as well as increasing efficiency, security, and safety for federal agencies and the traveling public. Looking to the future, the San Ysidro LPOE is undergoing a major expansion that will include a new northbound inspection facility, primary vehicle inspection booths, secondary inspection area, administration space, and a pedestrian processing facility. A new southbound inspection facility will also be developed, and Interstate 5 will be shifted to the west to align with Mexico's planned use of a reconstructed entry facility at the vacant Virginia Avenue/El Chaparral commercial facility. |

[2] Note: This discharger was not designated in the final version of Attachment B of the Order adopted by the Board on February 5, 2013.

| Place name | Category | Regional Board | Justification |
|---|---|---|---|
| Metropolitan Transit System (MTS) | Transportation Agency | 9 | The Metropolitan Transit Development Board (MTDB) was created in 1975 by the passage of California Senate Bill 101 and came into existence on January 1, 1976. In 2005, MTDB changed its name to the Metropolitan Transit System (MTS). MTS licenses and regulates taxicabs, jitneys, and other private for-hire passenger transportation services by contract with the cities of San Diego, El Cajon, Imperial Beach, La Mesa, Lemon Grove, Poway, and Santee.MTS provides bus and rail services directly or by contract with public or private operators. MTS determines the routing, stops, frequency of service, and hours of operation for its existing services. MTS does a significant amount of their vehicles' maintenance. |
| North County Transit District (NCTD) | Transportation Agency | 9 | North county Transit district (NCTD) owns and operates the Sprinter Rail located along 22 miles of the rail corridor (see attached file) and adjacent staging areas within the Cities of Oceanside, Vista, San Marcos and Escondido and within the County of San Diego. The project's totaldisturbed acreage is approximately 280 acres. Storm water runoff from the project discharges directly into Waters of the State, the Municipal Separate Storm Sewer System (MS4) and, ultimately discharging to Loma Alta Creek, Buena Vista Creek, Buena Creek, San Marcos Creek, Escondido Creek and unmanned tributaries. Beginning October 2007, during construction, the San Diego Water Board hadidentified significant violations of the Stormwater Permit (99-08- DWQ). NCTD threatens to continue to discharge waste (e.g. sediment and sediment-laden water) in violation of the Basin Plan Prohibitions. |

*UNOFFICIAL DRAFT — Not Certified by Clerk*

# Attachment A

*Additional monitoring may be required if permittee discharges to a 303(d) listed waterbody
**The list of Regulated MS4s may be amended by the Executive Director consistent with the designation criteria list in the Order
***CDPs located within an existing NPDES permit area within an urbanized area are not required to file for separate coverage and pay separate fees
Monitoring Types: Ω = Water Quality Monitoring Options, λ = TMDL Attachment G Requirements, Δ = ASBS Special Protections

| Place Name | County | RB | Permittee Type | Population 2010 | Monitoring Type | Urbanized Area/ Urban Cluster Name | Designation Criteria |
|---|---|---|---|---|---|---|---|
| Amador County | Amador | 5S | New | | | | Regional Board Designation |
| Butte County | Butte | 5R | Renewal | | λ | | Renewal |
| Chico City | Butte | 5R | Renewal | 86,187 | λ | Chico, CA Urbanized Area | Renewal |
| Oroville City | Butte | 5R | New | 15,546 | | Oroville, CA Urban Cluster | High Population/Density |
| Paradise Town | Butte | | New | 26,218 | | Paradise, CA Urban Cluster | High Population/Density |
| Calaveras County | Calaveras | 5S | Renewal | | | | Renewal |
| Colusa County | Colusa | 5S | New | | λ | | TMDL |
| Crescent City | Del Norte | 1 | New | 7,643 | | Crescent City, CA Urban Cluster | Regional Board Designation |
| Cameron Park CDP | El Dorado | 5S | New | 18,228 | | Sacramento, CA Urbanized Area | Within Urbanized Area |
| Diamond Springs CDP | El Dorado | 5S | New | 11,037 | | Sacramento, CA Urbanized Area | Within Urbanized Area |
| El Dorado County | El Dorado | 5S | Renewal | | | | Renewal |

| Place Name | County | RB | Permittee Type | Population 2010 | Monitoring Type | Urbanized Area/ Urban Cluster Name | Designation Criteria |
|---|---|---|---|---|---|---|---|
| El Dorado Hills CDP | El Dorado | 5S | Renewal | 42,108 | | Sacramento, CA Urbanized Area | Renewal |
| Placerville City | El Dorado | 5S | Renewal | 10,389 | | Placerville--Diamond Springs, CA Urban Cluster | Renewal |
| Kingsburg City | Fresno | 5F | Renewal | 11,382 | | Selma, CA Urban Cluster | Renewal |
| Reedley City | Fresno | 5F | Renewal | 24,194 | | Reedley--Dinuba, CA Urban Cluster | Renewal |
| Selma City | Fresno | 5F | Renewal | 23,219 | | Selma, CA Urban Cluster | Renewal |
| Coalinga City | Fresno | 5F | New | 13,380 | | Coalinga, CA Urban Cluster | High Population/Density |
| Mendota City | Fresno | 5F | New | 11,014 | | Mendota, CA Urban Cluster | High Population/Density |
| Parlier City | Fresno | 5F | New | 14,494 | | Parlier, CA Urban Cluster | High Population/Density |
| Sanger City | Fresno | 5F | New | 24,270 | | Sanger, CA Urban Cluster | High Population/Density |
| Arcata City | Humboldt | 1 | Renewal | 17,231 | | Arcata-McKinleyville, CA Urban Cluster | Renewal |
| Bayview CDP | Humboldt | 1 | New | 2,510 | | Eureka, CA Urban Cluster | Regional Board Designation |
| Cutten CDP | Humboldt | 1 | New | 3,108 | | Eureka, CA Urban Cluster | Regional Board Designation |
| Eureka City | Humboldt | 1 | Renewal | 27,191 | | Eureka, CA Urban Cluster | Renewal |
| Fortuna City | Humboldt | 1 | Renewal | 11,926 | | Fortuna, CA Urban Cluster | Renewal |
| Humboldt Hill CDP | Humboldt | 1 | New | 3,414 | | Eureka, CA Urban Cluster | Regional Board Designation |

| Place Name | County | RB | Permittee Type | Population 2010 | Monitoring Type | Urbanized Area/ Urban Cluster Name | Designation Criteria |
|---|---|---|---|---|---|---|---|
| Humboldt County | Humboldt | 1 | New | | Δ | | ASBS |
| McKinleyville CDP | Humboldt | 1 | Renewal | 15,177 | | Arcata-McKinleyville, CA Urban Cluster | Renewal |
| Myrtletown CDP | Humboldt | 1 | New | 4,675 | | Eureka, CA Urban Cluster | Regional Board Designation |
| Pine Hills CDP | Humboldt | 1 | New | 3,108 | | Eureka, CA Urban Cluster | Regional Board Designation |
| Ridgewood Heights USSA | Humboldt | 1 | New | | | | Regional Board Designation |
| Rosewood USSA | Humboldt | 1 | New | | | | Regional Board Designation |
| Trinidad City | Humboldt | 1 | New | 367 | Δ | | ASBS |
| Brawley City | Imperial | 7 | Renewal | 24,953 | | Brawley, CA Urban Cluster | Renewal |
| Calexico City | Imperial | 7 | Renewal | 38,572 | | El Centro--Calexico, CA Urbanized Area | Renewal |
| El Centro City | Imperial | 7 | Renewal | 42,598 | | El Centro--Calexico, CA Urbanized Area | Renewal |
| Imperial City | Imperial | 7 | Renewal | 14,758 | | El Centro--Calexico, CA Urbanized Area | Renewal |
| Imperial County | Imperial | 7 | Renewal | | | | Renewal |
| Delano City | Kern | 5F | New | 38,824 | | Delano, CA Urbanized Area | Within Urbanized Area |
| Tehachapi City | Kern | 5F | New | 14,414 | | Tehachapi--Golden Hills, CA Urban Cluster | High Population/Density |
| Wasco City | Kern | 5F | New | 25,545 | | Wasco, CA Urban Cluster | High Population/Density |
| Hanford City | Kings | 5F | Renewal | 53,967 | Ω | Hanford, CA Urbanized Area | Renewal |

| Place Name | County | RB | Permittee Type | Population 2010 | Monitoring Type | Urbanized Area/ Urban Cluster Name | Designation Criteria |
|---|---|---|---|---|---|---|---|
| Kings County | Kings | 5F | Renewal | | | | Renewal |
| Lemoore City | Kings | 5F | Renewal | 24,531 | | Hanford, CA Urbanized Area | Renewal |
| Clearlake City | Lake | 5S | Renewal | 15,250 | λ | Clearlake, CA Urban Cluster | Renewal |
| Lakeport City | Lake | 5S | Renewal | 4,753 | | Clearlake, CA Urban Cluster | Renewal |
| Lake County | Lake | 5S | Renewal | | λ | | Renewal |
| Susanville City | Lassen | 6SLT | New | 17,947 | | Susanville, CA Urban Cluster | High Population/Density |
| Avalon City | Los Angeles | 4 | New | 3,728 | | Avalon, CA Urban Cluster | Regional Board Designation |
| Bonadelle Ranchos-Madera Ranchos CDP | Madera | 5F | New | 8,569 | λ | Bonadelle Ranchos-Madera Ranchos, CA Urban Cluster | Within Urbanized Area |
| Madera Acres CDP | Madera | 5F | New | 9,163 | | Madera, CA Urbanized Area | Within Urbanized Area |
| Madera City | Madera | 5F | Renewal | 61,416 | λ | Madera, CA Urbanized Area | Renewal |
| Madera County | Madera | 5F | Renewal | | λ | | Renewal |
| Chowchilla City | Madera | 5F | New | 18,720 | | Chowchilla, CA Urban Cluster | High Population/Density |
| Belvedere City | Marin | 2 | Renewal | 2,068 | λ | San Francisco--Oakland, CA Urbanized Area | Renewal |
| Black Point-Green Point CDP | Marin | 2 | Renewal | 1,306 | | San Francisco--Oakland, CA Urbanized Area | Renewal |

| Place Name | County | RB | Permittee Type | Population 2010 | Monitoring Type | Urbanized Area/ Urban Cluster Name | Designation Criteria |
|---|---|---|---|---|---|---|---|
| Corte Madera Town | Marin | 2 | Renewal | 9,253 | | San Francisco--Oakland, CA Urbanized Area | Renewal |
| Fairfax Town | Marin | 2 | Renewal | 7,441 | | San Francisco--Oakland, CA Urbanized Area | Renewal |
| Kentfield CDP | Marin | 2 | New | 6,485 | | San Francisco--Oakland, CA Urbanized Area | Within Urbanized Area |
| Larkspur City | Marin | 2 | Renewal | 11,926 | | San Francisco--Oakland, CA Urbanized Area | Renewal |
| Lucas Valley-Marinwood CDP | Marin | 2 | Renewal | 6,094 | | San Francisco--Oakland, CA Urbanized Area | Renewal |
| Marin County | Marin | 2 | Renewal | | Δ λ | | Renewal |
| Mill Valley City | Marin | 2 | Renewal | 13,903 | λ | San Francisco--Oakland, CA Urbanized Area | Renewal |
| Novato City | Marin | 2 | Renewal | 51,904 | λ | San Francisco--Oakland, CA Urbanized Area | Renewal |
| Ross Town | Marin | 2 | Renewal | 2,415 | | San Francisco--Oakland, CA Urbanized Area | Renewal |
| San Anselmo Town | Marin | 2 | Renewal | 12,336 | | San Francisco--Oakland, CA Urbanized Area | Renewal |
| San Rafael City | Marin | 2 | Renewal | 57,713 | λ | San Francisco--Oakland, CA Urbanized Area | Renewal |

| Place Name | County | RB | Permittee Type | Population 2010 | Monitoring Type | Urbanized Area/ Urban Cluster Name | Designation Criteria |
|---|---|---|---|---|---|---|---|
| Sausalito City | Marin | 2 | Renewal | 7,061 | λ | San Francisco--Oakland, CA Urbanized Area | Renewal |
| Strawberry CDP | Marin | 2 | New | 5,393 | | San Francisco--Oakland, CA Urbanized Area | Within Urbanized Area |
| Tamalpais-Homestead Valley CDP | Marin | 2 | Renewal | 10,735 | | San Francisco--Oakland, CA Urbanized Area | Renewal |
| Tiburon Town | Marin | 2 | Renewal | 8,962 | λ | San Francisco--Oakland, CA Urbanized Area | Renewal |
| Woodacre CDP | Marin | 2 | Renewal | 1,348 | | San Francisco--Oakland, CA Urbanized Area | Renewal |
| Fort Bragg City | Mendocino | 1 | Renewal | 7,273 | | Fort Bragg, CA Urban Cluster | Renewal |
| Mendocino County | Mendocino | 1 | Renewal | | | | Renewal |
| Atwater City | Merced | 5F | Renewal | 28,168 | λ | Merced, CA Urbanized Area | Renewal |
| Delhi CDP | Merced | 5F | Renewal | 10,755 | λ | Turlock, CA Urbanized Area | Renewal |
| Franklin CDP | Merced | 5F | New | 6,149 | | Merced, CA Urbanized Area | Within Urbanized Area |
| Livingston City | Merced | 5F | Renewal | 13,058 | λ | Turlock, CA Urbanized Area | Renewal |
| Los Banos City | Merced | 5F | Renewal | 35,972 | λ | Los Banos, CA Urban Cluster | Renewal |
| Merced City | Merced | 5F | Renewal | 78,958 | λ | Merced, CA Urbanized Area | Renewal |

| Place Name | County | RB | Permittee Type | Population 2010 | Monitoring Type | Urbanized Area/ Urban Cluster Name | Designation Criteria |
|---|---|---|---|---|---|---|---|
| Merced County | Merced | 5F | Renewal | | λ | | Renewal |
| Winton CDP | Merced | 5F | Renewal | 10,613 | λ | Merced, CA Urbanized Area | Renewal |
| Carmel Valley Village CDP | Monterey | 3 | Renewal | 4,407 | | Carmel Valley Village, CA Urban Cluster | Renewal |
| Carmel-by-the-Sea City | Monterey | 3 | Renewal | 3,722 | Δ | Seaside--Monterey, CA Urbanized Area | Renewal |
| Castroville CDP | Monterey | 3 | Renewal | 6,481 | | Salinas, CA Urbanized Area | Renewal |
| Del Rey Oaks City | Monterey | 3 | Renewal | 1,624 | | Seaside--Monterey, CA Urbanized Area | Renewal |
| Elkhorn CDP | Monterey | 3 | New | 12,723 | | Salinas, CA Urbanized Area | Within Urbanized Area |
| Gonzalez City | Monterey | 3 | New | 8,187 | | | Regional Board Designation |
| King City City | Monterey | 3 | Renewal | 12,874 | | King City, CA Urban Cluster | Renewal |
| Las Lomas CDP | Monterey | 3 | Renewal | 3,024 | | Watsonville, CA Urbanized Area | Renewal |
| Marina City | Monterey | 3 | Renewal | 19,718 | | Seaside--Monterey, CA Urbanized Area | Renewal |
| Monterey City | Monterey | 3 | Renewal | 27,810 | Δ | Seaside--Monterey, CA Urbanized Area | Renewal |
| Monterey County | Monterey | 3 | Renewal | | Δλ | | Renewal |
| Moss Landing CDP | Monterey | 3 | Renewal | 204 | | | Regional Board Designation |
| Pacific Grove City | Monterey | 3 | Renewal | 15,041 | Δ | Seaside--Monterey, CA Urbanized Area | Renewal |
| Pajaro CDP | Monterey | 3 | Renewal | 3,070 | | Watsonville, CA Urbanized Area | Renewal |

| Place Name | County | RB | Permittee Type | Population 2010 | Monitoring Type | Urbanized Area/ Urban Cluster Name | Designation Criteria |
|---|---|---|---|---|---|---|---|
| Prunedale CDP | Monterey | 3 | Renewal | 17,560 | | Salinas, CA Urbanized Area | Renewal |
| Sand City City | Monterey | 3 | Renewal | 334 | | Seaside--Monterey, CA Urbanized Area | Renewal |
| Seaside City | Monterey | 3 | Renewal | 33,025 | | Seaside--Monterey, CA Urbanized Area | Renewal |
| Soledad City | Monterey | 3 | Renewal | 25,738 | | Soledad, CA Urban Cluster | Renewal |
| Greenfield City | Monterey | 3 | New | 16,330 | | Greenfield, CA Urban Cluster | High Population/Density |
| American Canyon City | Napa | 2 | Renewal | 19,454 | λ | Vallejo, CA Urbanized Area | Renewal |
| Calistoga City | Napa | 2 | Renewal | 5,155 | λ | Calistoga, CA Urban Cluster | Renewal |
| Napa City | Napa | 2 | Renewal | 76,915 | λ | Napa, CA Urbanized Area | Renewal |
| Napa County | Napa | 2 | Renewal | | λ | | Renewal |
| St. Helena City | Napa | 2 | Renewal | 5,814 | λ | St. Helena, CA Urban Cluster | Renewal |
| Yountville City | Napa | 2 | Renewal | 2,933 | λ | Yountville, CA Urban Cluster | Renewal |
| Grass Valley City | Nevada | 5S | Renewal | 12,860 | | Grass Valley, CA Urban Cluster | Renewal |
| Truckee Town | Nevada | 5S | Renewal | 16,180 | λ | Truckee, CA Urban Cluster | Renewal |
| Placer County (Region 6) | Placer | 6 | Renewal | | λ | | Renewal |
| Auburn City | Placer | 5S | Renewal | 13,330 | | Auburn--North Auburn, CA Urban Cluster | Renewal |

| Place Name | County | RB | Permittee Type | Population 2010 | Monitoring Type | Urbanized Area/ Urban Cluster Name | Designation Criteria |
|---|---|---|---|---|---|---|---|
| Granite Bay CDP | Placer | 5S | Renewal | 20,402 | | Sacramento, CA Urbanized Area | Renewal |
| Lincoln City | Placer | 5S | Renewal | 42,819 | λ | Sacramento, CA Urbanized Area | Renewal |
| Loomis Town | Placer | 5S | Renewal | 6,430 | λ | Sacramento, CA Urbanized Area | Renewal |
| North Auburn CDP | Placer | 5S | Renewal | 13,022 | | Auburn--North Auburn, CA Urban Cluster | Renewal |
| Placer County (Region 5S) | Placer | 5S | Renewal | | | | Renewal |
| Rocklin City | Placer | 5S | Renewal | 56,974 | λ | Sacramento, CA Urbanized Area | Renewal |
| Roseville City | Placer | 5S | Renewal | 118,788 | λ | Sacramento, CA Urbanized Area | Renewal |
| Hollister City | San Benito | 3 | Renewal | 34,928 | λ | Hollister, CA Urban Cluster | Renewal |
| Apple Valley Town | San Bernardino | 6V | Renewal | 69,135 | Ω | Victorville--Hesperia, CA Urbanized Area | Renewal |
| Barstow City | San Bernardino | 6V | New | 22, 639 | | Riverside--San Bernardino, CA Urbanized Area | Within Urbanized Area |
| Hesperia City | San Bernardino | 6V | Renewal | 90,173 | | Victorville--Hesperia, CA Urbanized Area | Renewal |
| Oak Hills CDP | San Bernardino | 6V | New | 8,879 | | Victorville--Hesperia, CA Urbanized Area | Within Urbanized Area |
| Phelan CDP | San Bernardino | 6V | New | 14,304 | | Victorville--Hesperia, CA Urbanized Area | Within Urbanized Area |
| Spring Valley Lake CDP | San Bernardino | 6V | New | 8,220 | | Victorville--Hesperia, CA Urbanized Area | Within Urbanized Area |
| Victorville City | San Bernardino | 6V | Renewal | 115,903 | Ω | Victorville--Hesperia, CA Urbanized Area | Renewal |

| Place Name | County | RB | Permittee Type | Population 2010 | Monitoring Type | Urbanized Area/ Urban Cluster Name | Designation Criteria |
|---|---|---|---|---|---|---|---|
| San Bernardino County | San Bernardino | 6V | Renewal | | | | Renewal |
| San Francisco City (San Francisco Public Utilities Commission) | San Francisco | 2 | Renewal | | | San Francisco--Oakland, CA Urbanized Area | Renewal |
| San Francisco City (Port of San Francisco) | San Francisco | 2 | Renewal | | | San Francisco--Oakland, CA Urbanized Area | Renewal |
| Escalon City | San Joaquin | 5S | New | 7, 132 | | Stockton, CA Urbanized Area | New |
| Lathrop City | San Joaquin | 5S | Renewal | 18,023 | λ | Manteca, CA Urbanized Area | Renewal |
| Lathrop City | San Joaquin | 5S | Renewal | 18,023 | λ | Stockton, CA Urbanized Area | Renewal |
| Lodi City | San Joaquin | 5S | Renewal | 62,134 | λ | Lodi, CA Urbanized Area | Renewal |
| Manteca City | San Joaquin | 5S | Renewal | 347 | λ | Stockton, CA Urbanized Area | Renewal |
| Manteca City | San Joaquin | 5S | Renewal | 67,096 | Ω | Manteca, CA Urbanized Area | Renewal |
| Ripon City | San Joaquin | 5S | Renewal | 14,297 | λ | Manteca, CA Urbanized Area | Renewal |
| San Joaquin County | San Joaquin | 5S | Renewal | | λ | | Renewal |
| Tracy City | San Joaquin | 5S | Renewal | 82,922 | λ | Tracy, CA Urbanized Area | Renewal |
| Woodbridge CDP | San Joaquin | 5S | Renewal | 3,984 | | Lodi, CA Urbanized Area | Renewal |
| Arroyo Grande City | San Luis Obispo | 3 | Renewal | 17,252 | | Arroyo Grande--Grover Beach, CA Urbanized Area | Renewal |

| Place Name | County | RB | Permittee Type | Population 2010 | Monitoring Type | Urbanized Area/ Urban Cluster Name | Designation Criteria |
|---|---|---|---|---|---|---|---|
| Atascadero City | San Luis Obispo | 3 | Renewal | 28,310 | | El Paso de Robles (Paso Robles)--Atascadero, CA Urbanized Area | Renewal |
| Blacklake CDP | San Luis Obispo | 3 | New | 930 | | Nipomo, CA Urban Cluster | Regional Board Designation |
| Cambria | San Luis Obispo | 3 | Renewal | 6,032 | | Cambria, CA Urban Cluster | Renewal |
| Cayucos CDP | San Luis Obispo | 3 | New | 2,592 | | Morro Bay--Los Osos, CA Urban Cluster | Regional Board Designation |
| El Paso de Robles (Paso Robles) City | San Luis Obispo | 3 | Renewal | 29,793 | | El Paso de Robles (Paso Robles)--Atascadero, CA Urbanized Area | Renewal |
| Grover Beach City | San Luis Obispo | 3 | Renewal | 13,156 | | Arroyo Grande--Grover Beach, CA Urbanized Area | Renewal |
| Lake Nacimiento CDP | San Luis Obispo | 3 | New | 2,411 | | | Regional Board Designation |
| Morro Bay City | San Luis Obispo | 3 | Renewal | 10,234 | λ | Morro Bay--Los Osos, CA Urban Cluster | Renewal |
| Nipomo CDP | San Luis Obispo | 3 | Renewal | 16,714 | | Nipomo, CA Urban Cluster | Renewal |
| Pismo Beach City | San Luis Obispo | 3 | Renewal | 7,655 | | Arroyo Grande--Grover Beach, CA Urbanized Area | Renewal |
| San Luis Obispo City | San Luis Obispo | 3 | Renewal | 45,119 | λ | San Luis Obispo, CA Urbanized Area | Renewal |
| San Luis Obispo County | San Luis Obispo | 3 | Renewal | | λ | | Renewal |
| San Miguel | San Luis Obispo | 3 | New | 2,336 | | | Regional Board Designation |

| Place Name | County | RB | Permittee Type | Population 2010 | Monitoring Type | Urbanized Area/ Urban Cluster Name | Designation Criteria |
|---|---|---|---|---|---|---|---|
| Shandon CDP | San Luis Obispo | 3 | New | 1,295 | | | Regional Board Designation |
| Buellton City | Santa Barbara | 3 | Renewal | 4,828 | | Solvang--Buellton--Santa Ynez, CA Urban Cluster | Renewal |
| Carpinteria City | Santa Barbara | 3 | New | 13,040 | | Santa Barbara, CA Urbanized Area | Within Urbanized Area |
| Goleta City | Santa Barbara | 3 | Renewal | 29,888 | | Santa Barbara, CA Urbanized Area | Renewal |
| Guadalupe City | Santa Barbara | 3 | New | 7,080 | | Guadalupe, CA Urban Cluster | Regional Board Designation |
| Hope Ranch CDP | Santa Barbara | 3 | New | | | | Regional Board Designation |
| Isla Vista CDP | Santa Barbara | 3 | Renewal | 23,096 | | Santa Barbara, CA Urbanized Area | Renewal |
| Lompoc City | Santa Barbara | 3 | Renewal | 42,434 | | Lompoc, CA Urbanized Area | Renewal |
| Los Olivos CDP | Santa Barbara | 3 | Renewal | 1,132 | | Solvang--Buellton--Santa Ynez, CA Urban Cluster | Renewal |
| Mission Canyon CDP | Santa Barbara | 3 | New | 2,381 | | | Regional Board Designation |
| Mission Hills CDP | Santa Barbara | 3 | New | 3,576 | | | Regional Board Designation |
| Montecito CDP | Santa Barbara | 3 | New | 8,965 | | Santa Barbara, CA Urbanized Area | Within Urbanized Area |
| Orcutt CDP | Santa Barbara | 3 | Renewal | 28,905 | | Santa Maria, CA Urbanized Area | Renewal |
| Santa Barbara City | Santa Barbara | 3 | Renewal | 88,410 | Ω | Santa Barbara, CA Urbanized Area | Renewal |

| Place Name | County | RB | Permittee Type | Population 2010 | Monitoring Type | Urbanized Area/ Urban Cluster Name | Designation Criteria |
|---|---|---|---|---|---|---|---|
| Santa Barbara County | Santa Barbara | 3 | Renewal | | | | Renewal |
| Santa Maria City | Santa Barbara | 3 | Renewal | 99,553 | Ω | Santa Maria, CA Urbanized Area | Renewal |
| Santa Ynez CDP | Santa Barbara | 3 | Renewal | 4,418 | | Solvang--Buellton--Santa Ynez, CA Urban Cluster | Renewal |
| Solvang City | Santa Barbara | 3 | Renewal | 5,245 | | Solvang--Buellton--Santa Ynez, CA Urban Cluster | Renewal |
| Summerland CDP | Santa Barbara | 3 | Renewal | 1,448 | | Santa Barbara, CA Urbanized Area | Renewal |
| Toro Canyon CDP | Santa Barbara | 3 | New | 1,508 | | | Regional Board Designation |
| Vandenberg Village CDP | Santa Barbara | 3 | Renewal | 6,497 | | Lompoc, CA Urbanized Area | Renewal |
| Gilroy City | Santa Clara | 3 | Renewal | 48,821 | λ | Gilroy--Morgan Hill, CA Urbanized Area | Renewal |
| Morgan Hill City | Santa Clara | 3 | Renewal | 37,882 | λ | Gilroy--Morgan Hill, CA Urbanized Area | Renewal |
| San Martin CDP | Santa Clara | 3 | Renewal | 7,027 | | Gilroy--Morgan Hill, CA Urbanized Area | Renewal |
| Santa Clara County | Santa Clara | 3 | Renewal | | λ | | Renewal |
| Aptos CDP | Santa Cruz | 3 | Renewal | 6,220 | | Santa Cruz, CA Urbanized Area | Renewal |
| Ben Lomond CDP | Santa Cruz | 3 | New | 6,234 | | Santa Cruz, CA Urbanized Area | Within Urbanized Area |
| Capitola City | Santa Cruz | 3 | Renewal | 9,918 | | Santa Cruz, CA Urbanized Area | Renewal |
| Interlaken CDP | Santa Cruz | 3 | New | 7,321 | | Watsonville, CA Urbanized Area | Within Urbanized Area |

| Place Name | County | RB | Permittee Type | Population 2010 | Monitoring Type | Urbanized Area/ Urban Cluster Name | Designation Criteria |
|---|---|---|---|---|---|---|---|
| Live Oak CDP | Santa Cruz | 3 | New | 17,158 | | Santa Cruz, CA Urbanized Area | Regional Board Designation |
| Pleasure Point CDP | Santa Cruz | 3 | New | 5846 | | Santa Cruz, CA Urbanized Area | Within Urbanized Area |
| Rio del Mar CDP | Santa Cruz | 3 | New | 9,216 | | Santa Cruz, CA Urbanized Area | Within Urbanized Area |
| Santa Cruz City | Santa Cruz | 3 | Renewal | 59,946 | λ | Santa Cruz, CA Urbanized Area | Renewal |
| Santa Cruz County | Santa Cruz | 3 | Renewal | | λ | | Renewal |
| Scotts Valley City | Santa Cruz | 3 | Renewal | 11,580 | λ | Santa Cruz, CA Urbanized Area | Renewal |
| Soquel CDP | Santa Cruz | 3 | New | 9,644 | | Santa Cruz, CA Urbanized Area | Within Urbanized Area |
| Watsonville City | Santa Cruz | 3 | Renewal | 51,199 | λ | Watsonville, CA Urbanized Area | Renewal |
| Anderson City | Shasta | 5R | New | 9,932 | λ | Redding, CA Urbanized Area | Renewal |
| Redding City | Shasta | 5R | New | 89,861 | λ | Redding, CA Urbanized Area | Renewal |
| Shasta County | Shasta | 5R | New | | λ | | Renewal |
| Shasta Lake City | Shasta | 5R | New | 10,164 | | Redding, CA Urbanized Area | Renewal |
| Yreka City | Siskiyou | 1 | New | 7,765 | λ | Yreka, CA Urban Cluster | TMDL |
| Benicia City | Solano | 2 | Renewal | 26,997 | | Vallejo, CA Urbanized Area | Renewal |
| Solano County (Region 2) | Solano | 2 | Renewal | | λ | | Renewal |
| Dixon City | Solano | 5S | Renewal | 18,351 | λ | Dixon, CA Urban Cluster | Renewal |

| Place Name | County | RB | Permittee Type | Population 2010 | Monitoring Type | Urbanized Area/ Urban Cluster Name | Designation Criteria |
|---|---|---|---|---|---|---|---|
| Rio Vista City | Solano | 5S | Renewal | 7,360 | λ | Rio Vista, CA Urban Cluster | Renewal |
| Solano County (Region 5S) | Solano | 5S | Renewal | | λ | | Renewal |
| Vacaville City | Solano | 5S | Renewal | 92,428 | λ | Fairfield, CA Urbanized Area | Renewal |
| Vacaville City | Solano | 5S | Renewal | 92,428 | Ω | Vacaville, CA Urbanized Area | Renewal |
| Petaluma City | Sonoma | 2 | Renewal | 57,941 | λ | Petaluma, CA Urbanized Area | Renewal |
| Sonoma City | Sonoma | 2 | Renewal | 10,648 | λ | Sonoma, CA Urban Cluster | Renewal |
| Sonoma County | Sonoma | 2 | Renewal | | λ | | Renewal |
| Sonoma County Water Agency | Sonoma | 2 | Renewal | | λ | | Renewal |
| Bret Harte CDP | Stanislaus | 5S | New | 5,152 | | Modesto, CA Urbanized Area | Within Urbanized Area |
| Ceres City | Stanislaus | 5S | Renewal | 45,417 | λ | Modesto, CA Urbanized Area | Renewal |
| Empire CDP | Stanislaus | 5S | Renewal | 4,189 | λ | Modesto, CA Urbanized Area | Renewal |
| Hughson City | Stanislaus | 5S | Renewal | 6,640 | λ | Modesto, CA Urbanized Area | Renewal |
| Keyes CDP | Stanislaus | 5S | Renewal | 5,601 | λ | Modesto, CA Urbanized Area | Renewal |
| Oakdale City | Stanislaus | 5S | Renewal | 20,675 | λ | Modesto, CA Urbanized Area | Renewal |
| Patterson City | Stanislaus | 5S | Renewal | 20,413 | λ | Patterson, CA Urban Cluster | Renewal |
| Riverbank City | Stanislaus | 5S | Renewal | 22,678 | λ | Modesto, CA Urbanized Area | Renewal |

| Place Name | County | RB | Permittee Type | Population 2010 | Monitoring Type | Urbanized Area/ Urban Cluster Name | Designation Criteria |
|---|---|---|---|---|---|---|---|
| Salida CDP | Stanislaus | 5S | Renewal | 13,722 | λ | Modesto, CA Urbanized Area | Renewal |
| Stanislaus County | Stanislaus | 5S | Renewal | | λ | | Renewal |
| Turlock City | Stanislaus | 5S | Renewal | 68,549 | λ | Turlock, CA Urbanized Area | Renewal |
| West Modesto CDP | Stanislaus | 5S | New | 5,682 | | Modesto, CA Urbanized Area | Within Urbanized Area |
| Newman City | Stanislaus | 5S | New | 10,224 | | Newman, CA Urban Cluster | High Population/Density |
| Live Oak | Sutter | 5S | New | 8,392 | λ | Live Oak (Sutter County), CA Urban Cluster | TMDL |
| Sutter County | Sutter | 5S | Renewal | | λ | | Renewal |
| Yuba City City | Sutter | 5S | Renewal | 64,925 | λ | Yuba City, CA Urbanized Area | Renewal |
| Red Bluff City | Tehama | 5R | New | 14,076 | λ | Red Bluff, CA Urban Cluster | High Population/Density |
| East Porterville CDP | Tulare | 5F | New | 6,767 | | Porterville, CA Urbanized Area | Within Urbanized Area |
| Exeter City | Tulare | 5F | Renewal | 10,334 | | Visalia, CA Urbanized Area | Renewal |
| Farmersville City | Tulare | 5F | Renewal | 10,588 | | Visalia, CA Urbanized Area | Renewal |
| Goshen CDP | Tulare | 5F | Renewal | 3,006 | | Visalia, CA Urbanized Area | Renewal |
| Porterville City | Tulare | 5F | Renewal | 54,165 | Ω | Porterville, CA Urbanized Area | Renewal |
| Strathmore CDP | Tulare | 5F | Renewal | 2,819 | | Porterville, CA Urbanized Area | Renewal |
| Tulare City | Tulare | 5F | Renewal | 59,278 | Ω | Visalia, CA Urbanized Area | Renewal |

| Place Name | County | RB | Permittee Type | Population 2010 | Monitoring Type | Urbanized Area/ Urban Cluster Name | Designation Criteria |
|---|---|---|---|---|---|---|---|
| Tulare County | Tulare | 5F | Renewal | | λ | | Renewal |
| Visalia City | Tulare | 5F | Renewal | 124,442 | Ω | Visalia, CA Urbanized Area | Renewal |
| Dinuba City | Tulare | 5F | New | 21,453 | | Reedley--Dinuba, CA Urban Cluster | High Population/Density |
| Davis City | Yolo | 5S | Renewal | 65,622 | λ | Davis, CA Urbanized Area | Renewal |
| UC Davis CDP | Yolo | 5S | New | 5,786 | | Davis, CA Urbanized Area | Within Urbanized Area |
| West Sacramento City | Yolo | 5S | Renewal | 48,744 | λ | Sacramento, CA Urbanized Area | Renewal |
| Woodland City | Yolo | 5S | Renewal | 55,468 | λ | Woodland, CA Urbanized Area | Renewal |
| Yolo County | Yolo | 5S | Renewal | | λ | | Renewal |
| Linda CDP | Yuba | 5S | Renewal | 17,773 | λ | Yuba City, CA Urbanized Area | Renewal |
| Marysville City | Yuba | 5S | Renewal | 12,072 | λ | Yuba City, CA Urbanized Area | Renewal |
| Olivehurst CDP | Yuba | 5S | Renewal | 13,656 | λ | Yuba City, CA Urbanized Area | Renewal |
| Yuba County | Yuba | 5S | Renewal | | λ | | Renewal |

# Attachment B — Non-Traditional Small MS4 Permittees

Monitoring Type: Δ = Areas of Special Biological Significance Special Protections

*The list of Regulated MS4s in this Attachment may be amended by the Executive Director consistent with the designation criteria listed in the Order. Revised 2/19/13 to change Agency to Department of Homeland Security for Petaluma Coast Guard Training Center and Alameda Coast Guard Integrated Support Command, removed VA Northern CA Healthcare Systems and Martinez Center for Rehab and Extended. Amended on September 2, 2015 to remove Tracy Unified School District. Amended on January 24, 2018 to remove Amtrak and to add California High Speed Rail Authority. Amended on March 13, 2018 to add San Diego Metropolitan Transit System and Marine Corps Recruit Depot San Diego.

| Region | Permittee Name | Agency | Designation Criteria | Permittee Type | Monitoring Type |
|---|---|---|---|---|---|
| **North Coast Regional Water Board** | | | | | |
| 1 | Sonoma State University | California State University | Within Urbanized Area | New | |
| 1 | Caspar Headlands SB | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 1 | Caspar Headlands SR | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 1 | Del Norte Coast Redwoods SP | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 1 | Humboldt Lagoons SP | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 1 | Jug Handle SR | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 1 | Mendocino Headlands SP | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 1 | Mill Creek Property | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 1 | Patrick's Point SP | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 1 | Pelican SB | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 1 | Point Cabrillo Light Station Property | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 1 | Prairie Creek Redwoods SP | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 1 | Sinkyone Wilderness SP | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 1 | Tolowa Dunes SP | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 1 | Trinidad SB | Parks and Recreation, Dept. of | ASBS | New | Δ |

| Region | Permittee Name | Agency | Designation Criteria | Permittee Type | Monitoring Type |
|---|---|---|---|---|---|
| 1 | Petaluma Coast Guard Training Center | Homeland Security, Department of | Regional Board Designation | New | |
| **San Francisco Regional Water Board** | | | | | |
| 2 | San Jose Airport | Airport | Regional Board Designation | New | |
| 2 | FCI Dublin | Bureau of Prisons | Within Urbanized Area | New | |
| 2 | California State University Maritime | California State University | Within Urbanized Area | New | |
| 2 | California State University East Bay - Hayward Campus | California State University | Within Urbanized Area | New | |
| 2 | California State University East Bay - Concord Campus | California State University | Within Urbanized Area | New | |
| 2 | San Jose State University | California State University | Within Urbanized Area | New | |
| 2 | San Quentin State Prison | Corrections and Rehabilitation, Dept of | Within Urbanized Area | New | |
| 2 | Travis Air Force Base | Defense, Department of | Within Urbanized Area | New | |
| 2 | Agnews Developmental Center East & West | Developmental Services, Dept of | Within Urbanized Area | New | |
| 2 | Sonoma Development Center | Developmental Services, Dept of. | Renewal | Renewal | |
| 2 | Sonoma-Marin Fair | District Agricultural Association | Within Urbanized Area | New | |
| 2 | Napa County Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| 2 | Montara SB | Parks and Recreation, Dept. of | ASBS | New | |
| 2 | Port of Oakland | Port | Regional Board Designation | New | |
| 2 | Port of Redwood City | Port | Regional Board Designation | New | |
| 2 | California High Speed Rail Authority | Special District | State Board Designation | New | |

| Region | Permittee Name | Agency | Designation Criteria | Permittee Type | Monitoring Type |
|---|---|---|---|---|---|
| 2 | Bay Area Rapid Transit | Special District | Regional Board Designation | New | |
| 2 | CalTrain | Special District | Regional Board Designation | New | |
| 2 | Golden Gate Bridge, Highway and Transportation District | Special District | Regional Board Designation | New | |
| 2 | Valley Transit Authority (VTA) | Special District | Regional Board Designation | New | |
| 2 | Alameda Coast Guard Integrated Support Command | Homeland Security, Department of | Regional Board Designation | New | |
| 2 | University of California Berkeley | University of California | Within Urbanized Area | New | |
| 2 | The University of California, San Francisco | University of California | Within Urbanized Area | New | |
| **Central Coast Regional Water Board** | | | | | |
| 3 | USP Lompoc | Bureau of Prisons | Within Urbanized Area | New | |
| 3 | FCI Lompoc | Bureau of Prisons | Within Urbanized Area | New | |
| 3 | California Polytechnic State University | California State University | Within Urbanized Area | New | |
| 3 | California State University Monterey Bay | California State University | Within Urbanized Area | New | |
| 3 | Los Osos Community Services District | Community Services District | Renewal | Renewal | |
| 3 | Oceano Community Services District | Community Services District | Renewal | Renewal | |
| 3 | Templeton Community Services District | Community Services District | Renewal | Renewal | |
| 3 | California Men's Colony | Corrections and Rehabilitation, Dept of | Within Urbanized Area | New | |

| Region | Permittee Name | Agency | Designation Criteria | Permittee Type | Monitoring Type |
|---|---|---|---|---|---|
| 3 | Fort Hunter Ligget, Army Garrison | Defense, Department of | Regional Board Designation | New | |
| 3 | US Army Presidio of Monterey; includes Defense Language Institute | Defense, Department of | Within Urbanized Area | New | |
| 3 | Vandenberg AFB | Defense, Department of | Renewal | Renewal | |
| 3 | Monterey County Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| 3 | Santa Maria Fairpark | District Agricultural Association | Within Urbanized Area | New | |
| 3 | Santa Cruz County Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| 3 | Earl Warren Showgrounds (National Horse Show) | District Agricultural Association | Within Urbanized Area | New | |
| 3 | San Luis Obispo County Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| 3 | Fort Ord Reuse Authority | Local Agency | Regional Board Designation | New | |
| 3 | Ano Nuevo SP | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 3 | Ano Nuevo SR | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 3 | Carmel River SB | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 3 | Julia Pfeiffer Burns SP | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 3 | Oceano Dunes SVRA | Parks and Recreation, Dept. of | Within Urbanized Area | New | |
| 3 | Pismo SB | Parks and Recreation, Dept. of | Within Urbanized Area | New | |
| 3 | Point Lobos SR | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 3 | Carpinteria Unified School District | School District, Carpinteria Unified | Renewal | Renewal | |
| 3 | University of California, Santa Barbara | University of California | Renewal | Renewal | |

| Region | Permittee Name | Agency | Designation Criteria | Permittee Type | Monitoring Type |
|---|---|---|---|---|---|
| 3 | University of California, Santa Cruz | University of California | Renewal | Renewal | |
| **Los Angeles Regional Water Board** | | | | | |
| 4 | FCI Terminal Island | Bureau of Prisons | Within Urbanized Area | New | |
| 4 | CCM Long Beach | Bureau of Prisons | Within Urbanized Area | New | |
| 4 | California State University Los Angeles | California State University | Within Urbanized Area | New | |
| 4 | California State University Northridge | California State University | Within Urbanized Area | New | |
| 4 | California State University Channel Islands | California State University | Within Urbanized Area | New | |
| 4 | California State University Long Beach | California State University | Within Urbanized Area | New | |
| 4 | California State Polytechnic University, Pomona | California State University | Within Urbanized Area | New | |
| 4 | California State University Dominguez Hills | California State University | Within Urbanized Area | New | |
| 4 | Naval Base Ventura County; includes Port Hueneme and Point Mugu | Defense, Department of | Within Urbanized Area | New | |
| 4 | Lanterman Developmental Center | Developmental Services, Dept of | Within Urbanized Area | New | |
| 4 | Ventura County Fairgrounds (Seaside Park and Ventura County Fairgrounds) | District Agricultural Association | Within Urbanized Area | New | |
| 4 | Point Dume SB | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 4 | Point Mugu SP | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 4 | Robert H. Meyer Memorial SB | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 4 | UCLA | University of California | Within Urbanized Area | New | |
| 4 | Long Beach VA Medical Center | Veteran Affairs | Within Urbanized Area | New | |

| Region | Permittee Name | Agency | Designation Criteria | Permittee Type | Monitoring Type |
|---|---|---|---|---|---|
| 4 | VA Greater Los Angeles Healthcare System (GLA) | Veteran Affairs | Within Urbanized Area | New | |
| **Central Valley Regional Water Board** | | | | | |
| 5F | USP Atwater | Bureau of Prisons | Within Urbanized Area | New | |
| 5F | California State University Bakersfield | California State University | Within Urbanized Area | New | |
| 5F | Porterville Developmental Center | Developmental Services, Dept of | Within Urbanized Area | New | |
| 5F | Madera County Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| 5F | Kern County Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| 5F | Tulare County Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| 5F | Kings County Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| 5F | The Big Fresno Fair | District Agricultural Association | Within Urbanized Area | New | |
| 5F | Merced County Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| 5F | University of California, Merced | University of California | Within Urbanized Area | New | |
| 5F | Lemoore NAS | Defense, Department of | Within Urbanized Area | New | |
| 5R | California State University Chico | California State University | Within Urbanized Area | New | |
| 5R | Silver Dollar Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| 5R | Shasta County Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| 5R | Carnegie State Vehicular Recreation Area | Parks and Recreation, Dept. of | Within Urbanized Area | New | |
| 5S | California State University Sacramento | California State University | Renewal | Renewal | |

| Region | Permittee Name | Agency | Designation Criteria | Permittee Type | Monitoring Type |
|---|---|---|---|---|---|
| 5S | California State University Stanislaus | California State University | Within Urbanized Area | New | |
| 5S | Rancho Murieta Community Services District | Community Services District | Renewal | Renewal | |
| 5S | Mountain House Community Services District | Community Services District | Renewal | Renewal | |
| 5S | Cosumnes Community Services District | Community Services District | Renewal | Renewal | |
| 5S | CSP, Solano County | Corrections and Rehabilitation, Dept of | Within Urbanized Area | New | |
| 5S | Deuel Vocational Institution | Corrections and Rehabilitation, Dept of | Within Urbanized Area | New | |
| 5S | Folsom State Prison | Corrections and Rehabilitation, Dept of | Within Urbanized Area | New | |
| 5S | CSP, Sacramento | Corrections and Rehabilitation, Dept of | Within Urbanized Area | New | |
| 5S | California Medical Facility | Corrections and Rehabilitation, Dept of | Within Urbanized Area | New | |
| 5S | Contra Costa County Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| 5S | Sutter County Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| 5S | Yolo County Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| 5S | Stanislaus County Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| 5S | San Joaquin County Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| 5S | California Exposition & State Fair | Exposition & State Fair, California | Renewal | Renewal | |
| 5S | Elk Grove Unified School District | School District, Elk Grove Unified | Renewal | Renewal | |

| Region | Permittee Name | Agency | Designation Criteria | Permittee Type | Monitoring Type |
|---|---|---|---|---|---|
| 5S | The University of California, Davis | University of California | Renewal | Renewal | |
| 5S | Sacramento Medical Center at Mather | Veteran Affairs | Within Urbanized Area | New | |
| **Lahontan Regional Water Board** | | | | | |
| 6V | FCI Victorville | Bureau of Prisons | Within Urbanized Area | New | |
| 6V | San Bernardino County Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| **Santa Ana Regional Water Board** | | | | | |
| 8 | Los Alamitos AFRC | California Army National Guard | Within Urbanized Area | New | |
| 8 | California State University Fullerton | California State University | Within Urbanized Area | New | |
| 8 | California State University San Bernardino | California State University | Within Urbanized Area | New | |
| 8 | California Institution for Men | Corrections and Rehabilitation, Dept of | Within Urbanized Area | New | |
| 8 | California Institution for Women | Corrections and Rehabilitation, Dept of | Within Urbanized Area | New | |
| 8 | California Rehabilitation Center | Corrections and Rehabilitation, Dept of | Within Urbanized Area | New | |
| 8 | Fairview Developmental Center | Developmental Services, Dept of. | Within Urbanized Area | New | |
| 8 | March Air Force Base | Department of Defense | Regional Board Designation | New | |
| 8 | Orange County Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| 8 | Crystal Cove SP | Parks and Recreation, Dept. of | ASBS | New | Δ |
| 8 | University of California, Irvine | University of California | Within Urbanized Area | New | |

| Region | Permittee Name | Agency | Designation Criteria | Permittee Type | Monitoring Type |
|---|---|---|---|---|---|
| 8 | University of California, Riverside | University of California | Within Urbanized Area | New | |
| 8 | Jerry L. Pettis Memorial VA Medical Center | Veteran Affairs | Within Urbanized Area | New | |
| **San Diego Regional Water Board** | | | | | |
| 9 | MCC San Diego | Bureau of Prisons | Within Urbanized Area | New | |
| 9 | San Diego State University | California State University | Within Urbanized Area | New | |
| 9 | California State University San Marcos | California State University | Within Urbanized Area | New | |
| 9 | R J Donovan Correctional Facility at Rock Mountain | Corrections and Rehabilitation, Dept of | Within Urbanized Area | New | |
| 9 | Miramar Marine Corps Air Station | Defense, Department of | Regional Board Designation | New | |
| 9 | Camp Pendleton | Defense, Department of | Within Urbanized Area | New | |
| 9 | Del Mar Fairgrounds | District Agricultural Association | Renewal | Renewal | |
| 9 | San Diego County Fairgrounds | District Agricultural Association | Within Urbanized Area | New | |
| 9 | North County Transit District (NCTD) | Transportation Agency | Regional Board Designation | New | |
| 9 | University of California, San Diego | University of California | Within Urbanized Area | New | |
| 9 | VA San Diego Healthcare System | Veteran Affairs | Within Urbanized Area | New | |
| 9 | San Diego Metropolitan Transit System | Special District | Regional Board Designation | New | |
| 9 | Marine Corps Recruit Depot San Diego | Department of Defense | Regional Board Designation | New | |

# Attachment C

# Special Conditions (Specific Provisions) for Traditional and Non-Traditional Small MS4 ASBS Discharges

All Traditional and Non-traditional Small MS4 Permittees that discharge to ASBS as listed in Attachment D have been granted an exception to the Ocean Plan and shall comply with the following Special Protections requirements. Special Protections for Areas of Special Biological Significance, Governing Point Source Discharges of Storm Water and Nonpoint Source Waste Discharges (Attachment B to State Water Board Resolution 2012-0001) (Special Protections).

The Special Protections for Areas of Special Biological Significance require submittal of Compliance Plans to be included in a SWMP. However, SWMPs are no longer required for submittal by this Order. As such, Permittees shall submit a stand-alone Compliance Plan document for ASBS discharges and submit per the Special Conditions compliance schedule, through their online Annual Report.

## I. PROVISIONS FOR POINT SOURCE DISCHARGES OF STORM WATER

The following terms, prohibitions, and special conditions (hereafter collectively referred to as special conditions) are established as limitations on point source storm water. These special conditions provide Special Protections for marine aquatic life and natural water quality in Areas of Special Biological Significance (ASBS), as required for State Water Quality Protection Areas pursuant to California Public Resources Code Sections 36700(f) and 36710(f). These Special Protections are adopted by the State Water Board as part of the California Ocean Plan (Ocean Plan) General Exception.

### A. PERMITTED POINT SOURCE DISCHARGES OF STORM WATER

1. General Provisions for Permitted Point Source Discharges of Storm Water
   a. Existing storm water discharges into an ASBS are allowed only under the following conditions:
      (1) The discharges are authorized by this Order;
      (2) The discharges comply with all of the applicable terms, prohibitions, and special conditions contained in the Special Protections as laid out in this Attachment; and
      (3) The discharges:
         (i) Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;
         (ii) Are designed to prevent soil erosion;
         (iii) Occur only during wet weather;
         (iv) Are composed of only storm water runoff.
   b. Discharges composed of storm water runoff shall not alter natural ocean water quality in an ASBS.
   c. The discharge of trash is prohibited.

d. Only discharges from existing storm water outfalls are allowed. Any proposed or new storm water runoff discharge shall be routed to existing storm water discharge outfalls and shall not result in any new contribution of waste to an ASBS (i.e., no additional pollutant loading). “Existing storm water outfalls” are those that were constructed or under construction prior to January 1, 2005. “New contribution of waste” is defined as any addition of waste beyond what would have occurred as of January 1, 2005. A change to an existing storm water outfall, in terms of re-location or alteration, in order to comply with these special conditions, is allowed and does not constitute a new discharge.

e. Non-storm water discharges are prohibited except as provided below:

(1) The term “non-storm water discharges” means any waste discharges from a municipal separate storm sewer system (MS4) or other NPDES permitted storm drain system to an ASBS that are not composed entirely of storm water.

(2) The following non-storm water discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability or occur naturally:

(i) Discharges associated with emergency firefighting operations.
(ii) Foundation and footing drains.
(iii) Water from crawl space or basement pumps.
(iv) Hillside dewatering.
(v) Naturally occurring groundwater seepage via a storm drain.
(vi) Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.

(3) Discharges from utility vaults and underground structures to a segment of the MS4 with a direct discharge to an ASBS are permitted if such discharges are authorized by the General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Water, NPDES No. CAG 990002. Other short-duration, intermittent non-storm water discharges related to utilities (e.g. groundwater dewatering, potable water system flushing, hydrotest discharges) to a segment of the MS4 with a direct discharge to an ASBS are permitted if such discharges are authorized by an NPDES permit issued by the relevant Regional Water Board. A Regional Water Board may nonetheless prohibit a specific discharge from a utility vault or underground structure or other specific utility-related discharge if it determines that the discharge is causing the MS4 discharge to the ASBS to alter natural ocean water quality in the ASBS. Additional non-storm water discharges to a segment of the MS4 with a direct discharge to an ASBS are allowed only to the extent the relevant Regional Water Board finds that the discharge does not alter natural ocean water quality in the ASBS.

This provision does not supersede the authority of the MS4 to effectively prohibit a non-storm water discharge that has been found to alter natural ocean water quality in the ASBS.

(4) Authorized non-storm water discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in an ASBS.

2. Compliance Plans for Inclusion in Storm Water Management Plans (SWMP) and Storm Water Pollution Prevention Plans (SWPPP)

   The Permittee shall specifically address the prohibition of non-storm water runoff and the requirement to maintain natural water quality for storm water discharges to an ASBS in an ASBS Compliance Plan to be submitted to the appropriate Regional Water Board. The ASBS Compliance Plan is subject to approval by the Executive Director of the State Water Board.

   a. The Compliance Plan shall include a map of surface drainage of storm water runoff, showing areas of sheet runoff, prioritize discharges, and describe any structural Best Management Practices (BMPs) already employed and/or BMPs to be employed in the future. Priority discharges are those that pose the greatest water quality threat and which are identified to require installation of structural BMPs. The map shall also show the storm water conveyances in relation to other features such as service areas, sewage conveyances and treatment facilities, landslides, areas prone to erosion and waste and hazardous material storage areas, if applicable. The SWMP or SWPPP shall also include a procedure for updating the map and plan when changes are made to the storm water conveyance facilities.
   b. The ASBS Compliance Plan shall describe the measures by which all non-authorized non-storm water runoff (e.g., dry weather flows) has been eliminated, how these measures will be maintained over time, and how these measures are monitored and documented.
   c. The ASBS Compliance Plan shall require minimum inspection frequencies as follows:
      (1) The minimum inspection frequency for construction sites shall be weekly during rainy season;
      (2) The minimum inspection frequency for industrial facilities shall be monthly during the rainy season;
      (3) The minimum inspection frequency for commercial facilities (e.g., restaurants) shall be twice during the rainy season;
      (4) Storm water outfall drains equal to or greater than 18 inches (457 mm) in diameter or width shall be inspected once prior to the beginning of the rainy season and once during the rainy season and maintained to remove trash and other anthropogenic debris.
   d. The ASBS Compliance Plan shall address storm water discharges (wet weather flows) and, in particular, describe how pollutant reductions in storm water runoff, that are necessary to comply with these special conditions, will be achieved through BMPs. Structural BMPs need not be installed if the Permittee can document to the satisfaction of the State Water Board Executive Director that such installation would pose a threat to health or safety. BMPs to control storm water runoff discharges (at the end-of-pipe) during a design storm shall be designed to achieve on average the following target levels:

      (1) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or
      (2) A 90% reduction in pollutant loading during storm events, for the Permittee's total discharges. The baseline for the reduction is the effective date of the Exception.

The baseline for these determinations is the effective date of the Exception, and the reductions must be achieved and documented within six (6) years of the effective date.

e. The ASBS Compliance Plan shall address erosion control and the prevention of anthropogenic sedimentation in ASBS. The natural habitat conditions in the ASBS shall not be altered as a result of anthropogenic sedimentation.
f. The ASBS Compliance Plan shall describe the non-structural BMPs currently employed and planned in the future (including those for construction activities) and include an implementation schedule. The ASBS Compliance Plan shall include non-structural BMPs that address public education and outreach. Education and outreach efforts must adequately inform the public that direct discharges of pollutants from private property not entering an MS4 are prohibited. The ASBS Compliance Plan shall also describe the structural BMPs, including any low impact development (LID) measures, currently employed and planned for higher threat discharges and include an implementation schedule. To control storm water runoff discharges (at the end-of-pipe) during a design storm, permittees must first consider using LID practices to infiltrate, use, or evapotranspire storm water runoff on-site.
g. The BMPs and implementation schedule shall be designed to ensure that natural water quality conditions in the receiving water are achieved and maintained by either reducing flows from impervious surfaces or reducing pollutant loading, or some combination thereof.
h. If the results of the receiving water monitoring described in Section IV. B. below indicate that the storm water runoff is causing or contributing to an alteration of natural ocean water quality in the ASBS, the Permittee shall submit a report to the State Water Board and Regional Water Board within 30 days of receiving the results.
    (1) The report shall identify the constituents in storm water runoff that alter natural ocean water quality and the sources of these constituents.
    (2) The report shall describe BMPs that are currently being implemented, BMPs that are identified in the ASBS Compliance Plan for future implementation, and any additional BMPs that may be added to the ASBS Compliance Plan to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the BMPs.
    (3) Within 30 days of the approval of the report by the State Water Board Executive Director, the Permittee shall revise its ASBS Compliance Plan to incorporate any new or modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required.
    (4) As long as the Permittee has complied with the procedures described above and is implementing the revised ASBS Compliance Plan, the Permittee does not have to repeat the same procedure for continuing or recurring exceedances of natural ocean water quality conditions due to the same constituent.
    (5) Compliance with this section does not excuse violations of any term, prohibition, or condition contained in the Special Protections.

3. Compliance Schedule
    a. On the effective date of the Exception, all non-authorized non-storm water discharges (e.g., dry weather flow) are effectively prohibited.

b. Within 18 months from the effective date of the Exception, the Permittee shall submit a written ASBS Compliance Plan to the State Water Board Executive Director that describes its strategy to comply with these special conditions, including the requirement to maintain natural water quality in the affected ASBS. The ASBS Compliance Plan shall include a time schedule to implement appropriate non-structural and structural controls (implementation schedule) to comply with these special conditions.
c. Within 18 months of the effective date of the Exception, any non-structural controls that are necessary to comply with these special conditions shall be implemented.
d. Within six (6) years of the effective date of the Exception, any structural controls identified in the ASBS Compliance Plan that are necessary to comply with these special conditions shall be operational.
e. Within six (6) years of the effective date of the Exception, all Permittees must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85th percentile threshold of reference water quality data and the pre-storm receiving water levels, then the Permittee must re-sample the receiving water, pre- and post-storm. If after re-sampling the post-storm levels are still higher than the 85th percentile threshold of reference water quality data, and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See attached Flowchart Section C.
f. The Executive Director of the State Water Board may only authorize additional time to comply with the special conditions d. and e., above if good cause exists to do so. Good cause means a physical impossibility or lack of funding.

If a Permittee claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the Permittee first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in d. or e. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Exception. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the Permittee to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The Permittee shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

The Permittee may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. for Traditional Small MS4s, a demonstration of significant hardship to Permittee ratepayers, by showing the relationship of storm water fees to annual household income for residents within the Permittee's jurisdictional area, and the Permittee has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate; or

2. for Non-Traditional Small MS4s, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process.

## II. ADDITIONAL REQUIREMENTS FOR PARKS AND RECREATION FACILITIES

In addition to the provisions in Section I (A) a Permittee with parks and recreation facilities shall comply with the following:

A. The Permittee shall include a section in an ASBS Compliance Plan to address storm water runoff from parks and recreation facilities.

1. The Section shall identify all pollutant sources, including sediment sources, which may result in waste entering storm water runoff. Pollutant sources include, but are not limited to, roadside rest areas and vistas, picnic areas, campgrounds, trash receptacles, maintenance facilities, park personnel housing, portable toilets, leach fields, fuel tanks, roads, piers, and boat launch facilities.
2. The Section shall describe BMPs or Management Measures/Practices that will be implemented to control soil erosion (both temporary and permanent erosion controls) and reduce or eliminate pollutants in storm water runoff in order to achieve and maintain natural water quality conditions in the affected ASBS. The plan shall include BMPs or Management Measures/Practices to ensure that trails and culverts are maintained to prevent erosion and minimize waste discharges to ASBS.
3. The Section shall include BMPs or Management Measures/Practices to prevent the discharge of pesticides or other chemicals, including agricultural chemicals, in storm water runoff to the affected ASBS.
4. The Section shall include BMPs or Management Measures/Practices that address public education and outreach. The goal of these BMPs or Management Measures/Practices is to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in in the Special Protections as laid out in this Attachment. The BMPs or Management Measures/Practices shall include signage at camping, picnicking, beach and roadside parking areas, and visitor centers, or other appropriate measures, which notify the public of any applicable requirements of the Special Protections as laid out in this Attachment and identify the ASBS boundaries.
5. The Section shall include BMPs or Management Measures/Practices that address the prohibition against the discharge of trash to ASBS. The BMPs or Management Measures/Practices shall include measures to ensure that adequate trash receptacles are available for public use at visitor facilities, including parking areas, and that the receptacles are adequately maintained to prevent trash discharges into the ASBS. Appropriate measures include covering trash receptacles to prevent trash from being windblown and periodically emptying the receptacles to prevent overflows.
6. The Section shall include BMPs or Management Measures/Practices to address runoff from parking areas and other developed features to ensure that the runoff does not alter natural water quality in the affected ASBS. BMPs or Management Measures/Practices shall include measures to reduce pollutant loading in runoff to the ASBS through installation of natural area buffers (LID), treatment, or other appropriate measures.

B. Maintenance and repair of park and recreation facilities must not result in waste discharges to the ASBS. The practice of road oiling must be minimized or eliminated, and must not result in waste discharges to the ASBS.

## III. ADDITIONAL REQUIREMENTS – WATERFRONT AND MARINE OPERATIONS

In addition to the provisions in Section I (A), a Permittee with waterfront and marine operations shall comply with the following:

A. For discharges related to waterfront and marine operations, the Permittee shall develop a Waterfront and Marine Operations Management Section (Waterfront Section) for its ASBS Compliance Plan. The Waterfront Section shall contain appropriate Best Management Practices (BMPs) to address pollutant discharges to the affected ASBS.

1. The Waterfront Section shall contain appropriate BMPs for any waste discharges associated with the operation and maintenance of vessels, moorings, piers, launch ramps, and cleaning stations in order to ensure that beneficial uses are protected and natural water quality is maintained in the affected ASBS.
2. For discharges from marinas and recreational boating activities, the Waterfront Section shall include appropriate Management Measures, described in The Plan for California's Nonpoint Source Pollution Control Program, for marinas and recreational boating, or equivalent practices, to ensure that nonpoint source pollutant discharges do not alter natural water quality in the affected ASBS.
3. The Waterfront Section shall include BMPs to address public education and outreach to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in the Special Protections as laid out in this Attachment. The BMPs shall include appropriate signage, or similar measures, to inform the public of the ASBS restrictions and to identify the ASBS boundaries.
4. The Waterfront Section shall include BMPs to address the prohibition against trash discharges to ASBS. The BMPs shall include the provision of adequate trash receptacles for marine recreation areas, including parking areas, launch ramps, and docks. The plan shall also include appropriate BMPs to ensure that the receptacles are adequately maintained and secured in order to prevent trash discharges into the ASBS. Appropriate BMPs include covering the trash receptacles to prevent trash from being windblown, staking or securing the trash receptacles so they don't tip over, and periodically emptying the receptacles to prevent overflow.
5. The Permittee shall submit the Waterfront Plan to the Executive Director of the State Water Board within six months of the effective date of these special conditions. The Waterfront Plan is subject to approval by the State Water Board Executive Director. The plan must be fully implemented within 18 months of the effective date of the Exception.

B. The discharge of chlorine, soaps, petroleum, other chemical contaminants, trash, fish offal, or human sewage to ASBS is prohibited. Sinks and fish cleaning stations are point source discharges of wastes and are prohibited from discharging into ASBS. Anthropogenic accumulations of discarded fouling organisms on the sea floor must be minimized.

C. Limited-term activities, such as the repair, renovation, or maintenance of waterfront facilities, including, but not limited to, piers, docks, moorings, and breakwaters, are authorized only in accordance with Chapter III.E.2 of the Ocean Plan.

D. If the Permittee anticipates that it will fail to fully implement the approved Waterfront Plan within the 18 month deadline, the Permittee shall submit a technical report as soon as practicable to the State Water Board Executive Director. The technical report shall contain reasons for failing to meet the deadline and propose a revised schedule to fully implement the plan.

E. The State Water Board Executive Director may, for good cause, authorize additional time to comply with the Waterfront Plan. Good cause means a physical impossibility or lack of funding.

If a Permittee claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the Permittee first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in Section III.A.5. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of the Special Protections as laid out in this Attachment. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the Permittee to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The Permittee shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality. The Permittee may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. a demonstration of significant hardship by showing that the Permittee has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate.
2. for governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency’s budgetary process, and a demonstration that funding was unavailable or inadequate.

## IV. MONITORING REQUIREMENTS

Monitoring is mandatory for all Permittees to assure compliance with the Ocean Plan. Monitoring requirements include both: (A) core discharge monitoring, and (B) ocean receiving water monitoring. The State and Regional Water Boards must approve sampling site locations and any adjustments to the monitoring programs. All ocean receiving water and reference area monitoring must be comparable with the Water Boards’ Surface Water Ambient Monitoring Program (SWAMP).

Safety concerns: Sample locations and sampling periods must be determined considering safety issues. Sampling may be postponed upon notification to the State and Regional Water Boards if hazardous conditions prevail.

Analytical Chemistry Methods: All constituents must be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, must be analyzed by the approved analytical method with the lowest minimum

detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

## A. CORE DISCHARGE MONITORING PROGRAM

1. General sampling requirements for timing and storm size:
   Runoff must be collected during a storm event that is greater than 0.1 inch and generates runoff, and at least 72 hours from the previously measurable storm event. Runoff samples shall be collected when post-storm receiving water is sampled, and analyzed for the same constituents as receiving water and reference site samples (see section IV B) as described below.

2. Runoff flow measurements
   a. For municipal/industrial storm water outfalls in existence as of December 31, 2007, 18 inches (457mm) or greater in diameter/width (including multiple outfall pipes in combination having a width of 18 inches, runoff flows must be measured or calculated, using a method acceptable to and approved by the State and Regional Water Boards.
   b. This will be reported annually for each precipitation season to the State and Regional Water Boards.

3. Runoff samples – storm events
   a. For outfalls equal to or greater than 18 inches (0.46m) in diameter or width:
      (1) samples of storm water runoff shall be analyzed during the same storm as receiving water samples for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination, and
      (2) samples of storm water runoff shall be analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS
      (3) If a Permittee has no outfall greater than 36 inches, then storm water runoff from the Permittee's largest outfall shall be further analyzed during the same storm as receiving water samples for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates).
   b. For outfalls equal to or greater than 36 inches (0.91m) in diameter or width:
      (1) samples of storm water runoff shall be analyzed during the same storm as receiving water samples for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination; and
      (2) samples of storm water runoff shall be further analyzed during the same storm as receiving water samples for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates) and
      (3) samples of storm water runoff shall be analyzed for critical stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.

c. For a Permittee not participating in a regional monitoring program [see below in Section IV (B)] in addition to (a.) and (b.) above, a minimum of the two largest outfalls or 20 percent of the larger outfalls, whichever is greater, shall be sampled (flow weighted composite samples) at least three times annually during wet weather (storm event) and analyzed for all Ocean Plan Table A constituents, Table B constituents for marine aquatic life protection (except for toxicity, only chronic toxicity for three species shall be required), DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, and Ocean Plan indicator bacteria. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one (the largest) such discharge shall be sampled annually in each Region.

4. The Executive Director of the State Water Board may reduce or suspend core monitoring once the storm runoff is fully characterized. This determination may be made at any point after the discharge is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

**B. OCEAN RECEIVING WATER AND REFERENCE AREA MONITORING PROGRAM**

In addition to performing the Core Discharge Monitoring Program in Section IV.A above, all applicants having authorized discharges must perform ocean receiving water monitoring. In order to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS, Permittees may choose either (1) an individual monitoring program, or (2) participation in a regional integrated monitoring program.

1. Individual Monitoring Program: The requirements listed below are for those Permittees who elect to perform an individual monitoring program to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within the affected ASBS. In addition to Core Discharge Monitoring, the following additional monitoring requirements shall be met:

   a. Three times annually, during wet weather (storm events), the receiving water at the point of discharge from the outfalls described in section (IV)(A)(3)(c) above shall be sampled and analyzed for Ocean Plan Table A constituents, Table B constituents for marine aquatic life, DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, salinity, chronic toxicity (three species), and Ocean Plan indicator bacteria.

      The sample location for the ocean receiving water shall be in the surf zone at the point of discharges; this must be at the same location where storm water runoff is sampled. Receiving water shall be sampled at approximately the same time prior to (pre-storm) and during (or immediately after) the same storm (post storm). Reference water quality shall also be sampled and analyzed for the same constituents pre-storm and post-storm, during the same storms when receiving water is sampled. Reference stations will be determined by the State Water Board's Division of Water Quality and the applicable Regional Water Board(s).

   b. Sediment sampling shall occur at least three times during every five (5) year period. The subtidal sediment (sand or finer, if present) at the discharge shall be sampled and analyzed for Ocean Plan Table B constituents for marine aquatic life, DDT, PCBs,

PAHs, pyrethroids, and OP pesticides. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed.

c. A quantitative survey of intertidal benthic marine life shall be performed at the discharge and at a reference site. The survey shall be performed at least once every five (5) year period. The survey design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The results of the survey shall be completed and submitted to the State Water Board and Regional Water Board at least six months prior to the end of the permit cycle.

d. Once during each five (5) year period, a bioaccumulation study shall be conducted to determine the concentrations of metals and synthetic organic pollutants at representative discharge sites and at representative reference sites. The study design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The bioaccumulation study may include California mussels (*Mytilus californianus*) and/or sand crabs (*Emerita analoga* or *Blepharipoda occidentalis*). Based on the study results, the Regional Water Board and the State Water Board's Division of Water Quality, may adjust the study design in subsequent permits, or add or modify additional test organisms (such as shore crabs or fish), or modify the study design appropriate for the area and best available sensitive measures of contaminant exposure.

e. Marine Debris: Representative quantitative observations for trash by type and source shall be performed along the coast of the ASBS within the influence of the Permittee's outfalls. The design, including locations and frequency, of the marine debris observations is subject to approval by the Regional Water Board and State Water Board's Division of Water Quality.

f. The monitoring requirements of the Individual Monitoring Program in this section are minimum requirements. After a minimum of one (1) year of continuous water quality monitoring of the discharges and ocean receiving waters, the Executive Director of the State Water Board (may require additional monitoring, or adjust, reduce or suspend receiving water and reference station monitoring. This determination may be made at any point after the discharge and receiving water is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

2. Regional Integrated Monitoring Program: Permittees may elect to participate in a regional integrated monitoring program, in lieu of an individual monitoring program, to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS. This regional approach shall characterize natural water quality, pre- and post-storm, in ocean reference areas near the mouths of identified open space watersheds and the effects of the discharges on natural water quality (physical, chemical, and toxicity) in the ASBS receiving waters, and should include benthic marine aquatic life and bioaccumulation components. The design of the ASBS stratum of a regional integrated monitoring program may deviate from the otherwise prescribed individual monitoring approach (in Section IV.B.1) if approved by the State Water Board's Division of Water Quality and the Regional Water Boards.

   a. Ocean reference areas shall be located at the drainages of flowing watersheds with minimal development (in no instance more than 10% development), and shall not be

located in CWA Section 303(d) listed waterbodies or have tributaries that are 303(d) listed. Reference areas shall be free of wastewater discharges and anthropogenic non- storm water runoff. A minimum of low threat storm runoff discharges (e.g. stream highway overpasses and campgrounds) may be allowed on a case-by-case basis. Reference areas shall be located in the same region as the ASBS receiving water monitoring occurs. The reference areas for each Region are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean reference water samples must be collected from each station, each from a separate storm. A minimum of one reference location shall be sampled for each ASBS receiving water site sampled per responsible party. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

b. ASBS ocean receiving water must be sampled in the surf zone at the location where the runoff makes contact with ocean water (i.e. at "point zero"). Ocean receiving water stations must be representative of worst-case discharge conditions (i.e. co-located at a large drain greater than 36 inches, or if drains greater than 36 inches are not present in the ASBS then the largest drain greater than18 inches.) Ocean receiving water stations are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean receiving water samples must be collected during each storm season from each station, each from a separate storm. A minimum of one receiving water location shall be sampled in each ASBS per responsible party in that ASBS. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

c. Reference and receiving water sampling shall commence during the first full storm season following the adoption of these special conditions, and post-storm samples shall be collected when annual storm water runoff is sampled. Sampling shall occur in a minimum of two storm seasons. For those ASBS Permittees that have already participated in the Southern California Bight 2008 ASBS regional monitoring effort, sampling may be limited to only one storm season.

d. Receiving water and reference samples shall be analyzed for the same constituents as storm water runoff samples. At a minimum, constituents to be sampled and analyzed in reference and discharge receiving waters must include oil and grease, total suspended solids, Ocean Plan Table B metals for protection of marine life, Ocean Plan PAHs, pyrethroids, OP pesticides, ammonia, nitrate, phosphates, and critical life stage chronic toxicity for three species. In addition, within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination shall be analyzed.

3. Waterfront and Marine Operations: In addition to the above requirements for ocean receiving water monitoring, additional monitoring must be performed for marinas and boat launch and pier facilities:

   a. For all marina or mooring field operators, in mooring fields with 10 or more occupied moorings, the ocean receiving water must be sampled for Ocean Plan indicator

bacteria, residual chlorine, copper, zinc, grease and oil, methylene blue active substances (MBAS), and ammonia nitrogen.

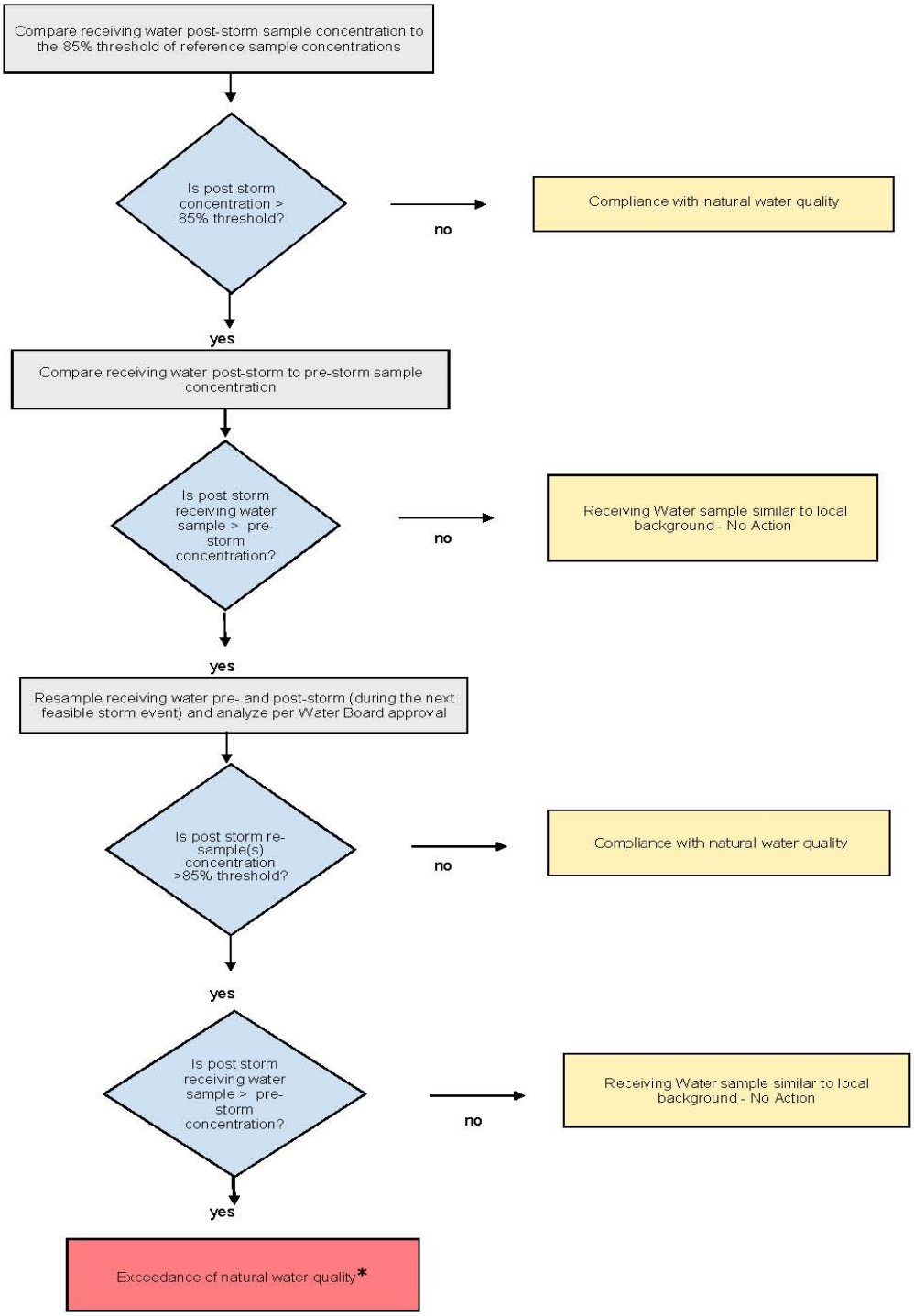
(1) For mooring field operators opting for an individual monitoring program (Section IV.B.1 above), this sampling must occur weekly (on the weekend) from May through October.

(2) For mooring field operators opting to participate in a regional integrated monitoring program (Section IV.B.2 above), this sampling must occur from May through October on a high weekend in each month. The Water Boards may allow a reduction in the frequency of sampling, through the regional monitoring program, after the first year of monitoring.

b. For all mooring field operators, the subtidal sediment (sand or finer, if present) within the mooring fields and below piers shall be sampled and analyzed for Ocean Plan Table B metals (for marine aquatic life beneficial use), acute toxicity, PAHs, and tributyltin. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed. This sampling shall occur at least three times during a five (5) year period. For mooring field operators opting to participate in a regional integrated monitoring program, the Water Boards may allow a reduction in the frequency of sampling after the first sampling effort's results are assessed.

## C. ASBS Flow Chart

**Figure 2**
**ASBS Special Protections**
**Flowchart to Determine Compliance with Natural Water Quality**




*** When an exceedance of natural water quality occurs, the Department must comply with section I.A.2.h of the Special Protections as well as the requirements of this Order. Note, when sampling data is available, end-of-pipe effluent concentrations will be considered by the Water Boards in making this determination.**

## D. ASBS Monitoring Constituents

**Table A: Monitoring Constituent List**
**(excerpted from California Ocean Plan dated 2009)**

| Constituent | Units |
|---|---|
| Grease and Oil | mg/L |
| Suspended Solids | mg/L |
| Settleable Solids | mL/L |
| Turbidity | NTU |
| pH | |

**Table B: Monitoring Constituent List**
**(excerpted from California Ocean Plan dated 2009)**

| Constituent | Units |
|---|---|
| Arsenic | ìg/L |
| Cadmium | ìg/L |
| Chromium | ìg/L |
| Copper | ìg/L |
| Lead | ìg/L |
| Mercury | ìg/L |
| Nickel | ìg/L |
| Selenium | ìg/L |
| Silver | ìg/L |
| Zinc | ìg/L |
| Cyanide | ìg/L |
| Total Chlorine Residual | ìg/L |
| Ammonia (as N) | ìg/L |
| Acute Toxicity | TUa |
| Chronic Toxicity | TUc |
| Phenolic Compounds (non-chlorinated) | ìg/L |
| Chlorinated Phenolics | ìg/L |
| Endosulfan | ìg/L |
| Endrin | ìg/L |
| HCH | µg/L |

*UNOFFICIAL DRAFT — Not Certified by Clerk*

# Attachment D

## Phase II Small MS4 Entities Authorized to Discharge to Areas of Special Biological Significance (ASBS)

| Regional Board | Applicant | ASBS |
|---|---|---|
| North Coast | City of Trinidad | Trinidad Head |
| North Coast | County of Humboldt | King Range |
| North Coast | Humboldt Bay Harbor District | King Range |
| North Coast | Department of Parks and Recreation | Gerstle Cove |
| North Coast | Department of Parks and Recreation | Jughandle Cove |
| North Coast | Department of Parks and Recreation | King Range |
| North Coast | Department of Parks and Recreation | Trinidad Head |
| North Coast | Department of Parks and Recreation | Redwoods State and National Park |
| San Francisco | County of Marin | Duxbury Reef |
| San Francisco | Defense, Department of (Vandenberg Air Force Base) | James V. Fitzgerald |
| San Francisco | National Park Service | Point Reyes National Seashore |
| Central Coast | City of Monterey | Pacific Grove |
| Central Coast | City of Pacific Grove | Pacific Grove |
| Central Coast | City of Carmel by The Sea | Carmel Bay |
| Central Coast | County of Monterey | Carmel Bay |
| Central Coast | Department of Parks and Recreation | Año Nuevo |
| Central Coast | Department of Parks and Recreation | Carmel Bay |
| Central Coast | Department of Parks and Recreation | Julia Pfeiffer Burns |
| Central Coast | Department of Parks and Recreation | Point Lobos |
| Los Angeles | Department of Parks and Recreation | Laguna Point to Latigo Point |
| Santa Ana | Department of Parks and Recreation | Irvine Coast |

# Attachment E - Community-Based Social Marketing (CBSM) Education and Outreach Requirements

## A. Public Education and Outreach Program

### A.1. Compliance Participation Options

Within the first year of the effective date of the permit, all Permittees shall comply with the requirements in this Section by participating in one or more of the following:

(i) Contributing to a countywide storm water program, as determined appropriate by the Permittee members, so that the countywide storm water program conducts education and outreach on behalf of its members; or

(ii) Contributing to a regional education and outreach collaborative effort (a regional outreach and education collaborative effort occurs when all or a majority of the Permittees collaborate to conduct regional outreach and education. Regional education and outreach collaboration includes Permittees defining a uniform and consistent message, deciding how best to communicate the message, and how to facilitate behavioral changes. Then collaboratively apply what is learned through local jurisdiction groups, pooling resources and skills.); or

(iii) Fulfilling education and outreach requirements within their jurisdictional boundaries on their own; or

(iv) A combination of the previous options, so that all requirements are fulfilled.

**Reporting** – By the first year online Annual Report, the Permittee shall identify which compliance participation option it will use to comply with the public education and outreach requirements in this Section. For each public education and outreach requirement in this Section that the Permittee will comply with through contribution to a countywide storm water program or regional education and outreach collaborative effort, the Permittee shall include in the first year online Annual Report documentation, such as a written agreement, letter or similar document, which confirms the collaboration with other MS4s.

### A.2. Public Education and Outreach

#### A.2.a. Public Education and Outreach

(i) Task Description – Within the second year of the effective date of the permit, the Permittee shall develop and implement a comprehensive storm water public education and outreach program. The public education and outreach program shall be designed to reduce pollutant discharges in storm water runoff and non-storm water discharges to the MS4 through behavior changes in target communities. The Public Education and Outreach Program shall (1) measurably increase the knowledge of targeted communities regarding the municipal storm drain system, impacts of urban runoff and non-storm water discharges on receiving waters, and potential BMP solutions for the target audiences and (2) measurably change the behavior of target audiences, thereby reducing pollutant releases to the MS4 and the environment.

(ii) Implementation Level –The Permittee shall, at a minimum:

(a) Develop and implement a public education strategy that establishes education tasks based on water quality problems, target audiences, and anticipated task effectiveness. The strategy must include identification of who is responsible for implementing specific tasks, a schedule for task implementation, and a budget for implementing the tasks. The strategy must demonstrate how specific high priority storm water quality issues in the community or local pollutants of concern are addressed. The Permittee shall use CBSM[1] strategies or equivalent.

(b) Implement surveys at least twice during the five year permit term to gauge the level of awareness and behavior change in target audiences and effectiveness of education tasks.

(c) Use of CBSM strategies or equivalent. The Public Education strategy shall at a minimum include the following Permittee actions:

(1) Research on barriers to desired behaviors and benefits of desired behaviors (ex. Literature review, observation, focus groups).
(2) Elicit commitment to implement desired behavior from target audience.
(3) Provide prompts reminding target audience of desired behavior.
(4) Use the concept of social norms/modeling of desired behavior.
(5) Use education messages that are specific, easy to remember, from a credible source, and appropriate for the target audience.
(6) Create incentives for the desired behavior.
(7) Remove barriers to the desired behavior.

(d) Development and conveyance of a specific storm water message that focuses on the following:

(1) Local pollutants of concern
(2) Target audience
(3) Behavior of concern
(4) Regional water quality issues

(e) Development and disseminate appropriate educational materials to target audiences and translate into applicable languages when appropriate (e.g. the materials can utilize various media such as printed materials, billboard and mass transit advertisements, signage at select locations, stenciling at storm drain inlets, radio advertisements, television advertisements, and websites);

(f) Utilization of public input (e.g., the opportunity for public comment, or public meetings) in the development of the program;

(g) Distribution of the educational materials, using whichever methods and procedures determined appropriate during development of the public education strategy, in such a way that is designed to convey the program's message to 20% of the target audience each year;

[1] CBSM: A systematic way to change the behavior of communities to reduce their impact on the environment. Realizing that simply providing information is usually not sufficient to initiate behavior change, CBSM uses tools and findings from social psychology to discover the perceived barriers to behavior change and ways of overcoming these barriers.

(h) Coordination with outreach programs for the Water Efficient Landscape Ordinance to explain the benefits of storm water-friendly landscaping;
(i) Technical and financial assistance and implementation guidance related to storm water-friendly landscaping;
(j) Development and conveyance of messages specific to reducing illicit discharges with information about how the public can report incidents to the appropriate authorities;
(k) Development and conveyance of messages specific to proper application of pesticides, herbicides, and fertilizers;
(l) Storm water education for school-age children. The Permittee may use California's Education and Environment Initiative Curriculum or equivalent.
(m) Reducing discharges from charity car washes, mobile cleaning and pressure washing operations, and landscape irrigation.

**(iii) Reporting** – By the second year online Annual Report and annually thereafter, report on the public education strategy and general program development and progress. By the fifth year online Annual Report, summarize changes in public awareness and behavior resulting from the implementation of the program and any modifications to the public outreach and education program. Report on the public education and CBSM strategies such as pilot programs, survey results, research on barriers to desired behaviors and benefits of desired behaviors, commitments from target audience to implement desired behavior, prompts, implementation of the social norms/modeling, education messages, incentives for desired behaviors, methods for removing barriers to behavior change, development of education materials, methods for educational material distribution, public input, Water Efficient Landscape Ordinance, technical and financial assistance for storm water friendly landscaping, reporting of illicit discharges, proper application of pesticides, herbicides, and fertilizers, elementary school education, reduction of discharges from charity car washes, mobile cleaning and pressure washing operations, and landscape irrigation efforts. Annually report number of trainings, describe the technical and financial program and implementation, and the study and results to date. For each whole five years of the permit life, submit the online Annual Report summarizing the changes in public awareness and behavior.

**A.2.b. Construction Education and Outreach Program**

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop and implement a construction outreach and education program for construction sites smaller than one acre. The construction outreach and education program shall be designed to reduce pollutant discharges in storm water runoff and non-storm water discharges to the MS4 through behavior changes in target communities. The multi-media program shall (1) measurably increases the knowledge of the construction community regarding the municipal storm drain system, impacts of urban runoff and non-storm water discharges on receiving waters, and potential BMP solutions for the target audiences and (2) measurably changes the behavior of the construction community, thereby reducing pollutant releases to the MS4 and the environment.

(ii) **Implementation Level** –The program shall include, at a minimum:
(a) Development of a watershed-based inventory of the high priority residential and commercial construction sites within the Permittee's jurisdiction.
(b) Development and implementation of a construction outreach and education strategy that establishes measurable goals and prioritizes education tasks based on water quality problems, target audiences, and anticipated task effectiveness. The strategy must include identification of who is responsible for implementing specific tasks and attaining measurable goals, a schedule for task implementation, and a budget for implementing the tasks and meeting the measurable goals. The strategy must include measurable goals designed to demonstrate how specific high priority storm water quality issues in the community or local pollutants of concern are addressed. Establish who is responsible for specific tasks and goals and a budget for meeting the tasks and goals.
(c) Implementation of CBSM to address the MS4's highest priority water quality problems. For each high priority water quality problem, implementation of CBSM shall first be conducted on a pilot project level. CBSM techniques found to be effective at the pilot project level shall be implemented jurisdiction-wide by permit year four. Pilot project and jurisdiction level CBSM shall include the following Permittee actions:

(1) Research on barriers to desired behaviors and benefits of desired behaviors (ex. Literature review, observation, focus groups).
(2) Elicit commitment to implement desired behavior from construction community.
(3) Provide prompts reminding construction community of desired behavior.
(4) Use the concept of social norms/modeling of desired behavior.
(5) Use education messages that are specific, easy to remember, from a credible source, and appropriate for the target audience.
(6) Create incentives for the desired behavior.
(7) Remove barriers to the desired behavior.

(iii) **Reporting** – By the second year online Annual Report and annually thereafter, report program progress and mechanisms used for outreach and education including measurable increases in the knowledge of the construction community and measurable changes in the construction community's behavior. This includes a watershed-based inventory of high priority residential and commercial construction sites, outreach and education strategy and implementation, implementation of CBSM, pilot project, research on barriers to desired behaviors and benefits of desired behaviors, commitments from target audience to implement desired behavior, prompts, implementation of the social norms/modeling, education messages, incentives for desired behaviors, methods for removing barriers to behavior change.

## A.3. STAFF AND SITE OPERATOR TRAINING AND EDUCATION

### A.3.a. Illicit Discharge Detection and Elimination Training

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and implement a training program for all Permittee staff who, as part of their normal job responsibilities, may be notified of, come into contact with, or otherwise observe an illicit discharge or illegal connection to the storm drain system.

(ii) **Implementation Level** – The training program shall include at a minimum:
(a) Identification of an illicit discharge or illegal connection.
(b) Proper procedures for reporting and responding to the illicit discharge or illegal connection.
(c) Follow-up training shall be provided as needed to address changes in procedures, techniques, or staffing.
(d) The Permittee shall annually perform an assessment of their trained staff's knowledge of illicit discharge response and shall provide refresher training as needed.
(e) New staff that, as part of their normal job responsibilities may be notified of, come into contact with, or otherwise observe an illicit discharge or illegal connection shall be trained no later than six months after the start of employment.
(f) Contact information, including the procedure for reporting an illicit discharge, shall be included in each of the Permittee's fleet vehicles that are used by field staff.
(g) The Permittee shall conduct focused education in identified illicit discharge flow areas based on identified illicit discharge(s).

(iii) **Reporting** - The Permittee shall document and maintain records of the training provided and the staff trained annually in the online Annual Report.

**A.3.b. Construction Outreach and Education**

**1. Permittee Staff Training**

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall ensure that all staff implementing the construction storm water program are adequately trained.

(ii) **Implementation Level** – The Permittee may conduct in-house training or contract with consultants. Training shall be provided to the following staff positions of the MS4:

(a) Plan Reviewers and Permitting Staff - Ensure staff and consultants are qualified individuals, knowledgeable in the technical review of local erosion and sediment control plans, and are certified pursuant to a State Water Board sponsored program as a Qualified SWPPP Developer (QSD), or a designated person on staff possesses the QSD credential.
(b) Erosion Sediment Control/Storm Water Inspectors - The Permittee shall ensure inspectors are qualified individuals, knowledgeable in inspection procedures, and are certified pursuant to a State Water Board sponsored program as either (1) a Qualified SWPPP Developer (QSD) (2) a Qualified SWPPP Practitioner (QSP) or (3) a designated person on staff possesses

each credential (QSD to supervise plan review, QSP to supervise inspection operations).

(c) Third-Party Plan Reviewers, Permitting Staff, and Inspectors - If the Permittee utilizes outside parties to conduct inspections and/or review plans, the Permittee shall ensure these staff are trained.

(iii) **Reporting** – By the second year of the permit term and annually thereafter, submit the following information:
(a) Training topics covered.
(b) Dates of training.
(c) Number and percentage of Permittee's staff, as identified in Sections a-c above, attending each training.
(d) Results of any surveys conducted to demonstrate the awareness and potential behavioral changes in the attendees.

**2. Construction Site Operator Education**

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and distribute educational materials to construction site operators.

(ii) **Implementation Level** – The Permittee shall do the following:
(a) Each year provide information on training opportunities for construction operators on BMP selection, installation, implementation, and maintenance as well as overall program compliance.
(b) Develop or utilize existing outreach tools (i.e. brochures, posters, etc.) aimed at educating construction operators on appropriate selection, installation, implementation, and maintenance of storm water BMPs, as well as overall program compliance.
(c) Distribute appropriate outreach materials to all construction operators who will be disturbing land within the MS4 boundary. The Permittee's contact information and website shall be included in these materials.
(d) Update the existing storm water website to include information on appropriate selection, installation, implementation, and maintenance of BMPs.

(iii) **Reporting** – By the third year online Annual Report and annually thereafter, include the following information:
(a) Training topics covered;
(b) Dates of training;
(c) Number and percentage of Permittee's operators, inspectors, and number of Contractors attending each training;
(d) Results of any surveys conducted to demonstrate the awareness and potential behavioral changes in the attendees.

**A.3.c. Pollution Prevention and Good Housekeeping Staff Training**

The Permittee shall train employees on how to incorporate pollution prevention/good housekeeping techniques into Permittee operations.

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop a bi-annual employee training program for appropriate employees involved in implementing pollution prevention and good

housekeeping practices in the Pollution Prevention/Good Housekeeping for Permittee Operations sections of this General Permit. The Permittee shall determine the need for interim training during alternate years when training is not conducted, through an evaluation of employee Pollution Prevention/Good Housekeeping knowledge. All new hires whose jobs include implementation of pollution prevention and good housekeeping practices must receive this training within the first year of their hire date.

(ii) **Implementation Level** – The training program shall include the following:
(a) Bi-annual training for all employees implementing this program element. This bi-annual training shall include a general storm water education component, any new technologies, operations, or responsibilities that arise during the year, and the permit requirements that apply to the staff being trained. Employees shall receive clear guidance on appropriate storm water BMPs to use at municipal facilities and during typical O&M activities.
(b) A bi-annual assessment, occurring on alternate years between training, of trained staff's knowledge of pollution prevention and good housekeeping and shall revise the training as needed.
(c) A requirement that any contractors hired by the Permittee to perform O&M activities shall be contractually required to comply with all of the storm water BMPs, good housekeeping practices, and standard operating procedures described above.
(d) The Permittee shall provide oversight of contractor activities to ensure that contractors are using appropriate BMPs, good housekeeping practices and following standard operating procedures.

(iii) **Reporting** – By the second year online Annual Report and annually thereafter, summarize oversight procedures and identify and track all personnel requiring training and assessment and records.

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# Attachment F - Standard Provisions

1. General Authority

   Various storm water program components (e.g. IDDE) require enforceable controls on third party activities to ensure successful implementation of the program. Some non-traditional operators, however, may not have the necessary legal or regulatory authority to adopt enforceable controls. As with local governments that lack such authority, NTMS4s shall utilize the authority they do possess and seek cooperative agreements with local municipalities to implement enforceable controls.

2. Duty to Comply

   The Permittee shall comply with all conditions of this Permit. Any Permit noncompliance constitutes a violation of the CWA and the Porter-Cologne Water Quality Control Act, which may be grounds for enforcement action or denial of General Permit coverage. [40 CFR 122.41(a)]
   The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Permit has not yet been modified to incorporate the requirement.
   In the event that the Permittee is removed from coverage under the General Permit, the Permittee will be required to seek coverage under an individual or alternative general permit.

3. General Permit Actions

   This General Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not nullify any General Permit condition.
   If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under §307(a) of CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and Permittee will be so notified.

4. Enforcement

   a. The enforcement provisions contained in this section shall not act as a limitation on the statutory or regulatory authority of the State and Regional Water Board.

   b. Any violation of the permit constitutes violation of the California Water Code and regulations adopted hereunder and the provisions of the Clean Water Act, and is the basis for enforcement, permit termination, permit revocation and reissuance, denial of an application for permit reissuance; or a combination thereof.

   c. The State Water Board has authority to regulate discharges from a MS4 on a system-wide or jurisdiction-wide basis. [CWA Section 402(p) & 40 CFR 122.26(a)(v)]

d. The State and Regional Boards may impose administrative civil liability, may refer a discharger to the State Attorney General to seek civil monetary penalties, may seek injunctive relief or take other appropriate enforcement action as provided in the California Water Code or federal law for violation of Board orders.

e. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this order and permit.

f. Significant penalties may be imposed for violation of this General Permit, pursuant to CWC section 13385 and other State and federal statutes. Court- imposed liability may exceed $25,000 per day, and Regional Water Board's may impose administrative fines exceeding $10,000 per day [40 CFR 122.41(a)(2) & (3)].

g. The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both [40 CFR 122.41(k)(2)].

h. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or both. Higher penalties may be imposed for repeat offenders [40 CFR 122.41(j)(5)].

5. Noncompliance Reporting

   Permittees who cannot certify compliance and/or who have had other instances of noncompliance shall notify the appropriate Regional Water Board within 30 days. Instances of noncompliance resulting in emergencies (i.e., that endanger human health or the environment) shall be reported orally to the Regional Water Board within 24 hours from the time the discharger becomes aware of the circumstance and in writing to the Regional Water Board within five days of the occurrence. The notification shall identify the noncompliance event and an initial assessment of any impact caused by the event, describe the actions necessary to achieve compliance, and include a time schedule indicating when compliance will be achieved. The time schedule and corrective measures are subject to modification by the Regional Water Board Executive Officer.

6. Duty to Mitigate

   The Permittee shall take all responsible steps to minimize or prevent any discharge in violation of this General Permit that has a reasonable likelihood of adversely affecting human health or the environment. [40 CFR 122.41(d)]

7. Proper Operation and Maintenance

   The Permittee shall at all times properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this General Permit and with the requirements of the storm water program. Proper operation and maintenance also includes

adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by the Permittee when necessary to achieve compliance with the conditions of this General Permit. [40 CFR 122.41(e)]

8. Property Rights

   This General Permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor does it authorize any infringement of federal, State, or local laws or regulations.[40 CFR 122.41(g)]

9. Duty to Provide Information

   The Permittee shall furnish Regional Water Boards or U.S. EPA, during normal business hours, any requested information to determine compliance with this General Permit. The Permittee shall also furnish, upon request, copies of records required to be kept by this General Permit. [40 CFR 122.41(h)]

10. Inspection and Entry

    Upon the presentation of credentials and other documents as may be required by law, the Permittee shall allow the State and Regional Water Boards, U.S. EPA, or municipal storm water management agency to enter upon the Permittee premises where a regulated facility or activity is located or conducted or where records are required to be kept under the conditions of this General Permit to [40 CFR 122.41(i)]:

    a. Have access to and copy at reasonable times any records that are required to be kept under the conditions of this Permit;

    b. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment) that are related to or may impact any storm water or non-storm water discharge; and

    c. Conduct monitoring activities at reasonable times to ensure Permit compliance.

    d. Photograph or videotape outdoor areas of the facility to document compliance or non-compliance with this Permit.

11. Signatory Requirements

    All NOIs, certifications, reports, or other information prepared in accordance with this General Permit that are submitted to State or Regional Water Boards shall be signed by either a principal executive officer, ranking elected official, or duly authorized representative. The principal executive officer of a Federal agency includes the chief executive officer of the agency or the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of U.S. EPA). For the military: any military officer or Department of Defense civilian, acting in an equivalent capacity to a military officer, who has been designated.

12. Certification

    Any person signing documents under this General Permit shall make the following certification:

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete.*
*I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

13. Anticipated Noncompliance

    The Permittee will give advance notice to the Regional Water Board of any planned changes in the regulated Small MS4 activity that may result in noncompliance with General Permit requirements.

14. Penalties for Falsification of Reports

    Section 309(c)(4) of CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance, shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years or by both.

15. Penalties for Violations of Permit Conditions

    a. Part 309 of CWA provides significant penalties for any person who violates a permit condition implementing Parts 301, 302, 306, 307, 308, 318, or 405 of CWA or any permit condition or limitation implementing any such section in a permit issued under Part 402. Any person who violates any permit condition of this General Permit is subject to a civil penalty not to exceed $27,500 per calendar day of such violation, as well as any other appropriate sanction provided by Part 309 of CWA.

    b. The California Water Code also provides for administrative, civil, and criminal penalties, which in some cases are greater than those under CWA.

16. Oil and Hazardous Substance Liability

    Nothing in this General Permit shall be construed to preclude the institution of any legal action against the Permittee or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject to under Part 311 of CWA.

17. Severability

    The provisions of this General Permit are severable; and, if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

18. Reopener Clause

    This General Permit may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, or otherwise in accordance with 40 CFR sections 122.62, 122.63, 122.64, and 124.5.

19. Availability

    A copy of this General Permit and Annual Reports shall be made available for public review, program evaluation (audit) and inspection.

20. Transfers

    This General Permit is not transferable. A Permittee shall submit written notification to the appropriate Regional Water Board to terminate coverage of this General Permit.

21. Continuation of Expired Permit

    This General Permit expires five years from the date of adoption. This General Permit continues in force and in effect until a new General Permit is issued or the State Water Board rescinds this General Permit. Only those Small MS4s authorized to discharge under the expired General Permit are covered by the continued General Permit.

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# ATTACHMENT G - Region-Specific Requirements

## Regional Water Board-Approved TMDLs with urban runoff listed as a source

## Region 1: North Coast Regional Water Board

*Temperature & Dissolved Oxygen*

**TMDL for Shasta River Watershed** – *Temperature & Dissolved Oxygen*

Effective Date: January 26, 2007
BPA: Action Plan for the Shasta River Watershed Temperature and Dissolved Oxygen Total Maximum Daily Loads
Resolution R1-2006-0052
Phase II Entities: City of Yreka
Impaired Water Body: Shasta River

**Requirements for Implementing the TMDL**

The City of Yreka developed a Plan to minimize, control, and preferably prevent discharges of fine sediment, nutrients and other oxygen-consuming materials, and elevated water temperature waste discharge from affecting waters of the Shasta River and its tributaries. The Regional Water Board Executive Officer approved the City of Yreka's Plan. No later than January 1, 2019, the City of Yreka shall begin implementing the Plan.

The TMDL does not specify a wasteload or load allocation for the City of Yreka.

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## Region 2: San Francisco Regional Water Board

### *Diazinon & Pesticide Toxicity*

**TMDL for Urban Creeks** – *Diazinon & Pesticide Toxicity*

Effective Date: May 16, 2007
BPA: BPA – Chapter 3, Toxicity
Resolution No. R2-2005-0063
Phase II Entities: City of Belvedere, Town of Corte Madera, Town of Fairfax, City of Larkspur, Marin County, City of Mill Valley, City of Novato, City of Petaluma, Town of Ross, Town of San Anselmo, City of San Rafael, City of Sausalito, City of Sonoma, County of Sonoma, Town of Tiburon
Impaired Water Body: Arroyo Corte Madera del Presidio, Corte Madera Creek, Coyote Creek (Marin Co.), Gallinas Creek, Miller Creek, Novato Creek, San Antonio Creek, San Rafael Creek, Petaluma River, Calabazas Creek

**Requirements for Implementing the TMDL**

Urban runoff management agencies' responsibilities for addressing the allocations set in the TMDL will be satisfied by complying with the requirements set forth below. Permittees identified in this TMDL section may coordinate with the Bay Area Storm Water Management Agencies Association, the Urban Pesticide Pollution Prevention Project, the Urban Pesticide Committee, and other agencies and organizations in carrying out these activities.

**A. Implement the Pesticide-Related Toxicity Control Program**

To prevent the impairment of urban streams by pesticide-related toxicity, the Phase II entities identified in this TMDL section shall implement an Integrated Pest Management Policy (IPM) or Ordinance, applicable to all the permittees' operations and property, as described in the Fact Sheet of this Order.

Implementation actions shall include:

- Ensure all municipal employees who apply or use pesticides within the scope of their duties are trained in the IPM practices and policy/ordinance.
- Require all contractors to implement the IPM policy/ordinance.
- Keep the County Agricultural Commissioners informed of water quality issues related to pesticides and of violations of pesticides regulations (e.g., illegal handling) associated with storm water management.
- Conduct outreach to residents and pest control applicators on less toxic methods of pest control.
- Keep records of the permittees' own use of pesticides of concern and the pesticide use by the permittees' hired contractors. Report on pesticide use when requested by the Regional Water Board.
- Monitor water and sediment for pesticides and associated toxicity in urban creeks via an individual or regional program designed to answer the following questions:
  - Are the TMDL toxicity targets being met?
  - Is toxicity observed in urban creeks caused by a pesticide?
  - Is urban runoff the source of any observed toxicity in urban creeks?

- How does observed pesticide-related toxicity in urban creeks (or pesticide concentrations contributing to such toxicity) vary in time and magnitude across urban creek watersheds, and what types of pest control practices contribute to such toxicity?
- Are actions already being taken to reduce pesticide discharges sufficient to meet the targets, and if not, what should be done differently?

A final deadline for attainment of the WLA is not specified in the TMDL. Therefore, municipalities identified in this TMDL section shall propose a timeline to meet the WLA in the shortest practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the WLA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii) of this Order.

## *Pathogens*

**TMDL for Napa River** – *Pathogens*

Effective Date: February 29, 2008
BPA: Chapter 7, Water Quality Attainment Strategies including TMDLs
Resolution No. R2-2006-0079
Phase II Entities: City of American Canyon, City of Calistoga, City of St. Helena, City of Napa, Napa County, Town of Yountville
Impaired Water Body: Napa River

**Requirements for Implementing the TMDL**

The Phase II entities identified in this TMDL section shall implement the following actions by January 1, 2019:

i. Public Participation and Outreach. Educate the public regarding sources of fecal coliform and associated health risks of fecal coliform in surface waters. Educate the public regarding actions that individuals can take to reduce pathogen loading.
ii. Pet Waste Management. Implement enforceable means of reducing/eliminating fecal coliform loading from pet waste.
iii. Illicit Discharge Detection and Elimination. Implement strategies to detect and eliminate illicit discharges (whether mistaken or deliberate) of sewage to the Napa River.
iv. Pollution Prevention and Good Housekeeping. Implement strategies to reduce/eliminate fecal coliform loading from streets, parking lots, sidewalks, and other urban areas that potentially collect and discharge fecal coliform to the Napa River.
v. As indicated in the TMDL, participate in the Regional Water Board's stakeholder effort to conduct water quality monitoring at baseline monitoring sites.
vi. Conduct baseline water quality monitoring to evaluate E. coli concentration trends in the Napa River and its tributaries. Table 7-g in Chapter 7, Water Quality Attainment Strategies, presents locations and frequency for the required baseline water quality monitoring.
vii. Report yearly, in the Annual Report, (on participation in the stakeholder group and progress made on implementation of human and animal runoff reduction measures.

A final deadline for attainment of the LA is not specified in the TMDL. Therefore, municipalities identified in this TMDL section shall propose a timeline to attain the LA in the shortest

practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the LA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii) of this Order.

**TMDL for Richardson Bay** – *Pathogens*

Effective Date: December 18, 2009
BPA: Chapter 7, Water Quality Attainment Strategies including TMDLs
Resolution No. R2-2008-0061
Phase II Entities: City of Belvedere, Marin County, City of Mill Valley, City of Sausalito, City of Tiburon
Impaired Water Body: Richardson Bay

**Requirements for Implementing the TMDL**

The Phase II entities identified in this TMDL section shall implement the following actions by January 1, 2019:

i. Public Participation and Outreach. Educate the public regarding sources of fecal coliform and associated health risks of fecal coliform in surface waters. Educate the public regarding actions that individuals can take to reduce pathogen loading.
ii. Pet Waste Management. Implement enforceable means of reducing/eliminating fecal coliform loading from pet waste.
iii. Illicit Discharge Detection and Elimination. Implement strategies to detect and eliminate illicit discharges (whether mistaken or deliberate) of sewage to Richardson Bay.
iv. Pollution Prevention and Good Housekeeping. Implement strategies to reduce/eliminate fecal coliform loading from streets, parking lots, sidewalks, and other urban areas that potentially collect and discharge fecal coliform to Richardson Bay.
v. Report yearly in the Annual Report on progress made on implementation of pathogen reduction measures.

A final deadline for attainment of the WLA is not specified in the TMDL. Therefore, municipalities identified in this TMDL section shall propose a timeline to attain the WLA in the shortest practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the WLA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii) of this Order.

**TMDL for Sonoma Creek** – *Pathogens*

Effective Date: February 29, 2008
BPA: Chapter 7, Water Quality Attainment Strategies including TMDLs
Resolution No. R2-2006-0042
Phase II Entities: City of Sonoma, County of Sonoma
Impaired Water Body: Sonoma Creek

**Requirements for Implementing the TMDL**

The Phase II entities identified in this TMDL section shall implement the following actions by January 1, 2019:

i. Public Participation and Outreach. Educate the public regarding sources of fecal coliform and associated health risks of fecal coliform in surface waters. Educate the public regarding actions that individuals can take to reduce pathogen loading.

ii. Pet Waste Management. Implement enforceable means of reducing/eliminating fecal coliform loading from pet waste.
iii. Illicit Discharge Detection and Elimination. Implement strategies to detect and eliminate illicit discharges (whether mistaken or deliberate) of sewage to Sonoma Creek.
iv. Pollution Prevention and Good Housekeeping. Implement strategies to reduce/eliminate fecal coliform loading from streets, parking lots, sidewalks, and other urban areas that potentially collect and discharge fecal coliform to Sonoma Creek.
v. Conduct baseline water quality monitoring to evaluate E. coli concentration trends in Sonoma Creek and its tributaries. Table 7-n in Chapter 7, Water Quality Attainment Strategies, presents locations and frequency for the required baseline water quality monitoring.
vi. Report yearly in the Annual Report on water quality monitoring results and progress made on implementation of human and animal runoff reduction measures.

A final deadline for attainment of the WLA is not specified in the TMDL. Therefore, municipalities identified in this TMDL section shall propose a timeline to attain the WLA in the shortest practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the WLA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii) of this Order.

**TMDL for Sonoma Creek** – *Pathogens* (Continued)
Phase II Entities: Sonoma County Water Agency
Impaired Water Body: Sonoma Creek

**Requirements for Sonoma County Water Agency for Implementing TMDL**

The Sonoma County Water Agency shall:

1. Continue to implement actions as specified in the Storm Water Management Plan approved under the 2003 General Permit (State Water Board Order 2003-0005-DWQ).
2. Review annually and update the TMDL attainment actions, as necessary.
3. Report progress on TMDL implementation measures in the Annual Report.

A final deadline for attainment of the WLA is not specified in the TMDL. Therefore, Sonoma County Water Agency shall propose a timeline to attain the WLA in the shortest practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the WLA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii) of this Order.

**TMDL for Tomales Bay** – *Pathogens*

Effective Date: February 8, 2007
BPA: Chapter 4, Surface Water Protection and Management, Nonpoint Source Control Resolution No. R2-2005-0046
Phase II Entities: Marin County
Impaired Water Body: Tomales Bay, Lagunitas Creek, Walker Creek, Olema Creek

**Requirements for Implementing the TMDL**

The Phase II entities identified in this TMDL section shall implement the following actions by January 1, 2019:

i. Public Participation and Outreach. Educate the public regarding sources of fecal coliform and associated health risks of fecal coliform in surface waters. Educate the public regarding actions that individuals can take to reduce pathogen loading.
ii. Pet Waste Management. Implement enforceable means of reducing/eliminating fecal coliform loading from pet waste.
iii. Illicit Discharge Detection and Elimination. Implement strategies to detect and eliminate illicit discharges (whether mistaken or deliberate) of sewage to Tomales Bay.
iv. Pollution Prevention and Good Housekeeping. Implement strategies to reduce/eliminate fecal coliform loading from streets, parking lots, sidewalks, and other urban areas that potentially collect and discharge fecal coliform to Tomales Bay.
v. Report yearly in the Annual Report on water quality monitoring results and progress made on implementation of human and animal runoff reduction measures.

A final deadline for attainment of the WLA is not specified in the TMDL. Therefore, municipalities identified in this TMDL section shall propose a timeline to attain the WLA in the shortest practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the WLA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii) of this Order.

## *Sediment*

**TMDL for Napa River** – *Sediment*

Effective Date: January 20, 2011
BPA: Chapter 7, Water Quality Attainment Strategies including TMDLs
Resolution R2-2009-0064
Phase II Entities: City of American Canyon, City of Calistoga, City of St. Helens, City of Napa, Napa County, and Town of Yountville
Impaired Water Body: Napa River

**Requirements for Implementing the TMDL**

**A. Implementation of Sediment Wasteload Allocations (WLAs)**

i. To attain the wasteload allocation, municipalities identified in this TMDL section shall comply with the requirements in this TMDL section and the Order.

**B. Implementation of Sediment Load Allocations (LAs)**

i. To attain the shared load allocation of 27,000 metric tons/year, Napa County shall implement measures to repair and/or reconstruct road crossings to minimize road-related sediment delivery (≤500 cubic yards/mile per 20-year period) to stream channels. Specifically, to reduce road-related erosion and protect stream-riparian habitat conditions, Napa County shall by January 1, 2019:

- Update best management practices for maintenance of unimproved (dirt/gravel) roads to ensure that the LA will be met, and implement these best management practices,
- Finalize a survey of stream-crossings associated with paved public roadways, and
- By July 1, 2019 submit a schedule for the maintenance of unpaved roads and implementation of BMPs to ensure attainment of the LA and the repair and/or

replacement of high priority crossings/culverts identified in the survey, to the Regional Water Board Executive Officer for approval.

For paved roads, erosion and sediment control actions shall primarily focus on road crossings to meet the sediment load allocation.

The final deadline for attainment of the WLA and LA is not specified in the TMDL. Therefore, municipalities identified in this TMDL section shall propose a timeline to attain the WLAs and LAs in the shortest practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the WLA and LA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii). of this Order.

**TMDL for Sonoma Creek** – *Sediment*

Effective Date: September 8, 2010
BPA: Chapter 7, Water Quality Attainment Strategies including TMDLs
Resolution R2-2008-0103
Phase II Entities: City of Sonoma, County of Sonoma
Impaired Water Body: Sonoma Creek

**Requirements for Implementing the TMDL**

**A. Implementation of Sediment Wasteload Allocations**

i. To attain the wasteload allocation, Phase II entities identified in this TMDL section shall comply with the construction and maintenance requirements, sections E.10 and E.11, of this Order.

ii. The municipalities identified in this TMDL section shall continue to implement actions proposed in their Storm Water Management Plans approved under the 2003 Permit (State Water Board Order 2003-0005-DWQ) to attenuate peak flows and durations from new and redevelopment projects. Implementation requirements for implementation actions are incorporated herein by reference. Municipalities may propose amendments to those Implementation Actions by submitting an updated Storm Water Management Plan to the Regional Water Board.

**B. Implementation of Sediment Load Allocations**

i. To attain the shared load allocation of 2,100 tons/year, municipalities identified in this TMDL section shall implement opportunities to retrofit and/or reconstruct road crossings to minimize road-related sediment delivery to stream channels. To reduce road-related erosion and protect stream-riparian habitat conditions, the municipalities shall implement by January 1, 2019 the following actions:

- Continue to Implement best management practices for maintenance of unimproved (dirt/gravel) roads,
- Finalize a survey of stream-crossings associated with paved public roadways, and
- By July 1, 2019, submit a schedule for the retrofit and/or replacement of high priority crossings/culverts to the Regional Water Board Executive Officer for approval.

For paved roads, erosion and sediment control actions shall primarily focus on road crossings to meet the sediment load allocation.

The final deadline for attainment of the wasteload allocations and load allocations is not specified in the TMDL. Therefore, municipalities identified in this TMDL section shall propose a timeline to attain the WLAs and LAs in the shortest practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the WLA and LA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii) of this Order.

Municipalities identified in this section shall attenuate peak flows and durations from new and redevelopment projects by January 1, 2019.

**TMDL for Sonoma Creek** – *Sediment* (Continued)
Phase II Entities: Sonoma County Water Agency
Impaired Water Body: Sonoma Creek

**Requirements for Sonoma County Water Agency for Implementing TMDL**

1. The Sonoma County Water Agency shall continue to implement actions as specified in the Storm Water Management Plan approved under the prior 2003 General Permit (State Water Board Order 2003-0005-DWQ). Implementation requirements for implementation actions are incorporated herein by reference. The Sonoma County Water Agency may propose amendments to those Implementation Actions by submitting an updated Storm Water Management Plan to the Regional Water Board.
2. Report progress on TMDL implementation measures in the Annual Report.

The final deadline for attainment of the WLA and LA is not specified in the TMDL. Therefore, Sonoma County Water Agency shall propose a timeline to attain the WLAs and LAs in the shortest practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the WLA and LA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii) of this Order.

## Region 3: Central Coast Regional Water Board

### *Fecal Coliform*

**TMDL for Corralitos and Salsipuedes Creeks** – *Fecal Coliform*

Effective Date: 9/8/2011
BPA: Chapter 4
Resolution No. R3-2009-0009
Phase II Entities: County of Santa Cruz, Santa Cruz County Fairgrounds, City of Watsonville
Impaired Water Bodies: Corralitos Creek, Salsipuedes Creek

**Requirements for Implementing the TMDL**

By January 1, 2019, the County of Santa Cruz and the City of Watsonville (hereafter referred to in this TMDL section as MS4) shall each implement a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. By January 1, 2019 the Santa Cruz County Fairgrounds (hereafter referred to in this TMDL section as "the MS4") shall develop, submit, and begin implementation of a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their waste load allocations. The Wasteload Allocation Attainment Programs shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once

the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.

8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. At least one interim target and date must occur during the first five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.
10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By September 8, 2024, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDL for the Lower Salinas River Watershed** – *Fecal Coliform*

Effective Date: 12/20/2011
BPA: Chapter 4
Resolution No. R3-2010-0017
Phase II Entities: County of Monterey
Impaired Water Body: Lower Salinas River, Old Salinas River Estuary, Tembladero Slough, Salinas Reclamation Canal, Alisal Creek, Gabilan Creek, Salinas River Lagoon (North), Santa Rita Creek

**Requirements for Implementing the TMDL**

By January 1, 2019, the County of Monterey (hereafter referred to in this TMDL section as "the MS4") shall implement a Wasteload Allocation Attainment Program that identifies the actions it will take to attain its wasteload allocation. The Wasteload Allocation Attainment Program shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. At least one interim target and date must occur during the first five years commencing on

January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.

10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By December 20, 2024, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDL for Pajaro River, San Benito River, Llagas Creek, Tequesquita Slough, San Juan Creek, Carnadero/Uvas Creek, Bird Creek, Pescadero Creek, Tres Pinos Creek, Furlong (Jones) Creek, Santa Ana Creek, Pachecho Creek** – *Fecal Coliform*

Effective Date: 07/12/2010
BPA: Chapter 4
Resolution No. RB3-2009-0008
Phase II Entities: City of Gilroy, City of Hollister, County of Monterey, City of Morgan Hill, County of Santa Clara, County of Santa Cruz, City of Watsonville
Impaired Water Body: Pajaro River, San Benito River, Llagas Creek, Tequesquita Slough, San Juan Creek, Carnadero/Uvas Creek, Bird Creek, Pescadero Creek, Tres Pinos Creek, Furlong (Jones) Creek, Santa Ana Creek, Pachecho Creek

**Requirements for Implementing the TMDL**

By January 1, 2019, the Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as “the MS4”) shall each implement a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4’s jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.

3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. At least one interim target and date must occur during the first five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.
10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.

12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By July 12, 2023, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Fecal Indicator Bacteria*

**TMDLs for the Santa Maria River Watershed** – *Fecal Indicator Bacteria*

Effective Date: 2/21/2013
BPA: Chapter 4
Resolution No. R3-2012-0055
Phase II Entities: City of Guadalupe, County of San Luis Obispo, County of Santa Barbara, City of Santa Maria
Impaired Water Body: Water Bodies in the Santa Maria River Watershed, including: Blosser Channel, Bradley Channel, Main Street Canal, Nipomo Creek, Orcutt Creek, Santa Maria River Estuary, Santa Maria River

**Requirements for Implementing the TMDL**

By January 1, 2019, the Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as "the MS4") shall each develop, submit, and begin implementation of a Wasteload Allocation Attainment Program, or an integrated plan, that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs or integrated plans shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.

6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocations. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. The MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. At least one interim target and date must occur during the first five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not specify interim targets as described above in its Wasteload Allocation Attainment Program, the interim targets identified in the TMDL apply. If the MS4 does not achieve any interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.
10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 proposes to assess its attainment of interim targets and the final wasteload allocation.
12. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
13. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
14. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program or integrated plan.

15. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment, including public education and participation items identified above.

By February 21, 2028, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Nitrate Nitrogen*

**TMDL and Implementation Plan for San Luis Obispo Creek** – *Nitrate-Nitrogen*

Effective Date: 8/04/2006
BPA: Chapter 4
Resolution No. R3-2005-0106
Phase II Entities: Cal Poly State University, City of San Luis Obispo, County of San Luis Obispo
Impaired Water Body: San Luis Obispo Creek

**Requirements for Implementing the TMDL**

By January 1, 2019, the Phase II entities identified in this TMDL section shall implement best management practices that specifically address the reduction or elimination of nutrient loading.

The Phase II entities identified in this TMDL section shall submit reports required by this Order and in those reports outline best management practices implemented to assure ongoing attainment of their allocation.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Nitrogen Compounds and Orthophosphate*

**TMDL for the Lower Salinas River and Reclamation Canal Basin and the Moro Cojo Slough Subwatershed** – *Nitrogen Compounds and Orthophosphate*

Effective Date: 6/7/2014
BPA: Chapter 4
Resolution No. R3-2013-0008
Phase II Entities: County of Monterey
Impaired Water Body: Lower Salinas River, Santa Rita Creek, Reclamation Canal, Gabilan Creek, Natividad Creek, Alisal Creek

**Requirements for Implementing the TMDL**

By January 1, 2019, the County of Monterey (hereafter referred to in this TMDL section as “the MS4”) shall develop, submit, and begin implementation of a Wasteload Allocation Attainment Program that identifies the actions it will take to attain its wasteload allocations. The Wasteload Allocation Attainment Program shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at

abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.

2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocations. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim and final wasteload allocations.
9. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
10. A detailed description of how the MS4 proposes to assess its attainment of interim targets and the final wasteload allocation.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.

13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program or integrated plan.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

The MS4 shall achieve its interim wasteload allocations as specified in the Fact Sheet. If the MS4 does not achieve any interim wasteload allocation by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim or final wasteload allocations.

By May 7, 2044, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDLs for the Lower Santa Maria River Watershed and Tributaries to Oso Flaco Lake** – *Nitrogen Compounds and Orthophosphate*

Effective Date: 5/22/2014
BPA: Chapter 4
Resolution No. R3-2013-0013
Phase II Entities: City of Guadalupe, County of San Luis Obispo, County of Santa Barbara, City of Santa Maria
Impaired Water Body: Water Bodies in the Lower Santa Maria River Watershed and Tributaries to Oso Flaco Lake, including: Blosser Channel, Bradley Channel, Greene Valley Creek, Main Street Canal, North Main Street Channel, Orcutt Creek, Nipomo Creek, Santa Maria River, Santa Maria River Estuary

**Requirements for Implementing the TMDL**

By January 1, 2019, the Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as “the MS4”) shall each develop, submit, and begin implementation of a Wasteload Allocation Attainment Program, or an integrated plan, that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs or integrated plans shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4’s jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4’s jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.

6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocations. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim and final wasteload allocations.
9. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
10. A detailed description of how the MS4 proposes to assess its attainment of interim targets and the final wasteload allocation.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program or integrated plan.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment, including public education and participation items identified above.

Waste load allocations will be achieved through implementation of management practices and strategies to reduce Nitrogen compound and Orthophosphate loading. Implementation can be conducted by MS4s specifically and/or through statewide programs addressing urban water pollution.

The MS4 shall achieve its interim wasteload allocations as specified in the Fact Sheet. If the MS4 does not achieve any interim wasteload allocation by the date specified, the MS4 shall

develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim or final wasteload allocations.

By May 22, 2044, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Pathogens*

**TMDL for Aptos Creek, Valencia Creek, and Trout Gulch** – *Pathogens*

Effective Date: 10/29/2010
BPA: Chapter 4
Resolution No. R3-2009-0025
Phase II Entities: County of Santa Cruz
Impaired Water Body: Aptos Creek, Valencia Creek, Trout Gulch

**Requirements for Implementing the TMDL**

By January 1, 2019, the County of Santa Cruz (hereafter referred to in this TMDL section as "the MS4") shall implement a Wasteload Allocation Attainment Program that identifies the actions it will take to attain its wasteload allocation. The Wasteload Allocation Attainment Program shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once

the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.

8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. At least one interim target and date must occur during the first five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.
10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By October 29, 2023, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDL and Implementation Plan for Morro Bay and Chorro and Los Osos Creeks** – *Pathogens*

Effective Date: 11/19/2003
BPA: Chapter 4
Resolution No. R3-2003-0060
Phase II Entities: City of Morro Bay, County of San Luis Obispo
Impaired Water Body: Morro Bay, Chorro Creek, Los Osos Creek, Pennington Creek, Warden Creek

**Requirements for Implementing the TMDL**

By January 1, 2019, the Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as "the MS4") shall each implement a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation achieved the MS4's wasteload allocation. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4's wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. Where TMDL attainment schedules have passed, but Wasteload Allocations have not

been achieved by January 1, 2019, the MS4 shall consult with the Regional Water Board to establish dates to meet new interim targets and to achieve wasteload allocations. At least one interim target and date must occur during the five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.

10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDL and Implementation Plan for San Luis Obispo Creek** *–Pathogens*

Effective Date: 7/25/2005
BPA: Chapter 4
Resolution No. R3-2004-0142
Phase II Entities: Cal Poly State University, City of San Luis Obispo, County of San Luis Obispo
Impaired Water Body: San Luis Obispo Creek, Stenner Creek, Brizziolari Creek

**Requirements for Implementing the TMDL**

The Phase II entities identified in this TMDL section are required to implement best management practices specifically targeting fecal coliform loading. Required actions include development and implementation of: public education regarding fecal coliform sources and associated health risk, enforceable means of addressing pet waste and wild animals that are attracted to storm water infrastructure, and elimination of illicit discharges.

By January 1, 2019, the Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as “the MS4”) shall each implement a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at

abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.

2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. Where TMDL attainment schedules have passed, but Wasteload Allocations have not been achieved by January 1, 2019, the MS4 shall consult with the Regional Water Board to establish dates to meet new interim targets and to achieve wasteload allocations. At least one interim target and date must occur during the five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.

10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL Schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDL for the San Lorenzo River Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek, and Lompico Creek** – *Pathogens*

Effective Date: 6/8/2011
BPA: Chapter 4
Resolution No. R3-2009-0023
Phase II Entities: City of Santa Cruz, County of Santa Cruz, City of Scotts Valley
Impaired Water Body: San Lorenzo River Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek, Lompico Creek

**Requirements for Implementing the TMDL**

By January 1, 2019, the Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as “the MS4”) shall each implement a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4’s jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4’s jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.

6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. At least one interim target and date must occur during the first five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.
10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By June 8, 2024, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDL for Soquel Lagoon, Soquel Creek, and Noble Gulch** – *Pathogens*

Effective Date: 9/15/2010
BPA: Chapter 4
Resolution No. R3-2009-0024
Phase II Entities: City of Capitola, County of Santa Cruz
Impaired Water Body: Soquel Lagoon, Soquel Creek, Noble Gulch

**Requirements for Implementing the TMDL**

By January 1, 2019, the Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as "the MS4") shall each implement a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL Schedule.
2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and

progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.

9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. At least one interim target and date must occur during the first five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.
10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By September 15, 2023, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDL and Implementation Plan for Watsonville Slough** – *Pathogens*

Effective Date: 11/20/2006
BPA: Chapter 4
Resolution No. R3-2006-0025
Phase II Entities: County of Santa Cruz, City of Watsonville
Impaired Water Body: Watsonville Slough, Struve Slough, Harkins Slough, Gallighan Slough, Hanson Slough

**Requirements for Implementing the TMDL**

By January 1, 2019, the Phase II entities identified in this TMDL section shall implement practices that will assure their allocation is achieved. The Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as "the MS4") shall each implement a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. Where TMDL attainment schedules have passed, but Wasteload Allocations have not been achieved by January 1, 2019, the MS4 shall consult with the Regional Water Board to establish dates to meet new interim targets and to achieve wasteload allocations. At least one interim target and date must occur during the five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target

by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.

10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment, including public education and participation. The MS4 public participation and outreach efforts must include the following tasks: a) Educating the public about sources of fecal coliform and its associated health risks in surface waters; and b) Identifying and promoting specific actions that responsible parties can implement to reduce pathogen loading from sources such as homeless encampments, agricultural field workers, and homeowners who contribute waste from domestic pets.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Sediment*

**TMDL for Morro Bay (including Chorro Creek, Los Osos Creek, and the Morro Bay Estuary)** – *Sediment*

Effective Date: 12/3/2003
BPA: Chapter 4
Resolution No. R3-2002-0051
Phase II Entities: County of San Luis Obispo
Impaired Water Body: Morro Bay, Los Osos Creek, Chorro Creek, Dairy Creek, Pennington Creek, Warden Creek

**Requirements for Implementing the TMDL**

By January 1, 2019, the County of San Luis Obispo shall implement practices that will assure their allocation is achieved, including identifying and implementing specific road sediment control measures. The County of San Luis Obispo (hereafter referred to in this TMDL section as “the MS4”) shall implement a Wasteload Allocation Attainment Program that identifies the actions it will take to attain its wasteload allocation. The Wasteload Allocation Attainment Program shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at

abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.

2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. At least one interim target and date must occur during the first five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.
10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.

11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By December 3, 2053, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDL and Implementation Plan for Pajaro River including Llagas Creek, Rider Creek, and San Benito River** – *Sediment*

Effective Date: 11/27/2006
BPA: Chapter 4
Resolution No. R3-2005-0132
Phase II Entities: City of Gilroy, City of Hollister, City of Morgan Hill, Santa Cruz County Fairgrounds, City of Watsonville
Impaired Water Body: Tres Pinos, San Benito River, Llagas Creek, Uvas Creek, Upper Pajaro River, Corralitos Creek (including Rider Creek), Mouth of Pajaro River

**Requirements for Implementing the TMDL**

The Phase II entities identified in this TMDL section shall implement the practices specified in this Order, tailored to focus on reduction of sediment discharges to the affected waterbodies, to ensure achievement of the wasteload allocations.

By November 27, 2051, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDL for San Lorenzo River (Including Carbonera Creek, Lompico Creek, and Shingle Mill Creek)** – *Sediment*

Effective Date: 12/18/2003
BPA: Chapter 4
Resolution No. R3-2002-0063
Phase II Entities: City of Santa Cruz, County of Santa Cruz, City of Scotts Valley
Impaired Water Body: San Lorenzo River, Carbonera Creek, Lompico Creek, Shingle Mill Creek

**Requirements for Implementing the TMDL**

By January 1, 2019, the Phase II entities identified in this TMDL section shall implement practices that will assure their allocation is achieved, including identifying and implementing specific road sediment control measures. The Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as “the MS4”) shall each implement a Wasteload

Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. At least one interim target and date must occur during the first five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target

by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.

10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By December 18, 2028, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Toxicity and Pesticides*

**TMDL for the Santa Maria River Watershed** – *Toxicity and Pesticides*

Effective Date: 10/29/2014
BPA: Chapter 4
Resolution No. R3-2014-0009
Phase II Entities: City of Guadalupe, City of Santa Maria, County of Santa Barbara
Impaired Water Body: Blosser Channel, Bradley Channel, Greene Valley Creek, Main Street Canal, Orcutt Creek, Santa Maria River

**Requirements for Implementing the TMDL**

By January 1, 2019, the Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as “the MS4”) shall each develop, submit, and begin implementation of a Wasteload Allocation Attainment Program, or an integrated plan, that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs or integrated plans shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4’s jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4’s jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.

4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis may incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocations. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim and final wasteload allocations. The Central Coast Water Board may approve participation in statewide or regional monitoring programs as meeting all, or a portion of monitoring requirements.
9. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
10. A detailed description of how the MS4 proposes to assess its attainment of interim targets and the final wasteload allocation.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program or integrated plan.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment, including public education and participation items identified above.

Waste load allocations will be achieved through implementation of management practices and strategies to reduce pesticide loading, and wasteload allocation attainment will be demonstrated through water quality monitoring. Implementation can be conducted by MS4s specifically and/or through statewide programs addressing urban pesticide water pollution. The Wasteload Allocation Attainment Program may include participation in statewide efforts, by organizations such as California Stormwater Quality Association (CASQA), that coordinate with Department of Pesticide Regulation and other organizations taking actions to protect water quality from the use of pesticides in the urban environment.

By November 1, 2029, the permittees shall demonstrate attainment of the pyrethroids WLA as specified in Section E.15.a.(ii). or F.5.i.1. (ii). of this Order. This estimate is based on the widespread availability of pyrethroids, including consumer usage, and current limited regulatory oversight. By November 1, 2044, the permittees shall demonstrate attainment of the organochlorine pesticides (DDT, DDD, DDE, chlordane, eldrin, toxaphene, dieldrin) WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

*UNOFFICIAL DRAFT — Not Certified by Clerk*

## Region 4: Los Angeles Regional Water Board

### *Bacteria*

**TMDL for Avalon Beach** – *Bacteria*

Effective Date: April 5, 2012
BPA: N/A (Issued through R4-2012-0077)
Phase II Entities: City of Avalon
Impaired Water Body: Avalon Beach

**Requirements for Implementing the TMDL**

City of Avalon's compliance with the MS4-specific provisions of Cease and Desist Order No. R4-2012-0077 and the applicable implementation requirements and timelines therein, in addition to compliance with all requirements of this Order, shall constitute compliance with the requirements of this Attachment.

**TMDL for Ballona Creek** – *Bacteria*

Effective Date: April 27, 2007
BPA Chapter 7-21
Resolution Nos.: 2006-11, R12-008 revision
Phase II Entities: University of California Los Angeles, Veteran Affairs, Greater Los Angeles Healthcare System
Impaired Water Body: Ballona Creek

**Requirements for Implementing the TMDL:**

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019, and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the

Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By January 1, 2019, the permittees shall demonstrate attainment of the Dry Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By July 15, 2021, the permittees shall demonstrate attainment of the Wet Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDL for Los Angeles Harbor (Inner Cabrillo Beach and Main Ship Channel)** – *Bacteria*

Effective Date: March 10, 2005
BPA Chapter 7-11
Resolution No.: 2004-011; R12-007 (revised)
Phase II Entities: Federal Correctional Institution (FCI), Terminal Island, California State University Dominguez Hills
Impaired Water Body: Dominguez Channel Watershed Management Area

**Requirements for Implementing the TMDL:**

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019, and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The

Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDL for Los Angeles River** – *Bacteria*

Effective Date: March 23, 2012
BPA Chapter 7-39
Resolution No.: R10-007
Phase II Entities: California State University Los Angeles, California State University Northridge
Impaired Water Body: Los Angeles River

**Requirements for Implementing the TMDL:**

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019, and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los

Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By March 23, 2037, the permittees shall demonstrate attainment of the Wet Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By March 23, 2022 to September 23, 2030, according to the following table, the permittees shall demonstrate attainment of the Dry Weather WLA, for the indicated waterbody segment, as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

| Waterbody Segment | Achieve Final dry weather WLA by: |
|---|---|
| Segment B (upper and middle Reach 2) | March 23, 2022 |
| Segment B Tributaries (Rio Hondo & Arroyo Seco) | September 23, 2023 |
| Segment A (lower Reach 2 and Reach 1) | March 23, 2024 |
| Segment A Tributaries (Compton Creek) | September 23, 2025 |
| Segment E (Reach 6) | March 23, 2025 |
| Segment E Tributaries (Dry Canyon, McCoy and Bell Creeks, and Aliso Canyon Wash) | March 23, 2029 |
| Segment C (lower Reach 4 and Reach 3) | September 23, 2030 |
| Segment C Tributaries (Tujunga Wash, Burbank Western Channel and Verdugo Wash) | September 23, 2030 |
| Segment D (Reach 5 and upper Reach 4) | September 23, 2030 |
| Segment D Tributaries (Bull Creek) | September 23, 2030 |

**TMDL for Santa Monica Bay Beaches** – *Bacteria*

Effective Date: July 15, 2003
BPA: Chapter 7-4
Resolution Nos.: 2002-04 (dry weather), 2002-022 (wet weather), R12-007 revision
Phase II Entities: Department of Parks and Recreation (Point Dume State Beach, Leo Carrillo State Beach, Robert H Meyer Memorial State Beach)
Impaired Water Body: Santa Monica Bay

**Requirements for Implementing the TMDL:**

The Department of Parks and Recreation (specifically, Point Dume State Beach, Leo Carrillo State Beach, and Robert H Meyer Memorial State Beach) must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019, and shall be submitted to the Executive Officer upon finalization.

Or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By January 1, 2019, the permittees shall demonstrate attainment of the summer period Dry Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By January 1, 2019, the permittees shall demonstrate attainment of the winter period Dry Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By July 15, 2021, the permittees shall demonstrate attainment of the Wet Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Indicator Bacteria*

**TMDL for San Gabriel River and Impaired Tributaries** – *Indicator Bacteria*

Effective Date: June 14, 2016
BPA: Chapter 7-41
Resolution No.: R15-005
Phase II Entities: California State Polytechnic University, Pomona
Impaired Water Body: San Gabriel River and Tributaries

**Requirements for Implementing the TMDL:**

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be

finalized by July 1, 2019, and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By June 14, 2026, the permittees shall demonstrate attainment of the Dry Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By June 14, 2036, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Marine Debris*

**TMDL for Santa Monica Bay** – *Marine Debris*

Effective Date: March 20, 2012
BPA Chapter 7-34
Resolution No.: 2010-010
Phase II Entities: Department of Parks and Recreation (Point Dume State Beach, Robert H Meyer Memorial State Beach)
Impaired Water Body: Santa Monica Bay Watershed Management Area

**Requirements for Implementing the TMDL:**

By January 1, 2019, the Department of Parks and Recreation (at Point Dume State Beach and Robert H. Meyer Memorial State Beach) must submit for Los Angeles Regional Water Board Executive Officer approval, a Minimum Frequency of Assessment and Collection Program (MFAC)/BMP Program that meets the following criteria:

a) The MFAC/BMP Program includes an initial minimum frequency of trash assessment and collection and suite of structural and/or nonstructural BMPs. The MFAC/BMP Program shall include collection and disposal of all trash found in the source areas and along the shoreline. Responsible jurisdictions shall implement an initial suite of BMPs based on current trash management practices in land areas that are found to be sources

of trash to waterbodies within the Santa Monica Bay Watershed Management Area and to Santa Monica Bay.

Beaches and Harbors along Santa Monica Bay

For beaches and harbors along Santa Monica Bay, the initial minimum frequency shall be set as follows:

1. The trash source areas of beaches and harbors shall be cleaned on a daily basis year-round.
2. Trash on Santa Monica Bay shorelines shall be collected daily. An assessment shall immediately follow at the frequency specified in the Trash Monitoring and Reporting Plan (TMRP).
3. The assessment performed immediately after the collection events shall focus on the shorelines or interface along Santa Monica Bay.
4. The protocol for conducting the assessment immediately after the collection event shall include methods and frequencies of assessment, specific locations on the beaches and harbors, in the TMRP.
5. Responsible jurisdictions for beaches and harbors shall conduct routine trash generation rate evaluation on the nonpoint source areas at selected beaches or harbors under their management. Protocols, as specified in the TMRP, for this evaluation include:
   i) The evaluation shall be performed in the late afternoon before dusk. Data collected may represent the daily trash quantity littered or deposited on the nonpoint source areas.
   ii) Methods, locations and frequencies of evaluation on the beaches and harbors shall be included in the TMRP.
6. Water in harbors shall be inspected and all trash found on the water shall be removed at a frequency and during critical conditions as defined in the approved TMRP.
7. Compliance for jurisdictions responsible for nonpoint source trash at areas where daily cleanup is implemented, is determined by the following conditions:
   i) The assessment conducted immediately after cleanup shall demonstrate that all trash on the shoreline or harbor is 100% removed and no trash remains.
   ii) Responsible jurisdictions for beaches and harbors where daily cleanup is performed, shall demonstrate that the trash generation rate of the source areas does not show an increasing trend and does not exceed the benchmark of 310 pounds (lbs) per mile of beach/harbor per day, or 113,150 lbs/mile/year.
8. Should trash amounts collected during evaluation at the source areas exceed 113,150 lbs/mile/year, or not indicate a decreasing trend, the responsible jurisdictions shall immediately initiate additional BMPs as specified in the TMRP,
9. By January 1, 2019, responsible agencies and jurisdictions shall also develop a Trash Monitoring and Reporting Plan (TMRP) for Los Angeles Regional Water Board Executive Officer approval that describes the methodologies that will be used to assess and monitor trash in their responsible areas within the Santa Monica Bay Watershed Management Area or along Santa Monica Bay.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Metals*

**TMDL for Ballona Creek** – *Metals*

Effective Date: October 29, 2008
BPA: Chapter 7-12
Resolution No.: 2007-015; R13-010 (revised)
Phase II Entities: Veteran Affairs, Greater Los Angeles Healthcare System, University of California Los Angeles
Impaired Water Body: Ballona Creek

**Requirements for Implementing the TMDL:**

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019, and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By January 1, 2019, the permittees shall demonstrate attainment of the Dry Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By January 11, 2021, the permittees shall demonstrate attainment of the Wet Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDL for Los Angeles River and Tributaries** – *Metals*

Effective Date: November 3, 2011
BPA: Chapter 7-13
Resolution No.: R07-014; R10-003 (revised); R15-004 (revised)
Phase II Entities: California State University Los Angeles, California State University Northridge
Impaired Water Body: Los Angeles River

**Requirements for Implementing the TMDL:**

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019, and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By January 11, 2024, the permittees shall demonstrate attainment of the Dry Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By January 11, 2028, the permittees shall demonstrate attainment of the Wet Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDL for Los Cerritos Channel** – *Metals*

Effective Date: March 17, 2010
USEPA Established
Phase II Entities: California State University Long Beach, Long Beach Veterans Affairs Medical Center
Impaired Water Body: Los Cerritos Channel

**Requirements for Implementing the TMDL:**

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019, and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By September 30, 2023, the permittees shall demonstrate attainment of the Dry Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By September 30, 2026, the permittees shall demonstrate attainment of the Wet Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Metals and Selenium*

**TMDL for Calleguas Creek** – *Metals and Selenium*

Effective Date: March 26, 2007
BPA Chapter 7-19
Resolution No.: 2006-012
Phase II Entities: Naval Base Ventura County (Point Mugu), Department of Parks and Recreation (Point Mugu State Park), California State University, Channel Islands
Impaired Water Body: Calleguas Creek

**Requirements for Implementing the TMDL:**

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019, and shall be submitted to the Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By March 26, 2022, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDL for San Gabriel River and Impaired Tributaries** – *Metals and Selenium*

Effective Date: March 26, 2007
USEPA Established
Phase II Entities: California State Polytechnic University, Pomona
Impaired Water Body: San Gabriel River and Tributaries

**Requirements for Implementing the TMDL:**

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019, and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

The final deadline for attainment of the WLA is not specified in the TMDL. Therefore, municipalities identified in this TMDL section shall propose a timeline to attain the WLA in the shortest practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the WLA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii) of this Order.

## *Nitrogen and Related Effects*

**TMDL for Los Angeles River** – *Nitrogen and Related Effects*

Effective Date: March 23, 2004
BPA Chapter 7-8
Resolution Nos.: R03-009 (amended by R03-016, R05-014, R07-005, & R12-010)
Phase II Entities: California State University Los Angeles, California State University Northridge
Impaired Water Body: Los Angeles River

**Requirements for Implementing the TMDL:**

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019 and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation*

**TMDL for Calleguas Creek** – *Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation*

Effective Date: March 24, 2006
BPA Chapter 7-16
Resolution No.: 2005-009
Phase II Entities: Naval Base Ventura County (Point Mugu), Department of Parks and Recreation (Point Mugu State Park), California State University, Channel Islands
Impaired Water Body: Calleguas Creek

**Requirements for Implementing the TMDL:**

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019 and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By March 24, 2026, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Toxic Pollutants*

**TMDL for Ballona Creek Estuary** – *Toxic Pollutants*

Effective Date: January 11, 2006
BPA: Chapter 7-14
Resolution No.: 2005-008; R13-010 (revised)
Phase II Entities: Veteran Affairs, Greater Los Angeles Healthcare System, University of California Los Angeles
Impaired Water Body: Ballona Creek

**Requirements for Implementing the TMDL:**

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019 and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019 and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By January 11, 2021, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Toxics and Metals*

**TMDL for Los Angeles and Long Beach Harbors** – *Toxics and Metals*

Effective Date: March 23, 2012
BPA Chapter 7-40
Resolution No.:2011-008
Phase II Entities: Federal Correction Institution (FCI), Terminal Island, Community Corrections Management (CCM), Long Beach, California State University Dominguez Hills
Impaired Water Body: Dominguez Channel Watershed

**Requirements for Implementing the TMDL:**

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019 and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By March 23, 2032, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Toxicity*

**TMDL for Calleguas Creek Watershed** – *Toxicity*

Effective Date: March 24, 2006
BPA Chapter 7-17
Resolution No.: 2005-010
Phase II Entities: Naval Base Ventura County (Point Mugu), Department of Parks and Recreation (Point Mugu State Park), California State University, Channel Islands
Impaired Water Body: Calleguas Creek

**Requirements for Implementing the TMDL:**

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019 and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Trash*

**TMDL for Ballona Creek** – *Trash*
Effective Date: August 28, 2002

BPA: Chapter 7.3
Resolution No.: 2001-014 2004-023 (revision), R15-006 (revision)
Phase II Entities: Veteran Affairs, Greater Los Angeles Healthcare System, University of California Los Angeles
Impaired Water Body: Ballona Creek

**Requirements for Implementing the TMDL:**

The Phase II entities identified in this TMDL section shall implement either 1) Full Capture Systems, 2) partial capture devices and the application of institutional controls, or 3) a scientifically based alternative attainment approach.

A Full Capture System is any device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate (Q) resulting from a one year, one hour, storm event. The Rational Equation is used to compute the peak flow rate (See Fact Sheet for Rational Equation).

A partial capture device does not meet the definition of a Full Capture System; a partial capture device may not trap all particles 5 mm or greater or may not have the minimum design treatment capacity of a one year, one hour, storm event. Thus, a MS4 Permittee must implement institutional controls in combination with the partial capture device to comply with the wasteload allocations. MS4 Permittees employing partial capture devices and institutional controls shall use a mass balance approach based on the trash daily generation rate, assessed annually, to demonstrate attainment. (See Fact Sheet for attainment determination information)

An alternative attainment approach to implementing either 1) a Full Capture System or 2) partial capture devices and the application of institutional controls must be submitted for approval by the Los Angeles Regional Water Board Executive Officer. By July 1, 2019, MS4 Permittees seeking approval of an alternative attainment approach, shall include in their submittal any proposed studies of institutional controls and partial capture devices for their particular subwatershed(s) or demonstrate that existing studies are representative and transferable to the implementing area. Permittees shall also provide a schedule for periodic, attainment effectiveness demonstration and evaluation.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDL for Los Angeles River** – *Trash*

Effective Date: September 23, 2008
BPA Chapter 7-2
Resolution No.:07-012, R15-006 (revision)
Phase II Entities: California State University Los Angeles, California State University Northridge
Impaired Water Body: Los Angeles River

**Requirements for Implementing the TMDL:**

The Phase II entities identified in this TMDL section shall implement either 1) Full Capture Systems, 2) partial capture devices and the application of institutional controls, or 3) a scientifically based alternative attainment approach.

A Full Capture System is any device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate (Q) resulting from a one year, one hour, storm event. The Rational Equation is used to compute the peak flow rate (See Fact Sheet for Rational Equation).

A partial capture device does not meet the definition of a Full Capture System; a partial capture device may not trap all particles 5 mm or greater or may not have the minimum design treatment capacity of a one year, one hour, storm event. Thus, a MS4 Permittee must implement institutional controls in combination with the partial capture device to comply with the wasteload allocations. MS4 Permittees employing partial capture devices or institutional controls shall use a mass balance approach based on the trash daily generation rate, assessed annually, to demonstrate attainment. (See Fact Sheet for attainment determination information)

An alternative attainment approach to implementing either 1) a Full Capture System or 2) partial capture devices and the application of institutional controls must be submitted for approval by the Los Angeles Regional Water Board Executive Officer. By July 1, 2019, MS4 Permittees seeking approval of an alternative attainment approach, shall include in their submittal any proposed studies of institutional controls and partial capture devices for their particular subwatershed(s) or demonstrate that existing studies are representative and transferable to the implementing area. Permittees shall also provide a schedule for periodic, attainment effectiveness demonstration and evaluation.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDL for Ventura River Estuary** – *Trash*

Effective Date: March 6, 2008
BPA Chapter 7-25
Resolution No.:07-008
Phase II Entities: Ventura County Fairgrounds (Seaside Park and Ventura County Fairgrounds)
Impaired Water Body: Ventura River

**Requirements for Implementing the TMDL:**

The Ventura County Fairgrounds (including Seaside Park and Ventura County Fairgrounds) shall implement Full Capture Systems. A Full Capture System is any device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate (Q) resulting from a one year, one hour, storm event. The Rational Equation is used to compute the peak flow rate (See Fact Sheet for Rational Equation).

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

*UNOFFICIAL DRAFT — Not Certified by Clerk*

## Region 5: Central Valley Regional Water Board

### *Diazinon & Chlorpyrifos*

**TMDL for Lower San Joaquin River** – *Diazinon & Chlorpyrifos*

Effective Date: December 20,2006
BPA: Chapter 3
Resolution No.: R5-2005-0138
Phase II Entities: City of Patterson
Impaired Water Body: San Joaquin River from Mendota Dam to Vernalis

**Requirements for Implementing the TMDL and Monitoring Requirements:**

The Phase II entities identified in this TMDL section (hereinafter referred to as Permittees in this TMDL section) shall implement the following actions by January 1, 2019:

1. a. Conduct an assessment: By July 1, 2020, the Permittees shall complete and submit to the Central Valley Regional Water Board Executive Officer an assessment to, at a minimum: determine the diazinon and chlorpyrifos levels and attainment of waste load allocations in urban discharge; and evaluate attainment of established water quality objectives applicable to diazinon and chlorpyrifos for the receiving water. Assessment monitoring may be done in coordination or conjunction with other municipalities and/or Permittees. The Permittees are responsible for providing the assessment and necessary information related to the assessment to the Central Valley Regional Water Board Executive Officer for review and approval. The assessment information may come from the Permittee's monitoring efforts; monitoring programs conducted by State or federal agencies or collaborative watershed efforts; or from special studies that evaluate the effectiveness of management practices.

   b. With Central Valley Regional Water Board Executive Officer approval, the Permittees may participate in the Delta Regional Monitoring Program or other collective monitoring efforts in lieu of some or all of the individual monitoring requirements required by this section.

   c. Permittees that implement individual water quality monitoring pursuant to 1.a., above, must submit a Monitoring Plan and Quality Assurance Project Plan (QAPP) to the Executive Officer for review and approval.

      i) Monitoring Plan – at a minimum, the Monitoring Plan must include the following information:

         1) Management questions to be answered by the Monitoring Plan,
         2) Constituents to be monitored, analytical methods, and reporting limits,
         3) Sampling site(s) locations, including latitude and longitude coordinates, water body name and water body segment if applicable,
         4) Other monitoring efforts that will provide supplemental data for the local water quality monitoring program and assessment (if any),
         5) Proposed schedule and level of detail for monitoring reports. If a more comprehensive report is necessary every few years, the Monitoring Plan shall

propose a schedule and description of the level of detail (consistent with the information described below) that will be included within the Annual Reports.

ii) Quality Assurance Project Plan (QAPP) consistent with Surface Water Ambient Monitoring Program (SWAMP). All samples shall be collected and analyzed according to the QAPP. Monitoring Reports shall be submitted with the Annual Report and include the following information (consistent with the approved Monitoring Plan):

1) The purpose of the monitoring, brief contextual background, and a brief description of the study design and rationale;
2) Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable;
3) Identification of and rationale for any deviations from the QAPP;
4) Results of data collection, including concentration detected, measurement units, reporting limits, and detection limits, if applicable;
5) Quantifiable assessment, analysis and interpretation of data for each monitoring parameter;
6) Comparison to reference sites (if applicable), guidelines or targets;
7) Discussion of whether data collected addresses the objective(s) or question(s) of study design;
8) Quantifiable discussion of program/study pollutant reduction effectiveness.

2. Pesticide Management Plans: Unless the Permittees can demonstrate attainment of the waste load allocations, the Permittee shall prepare a Pesticide Management Plan which includes a description of actions that will be taken to reduce diazinon and chlorpyrifos discharges to meet the applicable allocations. Pesticide Management Plan provisions addressing diazinon and chlorpyrifos can be included in the pesticide management plans covering current use pesticides with the goal of reducing the discharge of pesticides from municipal storm water to receiving water. Pesticide Management Plans shall address the Permittee's own use of pesticides, and to the extent authorized by law, the use of such pesticides by other sources within their jurisdictions. Pesticide Management Plans shall include identifying and promoting, within the context of integrated pest management (IPM) programs, the use of pest management practices that minimize the risk of pesticide impacts on surface water quality resulting from urban runoff discharges. Additionally, the plan shall include the integration of IPM into the Permittee's municipal operations and be promoted to residents, businesses, and public agencies within each Permittee's jurisdiction through public outreach.

   The Central Valley Regional Water Board Executive Officer may require revisions to the Pest Management Plans if the Central Valley Regional Water Board Executive Officer determines that the Pest Management Plan is not likely to attain the waste load allocations. Pest Management Plans may be submitted by individual Permittee or Permittee groups and may refer to actions required by other agencies or actions required elsewhere in this permit. Pest Management Plans may include actions to reduce MS4 pesticide discharges through participation or support of a regional or statewide pesticide reduction program. To receive credit toward compliance for such participation, the Permittees must demonstrate that they have participated in the implementation of the program (i.e., contributing materially and in proportion in the size of a Permittee's service area, including, but not limited to, implementation of reduction program measures, membership, contribution of resources,

etc.). Examples of programs that could be eligible include Our Water Our World (outreach), a recognized regional monitoring program, and California Stormwater Quality Association's (CASQA) pesticide regulatory initiative. In developing the monitoring and reporting programs for the Permittee, the Central Valley Water Board will, in coordination with the DPR, assist the Permittee in identifying diazinon and chlorpyrifos alternatives for which monitoring may be necessary.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDL for Sacramento and Feather Rivers** – *Diazinon & Chlorpyrifos*

Effective Date: May 3, 2007
BPA: Attachment 1
Resolution No.: R5-2007-0034
Phase II Entities: City of Anderson, County of Colusa, City of Marysville, City of Red Bluff, City of Redding, County of Shasta, County of Sutter, City of Yuba City, County of Yuba
Impaired Water Body: Sacramento River from Shasta Dam to I Street Bridge, Feather River from Fish Barrier Dam to Sacramento River

**Requirements for Monitoring and Implementing the TMDL:**

The Phase II entities identified in this TMDL section (hereinafter referred to as Permittees in this TMDL section) shall implement the following actions by January 1, 2019:

1. a. Conduct an assessment: By July 1, 2020, the Permittees shall complete and submit to the Central Valley Regional Water Board Executive Officer an assessment to, at a minimum: determine the diazinon and chlorpyrifos levels and attainment of waste load allocations in urban discharge; and evaluate attainment of established water quality objectives applicable to diazinon and chlorpyrifos for the receiving water. Assessment monitoring may be done in coordination or conjunction with other municipalities and/or Permittees. Permittees are responsible for providing the assessment and necessary information related to the assessment to the Central Valley Regional Water Board Executive Officer for review and approval. The assessment information may come from the Permittee's monitoring efforts; monitoring programs conducted by State or federal agencies or collaborative watershed efforts; or from special studies that evaluate the effectiveness of management practices.

   b. With Central Valley Regional Water Board Executive Officer approval, the Permittees may participate in the Delta Regional Monitoring Program or other collective monitoring efforts in lieu of some or all of the individual monitoring requirements required by this section.

   c. Permittees that implement individual water quality monitoring pursuant to 1.a., above, must submit a Monitoring Plan and Quality Assurance Project Plan (QAPP) to the Executive Officer for review and approval.

      i) Monitoring Plan – at a minimum, the Monitoring Plan must include the following information:

         1) Management questions to be answered by the Monitoring Plan,
         2) Constituents to be monitored, analytical methods, and reporting limits,

3) Sampling site(s) locations, including latitude and longitude coordinates, water body name and water body segment if applicable,
4) Other monitoring efforts that will provide supplemental data for the local water quality monitoring program and assessment (if any),
5) Proposed schedule and level of detail for monitoring reports. If a more comprehensive report is necessary every few years, the Monitoring Plan shall propose a schedule and description of the level of detail (consistent with the information described below) that will be included within the Annual Reports.

ii) Quality Assurance Project Plan (QAPP) consistent with Surface Water Ambient Monitoring Program (SWAMP). All samples shall be collected and analyzed according to the QAPP. Monitoring Reports shall be submitted with the Annual Report and include the following information (consistent with the approved Monitoring Plan):

i) The purpose of the monitoring, brief contextual background, and a brief description of the study design and rationale;
ii) Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable;
iii) Identification of and rationale for any deviations from the QAPP;
iv) Results of data collection, including concentration detected, measurement units, reporting limits, and detection limits, if applicable;
v) Quantifiable assessment, analysis and interpretation of data for each monitoring parameter;
vi) Comparison to reference sites (if applicable), guidelines or targets;
vii) Discussion of whether data collected addresses the objective(s) or question(s) of study design;
viii) Quantifiable discussion of program/study pollutant reduction effectiveness.

2. Pesticide Management Plans: Unless Permittees can demonstrate attainment of the waste load allocations, Permittees shall prepare a Pesticide Management Plan which include a description of actions that will be taken to reduce diazinon and chlorpyrifos discharges to meet the applicable allocations. Pesticide Management Plan provisions addressing diazinon and chlorpyrifos can be included in pesticide management plans covering current use pesticides with the goal of reducing the discharge of pesticides from municipal storm water to receiving water. Pesticide Management Plans shall address the Permittee's own use of pesticides, and to the extent authorized by law, the use of such pesticides by other sources within their jurisdictions. Pesticide Management Plans shall include identifying and promoting, within the context of integrated pest management (IPM) programs, the use of pest management practices that minimize the risk of pesticide impacts on surface water quality resulting from urban runoff discharges. Additionally, the plan shall include the integration of IPM into the Permittee's municipal operations and be promoted to residents, businesses, and public agencies within each Permittee's jurisdiction through public outreach.

   The Central Valley Regional Water Board Executive Officer may require revisions to the Pesticide Management Plans if the management plan is not likely to attain the waste load allocations. Pesticide Management Plans may be submitted by individual Permittee or Permittee groups and may refer to actions required by other agencies or actions required elsewhere in this permit. Management plans for pesticides may include actions to reduce

MS4 pesticide discharges through participation or support of a regional or statewide pesticide reduction program. To receive credit toward compliance for such participation, the Permittees must demonstrate that they have participated in the implementation of the program (i.e., contributing materially and in proportion in the size of a Permittee's service area, including, but not limited to, implementation of reduction program measures, membership, contribution of resources, etc.). Examples of programs that could be eligible include Our Water Our World (outreach), a recognized regional monitoring program, and California Stormwater Quality Association's (CASQA) pesticide regulatory initiative. In developing the monitoring and reporting programs for Permittees, the Central Valley Water Board will, in coordination with the DPR, assist the Permittee in identifying diazinon and chlorpyrifos alternatives for which monitoring may be necessary.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

**TMDL for Sacramento and San Joaquin Delta** – *Diazinon & Chlorpyrifos*

Effective Date: October 10, 2006
BPA: Chapter 31
Resolution No.: R5-2006-0061
Phase II Entities: City of Lathrop, City of Lodi, City of Manteca, City of Rio Vista, County of San Joaquin, City of Tracy, City of West Sacramento
Impaired Water Body: Sacramento-San Joaquin Delta Waterways

**Requirements for Monitoring and Implementing the TMDL:**

The Phase II entities identified in this TMDL section (hereinafter referred to as Permittees in this TMDL section) shall implement the following actions by January 1, 2019:

1. a. Conduct an assessment: By July 1, 2020, the Permittees shall complete and submit to the Central Valley Regional Water Board Executive Officer an assessment to, at a minimum: determine the diazinon and chlorpyrifos levels and attainment of waste load allocations in urban discharge; and evaluate attainment of established water quality objectives applicable to diazinon and chlorpyrifos for the receiving water. Assessment monitoring may be done in coordination or conjunction with other municipalities and/or Permittees. Permittees are responsible for providing the assessment and necessary information related to the assessment to the Central Valley Regional Water Board Executive Officer for review and approval. The assessment information may come from the Permittee's monitoring efforts; monitoring programs conducted by State or federal agencies or collaborative watershed efforts; or from special studies that evaluate the effectiveness of management practices.

   b. With Central Valley Regional Water Board Executive Officer approval, the Permittees may participate in the Delta Regional Monitoring Program or other collective monitoring efforts in lieu of some or all of the individual monitoring requirements required by this section.

   c. Permittees that implement individual water quality monitoring pursuant to 1.a., above, must submit a Monitoring Plan and Quality Assurance Project Plan (QAPP) to the Executive Officer for review and approval.

i) Monitoring Plan – at a minimum, the Monitoring Plan must include the following information:

1) Management questions to be answered by the Monitoring Plan,
2) Constituents to be monitored, analytical methods, and reporting limits,
3) Sampling site(s) locations, including latitude and longitude coordinates, water body name and water body segment if applicable,
4) Other monitoring efforts that will provide supplemental data for the local water quality monitoring program and assessment (if any),
5) Proposed schedule and level of detail for monitoring reports. If a more comprehensive report is necessary every few years, the Monitoring Plan shall propose a schedule and description of the level of detail (consistent with the information described below) that will be included within the Annual Reports.

ii) Quality Assurance Project Plan (QAPP) consistent with Surface Water Ambient Monitoring Program (SWAMP). All samples shall be collected and analyzed according to the QAPP. Monitoring Reports shall be submitted with the Annual Report and include the following information (consistent with the approved Monitoring Plan):

1) The purpose of the monitoring, brief contextual background, and a brief description of the study design and rationale;
2) Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable;
3) Identification of and rationale for any deviations from the QAPP;
4) Results of data collection, including concentration detected, measurement units, reporting limits, and detection limits, if applicable;
5) Quantifiable assessment, analysis and interpretation of data for each monitoring parameter;
6) Comparison to reference sites (if applicable), guidelines or targets;
7) Discussion of whether data collected addresses the objective(s) or question(s) of study design;
8) Quantifiable discussion of program/study pollutant reduction effectiveness.

2. Pesticide Management Plans: Unless Permittees can demonstrate attainment of the waste load allocations, Permittees shall prepare a Pesticide Management Plan which include a description of actions that will be taken to reduce diazinon and chlorpyrifos discharges to meet the applicable allocations. Pesticide Management Plan provisions addressing diazinon and chlorpyrifos can be included in pesticide management plans covering current use pesticides with the goal of reducing the discharge of pesticides from municipal storm water to receiving water. Pesticide Management Plans shall address the Permittee's own use of pesticides, and to the extent authorized by law, the use of such pesticides by other sources within their jurisdictions. Pesticide Management Plans shall include identifying and promoting, within the context of integrated pest management (IPM) programs, the use of pest management practices that minimize the risk of pesticide impacts on surface water quality resulting from urban runoff discharges. Additionally, the Pesticide Management Plan shall include the integration of IPM into the Permittee's municipal operations and be

promoted to residents, businesses, and public agencies within each Permittee's jurisdiction through public outreach.

The Central Valley Regional Water Board Executive Officer may require revisions to the Pesticide Management Plans if the plan is not likely to attain the waste load allocations. Pesticide Management Plans may be submitted by individual Permittee or Permittee groups and may refer to actions required by other agencies or actions required elsewhere in this permit. Pesticide Management Plans may include actions to reduce MS4 pesticide discharges through participation or support of a regional or statewide pesticide reduction programs. To receive credit toward compliance for such participation, the Permittees must demonstrate that they have participated in the implementation of the program (i.e., contributing materially and in proportion in the size of a Permittee's service area, including, but not limited to, implementation of reduction program measures, membership, contribution of resources, etc.). Examples of programs that could be eligible include Our Water Our World (outreach), a recognized regional monitoring program, and California Stormwater Quality Association's (CASQA's) pesticide regulatory initiative. In developing the monitoring and reporting programs for specific Permittees, the Central Valley Water Board will, in coordination with DPR, assist the Permittee in identifying diazinon and chlorpyrifos alternatives for which monitoring may be necessary.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Methylmercury*

**TMDL for the Delta** – *Methylmercury*

Effective Date: October 20, 2011
Resolution No.: R5-2010-0043
Phase II Entities: City of Lathrop, City of Lodi, City of Rio Vista, City of Tracy, City of West Sacramento, County of San Joaquin, County of Yolo
Impaired Water Body: Sacramento-San Joaquin Delta and Yolo Bypass waterways listed in Appendix 43 of the Basin Plan – Table A43-1

**Requirements for Implementing the TMDL:**

1. The Phase II entities identified in this TMDL section (hereinafter referred to as Permittees in this TMDL section) shall implement best management practices (BMPs) to control erosion and sediment discharges with the goal of reducing mercury discharges. This will be implemented through compliance with the following Small MS4 Permit requirements:

    - Discharge Prohibitions B.4
    - Section E.6.a Legal Authority
    - Section E.9 Illicit Discharge Detection and Elimination
    - Section E.10 Construction Site Storm Water Runoff Control Program
    - Section E.11 Pollution Prevention/Good Housekeeping
    - Section E.12 Post-Construction
    - Section E.13 Monitoring
    - Section E.14 Program Effectiveness

- Section E.15 Compliance with Implementation Provisions

2. Between 2014 and 2020 (Phase 1 of the Delta Mercury Control Program), the large MS4 permittees (not part of this permit) in the Delta are developing and evaluating BMPs to control methylmercury discharges in storm water. During this period, the Permittees should implement methylmercury management practices identified by the large MS4 permittees or other management practices identified by the Delta Mercury Control Program studies that are reasonable and feasible.
3. The Permittees shall implement the Delta Mercury Exposure Reduction Program (see Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Chapter IV). This requirement may be met by ongoing participation in the collective Mercury Exposure Reduction Program work plan, dated October 2013 (https://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/delta_hg/hg_exposure_reduction/2013oct_merp_wrkpln.pdf). Participation can include financial contributions and in-kind services that directly support exposure reduction activities.
4. The Permittees shall document in their annual report, compliance with erosion and sediment control requirements in this Order, including a discussion of effectiveness of BMPs. The Permittees shall submit a Program Effectiveness Assessment as specified in Section E.14. of the Permit.
5. As specified in section E.15.d, the Permittees shall document implementation of any methylmercury controls or best management practices in their Annual Reports.

**Monitoring Provisions:**

The following monitoring requirements apply after the Central Valley Water Board's review of Delta Mercury Control Program, (see the Delta Mercury Control Program in the Basin Plan) or 20 October 2022, whichever date occurs first.

1. a. The Permittees shall begin monitoring methylmercury loads and concentrations in storm water discharges to assess attainment with the TMDL allocations. Within one year of the Delta Mercury Control Program review, (or 20 October 2022, whichever date occurs first), the Permittees shall submit a plan, for Central Valley Regional Water Board Executive Officer approval, describing the locations and frequency of methylmercury monitoring. The Plan shall be representative of the MS4 service area. The sampling locations, frequencies, and reporting may be the same as the requirements in this Order. The Permittees shall implement the monitoring plan within six (6) months of Central Valley Regional Water Board Executive Officer approval.

   b. With Central Valley Regional Water Board Executive Officer approval, the Permittees may participate in the Delta Regional Monitoring Program or other collective monitoring efforts in lieu of some or all of the individual monitoring requirements required by this section.

   c. Permittees that implement individual water quality monitoring pursuant to 1.a., above, must submit a Monitoring Plan and Quality Assurance Project Plan (QAPP) to the Executive Officer for review and approval.

i) Monitoring Plan – at a minimum, the Monitoring Plan must include the following information:

1) Management questions to be answered by the Monitoring Plan,
2) Constituents to be monitored, analytical methods, and reporting limits,
3) Sampling site(s) locations, including latitude and longitude coordinates, water body name and water body segment if applicable,
4) Other monitoring efforts that will provide supplemental data for the local water quality monitoring program and assessment (if any),
5) Proposed schedule and level of detail for monitoring reports. If a more comprehensive report is necessary every few years, the Monitoring Plan shall propose a schedule and description of the level of detail (consistent with the information described below) that will be included within the Annual Reports.

ii) Quality Assurance Project Plan (QAPP) consistent with Surface Water Ambient Monitoring Program (SWAMP). All samples shall be collected and analyzed according to the QAPP. Monitoring Reports shall be submitted with the Annual Report and include the following information (consistent with the approved Monitoring Plan):

a. The purpose of the monitoring, brief contextual background, and a brief description of the study design and rationale;
b. Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable;
c. Identification of and rationale for any deviations from the QAPP;
d. Results of data collection, including concentration detected, measurement units, reporting limits, and detection limits, if applicable;
e. Quantifiable assessment, analysis and interpretation of data for each monitoring parameter;
f. Comparison to reference sites (if applicable), guidelines or targets;
g. Discussion of whether data collected addresses the objective(s) or question(s) of study design;
h. Quantifiable discussion of program/study pollutant reduction effectiveness.

2. Progress toward attainment of the waste load allocations (WLA) shall be documented in the Annual Report by monitoring methylmercury loads from the MS4 or by quantifying the annual average methylmercury load reduced by implementing pollution prevention activities and source and treatment controls. The Delta Mercury Control Program (see Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Chapter IV) provides guidance for the calculation of methylmercury loading from urban areas and determination of attainment. The assessment information may come from the Permittee's monitoring efforts, monitoring programs conducted by State or federal agencies or collaborative watershed efforts, or from special studies that evaluate the effectiveness of management practices, as approved by the Central Valley Regional Water Board Executive Officer.

By December 31, 2030, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Nutrients*

**TMDL for Clear Lake** – *Nutrients*

Effective Date: September 21, 2007
BPA: Chapter IV-37.04
Resolution No.: R5-2006-0060
Phase II Entities: City of Clearlake, County of Lake, City of Lakeport
Impaired Water Body: Clear Lake

**Requirements for Implementing the TMDL:**

The Phase II entities identified in this TMDL section (hereinafter referred to as Permittees in this TMDL section) shall implement best management practices (BMPs) to control erosion and sediment discharges as a means of controlling phosphorous. These will be implemented through compliance with the following Small MS4 Permit requirements:

- Discharge Prohibitions B.4
- Section E.6.a. Legal Authority
- Section E.9. Illicit Discharge Detection and Elimination
- Section E.10. Construction Site Storm Water Runoff Control Program
- Section E.11. Pollution Prevention/Good Housekeeping
- Section E.12. Post-Construction
- Section E.13. Monitoring
- Section E.14. Program Effectiveness
- Section E.15 Compliance with Implementation Provisions

The Permittees shall document implementation of erosion and sediment BMPs in their Annual Reports as specified in Section E.15.d of this Order. Each Annual Report shall include documentation of compliance with the above Permit requirements. Permittees shall complete and submit Program Effectiveness Assessments as specified in Section E.14 of this Order. The Permittees shall use the information gained from the Program Effectiveness Assessments to improve their program and identify new BMPs or modifications of existing BMPs.

**Monitoring Provisions:**

1. By July 1, 2019, each Permittee shall incorporate individual monitoring and reporting plans, or the Permittees can collectively incorporate a single monitoring plan, into their respective Storm Water Management Plans approved under the previous 2003 Permit (State Water Board Order 2003-0005-DWQ). The monitoring plans shall enable the Central Valley Water Board to evaluate the MS4 Permittee's progress toward attainment of the WLAs and shall be representative of the respective MS4 service area.
2. With Central Valley Regional Water Board Executive Officer approval, the Permittees may participate in a regional monitoring program or other collective monitoring efforts in lieu of some or all of the individual monitoring requirements required by this section.
3. Permittees that implement individual water quality monitoring pursuant to this provision must submit a Monitoring Plan and Quality Assurance Project Plan (QAPP) to the Executive Officer for review and approval.

a) Monitoring Plan – at a minimum, the Monitoring Plan must include the following information:

   i) Management questions to be answered by the Monitoring Plan,
   ii) Constituents to be monitored, analytical methods, and reporting limits,
   iii) Sampling site(s) locations, including latitude and longitude coordinates, water body name and water body segment if applicable,
   iv) Other monitoring efforts that will provide supplemental data for the local water quality monitoring program and assessment (if any),
   v) Proposed schedule and level of detail for monitoring reports. If a more comprehensive report is necessary every few years, the Monitoring Plan shall propose a schedule and description of the level of detail (consistent with the information described below) that will be included within the Annual Reports.

b) Quality Assurance Project Plan (QAPP) consistent with Surface Water Ambient Monitoring Program (SWAMP). All samples shall be collected and analyzed according to the QAPP. Monitoring Reports shall be submitted with the Annual Report and include the following information (consistent with the approved Monitoring Plan):

   i) The purpose of the monitoring, brief contextual background, and a brief description of the study design and rationale;
   ii) Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable;
   iii) Identification of and rationale for any deviations from the QAPP;
   iv) Results of data collection, including concentration detected, measurement units, reporting limits, and detection limits, if applicable;
   v) Quantifiable assessment, analysis and interpretation of data for each monitoring parameter;
   vi) Comparison to reference sites (if applicable), guidelines or targets;
   vii) Discussion of whether data collected addresses the objective(s) or question(s) of study design;
   viii) Quantifiable discussion of program/study pollutant reduction effectiveness

4. Progress toward attainment of the WLA shall be documented in the Annual Report.

Permittees may work with Central Valley Regional Water Board staff to estimate nutrient loadings from activities in the watershed. Loading estimates can be conducted using either water quality monitoring or computer modeling or a combination of the two.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Organic Enrichment and Low Dissolved Oxygen*

**TMDL for Lower San Joaquin River, San Joaquin River, Stockton Deep Water Ship Channel TMDL** – *Organic Enrichment and Low Dissolved Oxygen*

Effective Date: February 27, 2007
BPA: Chapter IV-37.01

Resolution No.: R5-2005-005
Phase II Entities: Atwater City, Ceres City, Escalon City, Hughson City, Lathrop City, Livingston City, Los Banos City, Manteca City, Merced City, Merced County, Newman City, Oakdale City, Patterson City, Ripon City, Riverbank City, San Joaquin County, Stanislaus County, Turlock City
Impaired Water Body: Lower San Joaquin River (Stockton Deep Water Ship Channel, DWSC)

**Requirements for Implementing the TMDL:**

The Phase II Entities identified within this TMDL section (hereinafter referred to as Permittees in this TMDL section) shall implement best management practices (BMPs) to control the discharge of oxygen demanding substances and their precursors in their urban discharge. This will be implemented through compliance with the following Small MS4 Permit requirements:

- Discharge Prohibitions B.4
- Section E.6.a. Legal Authority
- Section E.9. Illicit Discharge Detection and Elimination
- Section E.10. Construction Site Storm Water Runoff Control Program
- Section E.11. Pollution Prevention/Good Housekeeping
- Section E.12. Post-Construction
- Section E.13. Monitoring
- Section E.14. Program Effectiveness
- Section E.15 Compliance with Implementation Process

In measuring compliance with permit requirements related to attainment of these wasteload allocations (WLAs), credit will be given for control measures implemented after July 12, 2004.

The Permittees shall document, in their Annual Reports, the implementation of BMPs to control the discharge of oxygen demanding substances and precursors in their urban discharge. Each Annual Report shall include documentation of compliance with the Permit requirements and a discussion of the effectiveness of the BMPs. The Permittees shall use the information gained from the Program Effectiveness Assessments to improve their program and identify new BMPs or modifications of existing BMPs to ensure that they are meeting applicable WLAs. The Program Effectiveness Assessment information may come from the Permittees' monitoring efforts; monitoring programs conducted by State or federal agencies or collaborative watershed efforts; or from special studies that evaluate the effectiveness of management practices.

**Monitoring Provisions:**

1. By January 1, 2020, Permittees shall submit the Monitoring and Reporting Plan consistent with E.13 for Central Valley Regional Water Board Executive Officer approval;
2. With Central Valley Regional Water Board Executive Officer approval, the Permittees may participate in the Delta Regional Monitoring Program or other collective monitoring efforts in lieu of some or all of the individual monitoring requirements required by this section.
3. Permittees that implement individual water quality monitoring pursuant to this provision must submit a Monitoring Plan and Quality Assurance Project Plan (QAPP) to the Executive Officer for review and approval.

a) Monitoring Plan – at a minimum, the Monitoring Plan must include the following information:

   i) Management questions to be answered by the Monitoring Plan,
   ii) Constituents to be monitored, analytical methods, and reporting limits,
   iii) Sampling site(s) locations, including latitude and longitude coordinates, water body name and water body segment if applicable,
   iv) Other monitoring efforts that will provide supplemental data for the local water quality monitoring program and assessment (if any),
   v) Proposed schedule and level of detail for monitoring reports. If a more comprehensive report is necessary every few years, the Monitoring Plan shall propose a schedule and description of the level of detail (consistent with the information described below) that will be included within the Annual Reports.

b) Quality Assurance Project Plan (QAPP) consistent with Surface Water Ambient Monitoring Program (SWAMP). All samples shall be collected and analyzed according to the QAPP. Monitoring Reports shall be submitted with the Annual Report and include the following information (consistent with the approved Monitoring Plan):

   i) The purpose of the monitoring, brief contextual background, and a brief description of the study design and rationale;
   ii) Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable;
   iii) Identification of and rationale for any deviations from the QAPP;
   iv) Results of data collection, including concentration detected, measurement units, reporting limits, and detection limits, if applicable;
   v) Quantifiable assessment, analysis and interpretation of data for each monitoring parameter;
   vi) Comparison to reference sites (if applicable), guidelines or targets;
   vii) Discussion of whether data collected addresses the objective(s) or question(s) of study design;
   viii) Quantifiable discussion of program/study pollutant reduction effectiveness.

4. Progress toward attainment of the WLA shall be documented in the Annual Report.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## Region 6: Lahontan Regional Water Board

### *Sediment*

**TMDL for Middle Truckee River Watershed, Placer, Nevada and Sierra Counties** – *Sediment*

Effective Date: May 14, 2008
BPA: Section 4.13
Resolution No.: R6T-2008-0019
Phase II Entities: County of Placer, City of Truckee
Impaired Water Body: Truckee River

**Requirements for Implementing the TMDL:**

The Phase II entities identified in this TMDL section (hereinafter referred to as Permittees in this TMDL section) shall develop, implement, and report best management practices (BMPs) as follows:

1. Road sand application BMPs and recovery tracking - Road sand shall be applied using BMPs and recovered to the maximum extent practicable. Amounts of road abrasives and de-icing agents applied and recovered must be monitored and reported annually.
2. Dirt roads maintained or decommissioned - Identified dirt roads with inadequate erosion control structures shall be rehabilitated and maintained, or decommissioned. Permittees shall focus on dirt roads with high potential for sediment delivery to surface waters (e.g., within 200 feet of watercourse).
3. Legacy sites restoration and best management practices implementation - Identified legacy sites shall be restored or storm water BMPs shall be implemented to prevent erosion and sedimentation to surface waters.
4. Implement an Education and Outreach program, consistent with Section E.7. of the Order, for the targeted audience of ski areas within the jurisdictional boundaries of the permittees, focusing on sediment and erosion control for those facilities.
5. Continue to implement the most recent municipal monitoring program as approved by the Regional Water Board or it’s designee.

By May 14, 2028, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## Region 8: Santa Ana Regional Water Board

### *Bacterial Indicator*

**TMDL for Middle Santa Ana River** – *Bacterial Indicator*

Effective date: September 1, 2006
Resolution No.: R8-2005-0001
Phase II Entities: CA Institute for Men, CA Institute for Women, CA Rehab Center, University of California, Riverside
Impaired Water Body: Santa Ana River, Reach 3, Chino Creek, Mill Creek, Prado Park Lake

**Requirements for Implementing the TMDL**

The Phase II entities identified in this TMDL section (hereinafter referred to as Permittees in this TMDL section) shall:

1. Monitoring Program: By January 1, 2019, submit for approval by the Regional Water Board or its designee a watershed-wide attainment monitoring and facility specific bacterial indicator monitoring program that is adequate to determine attainment with the dry and wet season waste load allocation. The Permittees may alternatively participate in a stakeholder group monitoring program for the same purpose. The monitoring program must be consistent with the existing Santa Ana River Watershed Bacteria Monitoring Program – Monitoring Plan, approved by the Regional Water Board on March 11, 2016 (or the most current, Regional Water Board approved revision).
2. By January 1, 2019, either a) develop a facility-specific Bacterial Indicator Reduction Plan or b) join an updated watershed-based Bacterial Indicator Reduction Plan (within the Santa Ana River watershed).

For those entities that choose to develop facility-specific Bacterial Indicator Reduction Plans, the following applies:

1. Dry Season Bacterial Indicator Reduction Plan - Develop a facility specific Bacterial Reduction Plan that details the plan and schedule for achieving the Dry Season Bacterial Indicator WLA as soon as feasible.
2. Wet Season Bacterial Indicator Reduction Plan – Develop a facility specific Bacterial Reduction Plan that details the plan and schedule for achieving the Wet Season Bacterial Indicator WLA by December 31, 2025.

The Dry Season and Wet Season Bacterial Indicator Reduction Plans should include the following:

1. The specific Best Management Practices (BMPs) implemented to reduce the concentration of indicator bacteria from the facility and the water quality improvements expected to result from these BMPs.
2. Any specific regional treatment facilities and the locations where such facilities will be built to reduce the concentration of indicator bacteria discharged from the facility and the expected water quality improvements to result when complete.

3. The technical documentation used to conclude that the Bacterial Indicator Reduction Plan, once fully implemented, is expected to achieve attainment of either the dry season or wet season urban wasteload allocation for indicator bacteria by the specified attainment date.
4. A detailed schedule for implementing the Bacterial Indicator Reduction Plan. The schedule must identify measurable and verifiable milestones to assess satisfactory progress toward meeting the dry and wet season wasteload allocations.
5. The specific metric(s) that will be established to demonstrate the effectiveness of the Bacterial Indicator Reduction Plan.
6. Detailed descriptions of any additional BMPs planned, and the time required to implement those BMPs, in the event that data from the watershed-wide water quality monitoring program indicate that water quality objectives for indicator bacteria are still being exceeded after the Bacterial Indicator Reduction Plan is fully implemented.

By January 1, 2019, the permittees shall demonstrate attainment of the Dry Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By December 31, 2025, the permittees shall demonstrate attainment of the Wet Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Nutrients*

**TMDL for Lake Elsinore/Canyon Lake** – *Nutrients*

Resolution No.: R8-2004-0037
Effective date: July 26, 2005
Phase II Entities: March Air Reserve Base (ARB)
Impaired Water Body: Lake Elsinore, Canyon Lake

**Lake Elsinore/Canyon Lake Nutrient TMDL Joint Responsibility Option**
March ARB shall implement the following actions:

a. March ARB has already committed to cooperative implementation actions, monitoring actions, special studies and implementation actions jointly with other responsible agencies as an active paying member of the Lake Elsinore/Canyon Lake TMDL Task Force. March ARB shall continue with those actions in accordance with paragraph I.H. of the Agreement to Form the Lake Elsinore and Canyon Lake TMDL Task Force, dated June 18, 2012.
b. If the Regional Water Board is notified that March ARB is not fulfilling its Lake Elsinore/Canyon Lake Task Force obligations or if March ARB chooses to opt out of the cooperative approach with the TMDL Task Force for implementation actions, monitoring actions, and/or special studies, March ARB shall provide formal notification to the Regional Water Board. March ARB will then be required to conduct the following activities:
    1. Within 30 days of such notification, submit a proposed update of the March ARB SWPPP to address nutrient discharges;
    2. Within 30 days of such notification, submit a proposed March ARB specific nutrient monitoring program. This monitoring program must be prepared and executed in a manner that attainment of waste load allocations will be determined. The monitoring

program must be consistent with the most current, Regional Water Board approved, Lake Elsinore/Canyon Lake TMDL Task Force monitoring plan;

3. Within 60 days of such notification, submit a proposed water quality monitoring program to evaluate the impairment status of Lake Elsinore and Canyon Lake.
4. Submit an annual report by August 15th of each year.

By December 31, 2020, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Organochlorine Compounds*

**TMDL for San Diego Creek, Upper and Lower Newport Bay** – *Organochlorine Compounds*

Effective date: July 2013
Resolution No.: 2011-0037
Phase II Entities: Orange County Fairgrounds, University of California, Irvine
Impaired Water Body: San Diego Creek, Upper Newport Bay, Lower Newport Bay

**Requirements for Implementing the TMDL:** The Orange County Fairgrounds and the University of California, Irvine shall:

1. Per the Small MS4 Monitoring Flow Chart in this Order, the Permittees are:

   a. Not covered under an Ocean Plan Exception;
   b. Are identified in Attachment G (as noted under Phase II Entities here);
   c. Are not required to conduct Water Quality Monitoring; and
   d. Do discharge to a waterbody/waterbodies impaired (on 303(d) list for organochlorine compounds) by urban runoff.

   Therefore, the Permittees must initiate consultation with Regional Water Board staff by February 1, 2019 to determine the implementation and monitoring requirements (contained in a TMDL Attainment Plan) for San Diego Creek, Upper Newport Bay, and Lower Newport Bay.

3. As a result of the consultation with Regional Water Board staff, the Permittees shall submit their final TMDL Attainment Plan by February 1, 2020 to the Regional Water Board's Executive Officer. The Permittees shall implement the TMDL Attainment Plan immediately upon submittal.

By December 31, 2020, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## Region 9: San Diego Regional Water Board

### *Indicator Bacteria*

**Bacteria Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)** – *Indicator Bacteria*

Effective Date: April 4, 2011
Resolution No.: R9-2010-0001
Phase II Entities: 22nd District Agricultural Association, California State University at San Marcos, Marine Corps Air Station Miramar, Marine Corps Base Camp Pendleton, North County Transit District, San Diego State University, San Diego Veterans Administration Medical Center, University of California San Diego
Impaired Water Body: 20 impaired water quality limited segments within the following watersheds or portions of watersheds: Laguna/San Joaquin, San Juan, San Clemente, San Luis Rey, San Marcos, San Dieguito River, Miramar Creek, Scripps HA, Tecolate HA, San Diego River, and Chollas Creek

**Requirements for Implementing the Bacteria Project I – Twenty Beaches and Creeks TMDL**

The Phase II entities identified in this TMDL section (hereinafter referred to as Permittees in this TMDL section) must take the following actions to meet the requirements of this TMDL:

1. Develop and implement the Storm Water Pollution Prevention Plan (SWPPP) as required by section F.5.f.4 of this Order including additional measures necessary to achieve reductions in fecal coliform, enterococcus, and total coliform by the final attainment dates as required by the TMDL. The SWPPP must include short term and long-term Best Management Practices (BMPs) strategies appropriate for the prioritization schedule in Attachment A, pages A-63 through A-65 of Resolution No. R9-2010-0001.
2. By July 1, 2019, monitor discharges from their facilities including MS4 discharge locations to demonstrate progress towards attainment with final waste load allocations. The monitoring and assessment results must be submitted as part of the Annual Reports required under section F.5.j. of this Order.
3. The Permittees are encouraged to collaborate and coordinate with Phase I MS4s and other responsible parties to the Bacteria I TMDL using an adaptive framework approach as part of the waste load reduction planning and implementation strategies in the required SWPPP pursuant to section F of this Order and monitoring required pursuant to section F.5.i.4. Coordinated efforts by all responsible parties will accomplish the waste load reductions required in the TMDLs faster and achieve the ultimate goal of improving water quality as soon as possible.

By April 4, 2021, the permittees shall demonstrate attainment of the Dry Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By April 4, 2031 (or April 4, 2021 if SWPPP does not contain load reduction programs for other pollutants), the permittees shall demonstrate attainment of the Wet Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

## *Sediment*

**TMDL for Los Peñasquitos Lagoon** – *Sediment*

Effective Date: July 14, 2014
Resolution No. R9-2012-0033
Phase II Entities: Marine Corps Air Station Miramar, San Diego Veterans Administration Medical Center, University of California San Diego, North County Transit District
Impaired Water Body: Los Peñasquitos Lagoon

**Requirements for Implementing the TMDL**

The Phase II entities identified in this TMDL section (hereinafter referred to as Permittees in this TMDL section) must take the following actions to meet the requirements of this TMDL:

1. Develop and implement the Storm Water Pollution Prevention Plan (SWPPP) required by Provision F.5.f.4 of this Order to achieve reductions in sediment by the final TMDL attainment date. The development of a SWPPP to address the TMDL fulfills the responsibility for Phase II Copermittees to prepare a Load Reduction Plan (LRP). The SWPPP must be updated by July 1, 2019 with any additional BMPs, monitoring, or other measures needed to account for the Phase II site's potential to impact the receiving water body with respect to sediment. Permittees are responsible for reducing their sediment loads to the receiving water body or demonstrate that their discharges are not causing exceedances of the wasteload allocation.
2. By March 1, 2019 monitor sediment discharges from their facilities including MS4 discharge locations to demonstrate progress towards attainment of final waste load allocations. The monitoring, at a minimum, shall include representative flow rates and total suspended solids concentrations from individual discharger's facilities. The monitoring and assessment results must be submitted as part of the Annual Reports required under section E.16 of this Order.
3. The Permittees are encouraged to collaborate and coordinate with Phase I MS4s and other responsible parties to the Los Peñasquitos Lagoon Sediment TMDL using an adaptive framework approach as part of the waste load reduction planning and implementation strategies in the required SWPPP pursuant to section F of this Order. Coordinated efforts by all responsible parties will accomplish the waste load reductions required in the TMDLs faster and achieve the ultimate goal of improving water quality as soon as possible.

By July 14, 2034, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

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# Attachment H — Acronyms & Abbreviations

## Acronyms and Abbreviations

| | |
|---|---|
| ASBS | Area of Special Biological Significance |
| BMP | Best Management Practices |
| CASQA | California Stormwater Quality Association |
| CEDEN | California Environmental Data Exchange Network |
| CFR | Code of Federal Regulations |
| CGP | Construction General Permit |
| CWA | Clean Water Act |
| DEM | Digital Elevation Model |
| DMA | Drainage Management Area |
| GIS | Geographic Information System |
| GPS | Global Positioning System |
| IGP | Industrial General Permit |
| LID | Low Impact Development |
| LUP | Linear Utility Project |
| MEP | Maximum Extent Practicable |
| MS4 | Municipal Separate Storm Sewer System |
| NOI | Notice of Intent |
| NPDES | National Pollutant Discharge Elimination System |
| O&M | Operation and Maintenance |
| PAH | Polycyclic Aromatic Hydrocarbon |
| SMARTS | Storm Water Multi-Application, Reporting, and Tracking System |
| SWMP | Storm Water Management Plan |
| SWPPP | Storm Water Pollution Prevention Plan |
| TMDL | Total Maximum Daily Load |
| QAPP | Quality Assurance Project Plan |
| QSD | Qualified SWPPP Developer |
| QSP | Qualified SWPPP Preparer |
| USEPA | United States Environmental Protection Agency |

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# Attachment I — GLOSSARY

**Activism** – is the practice of action or involvement as a means of achieving goals.

**At the Point of Discharge(s)** – Means in the surf zone immediately where runoff from an outfall meets the ocean water (a.k.a., at point zero).

**Beneficial Uses** – The Uses of water of the state protected against degradation, such as domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation and preservation of fish and wildlife, and other aquatic resources or preserves.

**Catch Basin** – A catch basin (a.k.a, storm drain inlet) is an inlet to the storm drain system that typically includes a grate or curb inlet where storm water enters the catch basin and a sump to capture sediment, debris and associated pollutants. Catch basins act as pretreatment for other treatment practices by capturing large sediments. The performance of catch basins at removing sediment and other pollutants depends on the design of the catch basin (e.g., the size of the sump), and routine maintenance to retain the storage available in the sump to capture sediment.

**Common Plan or Development or Sale** – U.S. EPA regulations include the term "commonplan of development or sale" to ensure that acreage within a common project does not artificially escape the permit requirements because construction activities are phased, split among smaller parcels, or completed by different owners/developers. In the absence of an exact definition of "common plan of development or sale," the State Water Board is required to exercise its regulatory discretion in providing a commonsense interpretation of the term as it applies to construction projects and permit coverage. The common plan of development is generally a contiguous area where multiple, distinct construction activities may be taking place at different times under one plan. A plan is generally defined as any piece of documentation or physical demarcation that indicates that construction activities may occur on a common plot. Such documentation could consist of a tract map, parcel map, demolition plans, grading plans, or contract documents. Any of these documents could delineate the boundaries of a common plan area. However, broad planning documents, such as land use master plans, conceptual master plans, or broad-based CEQA or NEPA documents that identify potential projects for an agency or facility are not considered common plans of development. An overbroad interpretation of the term would render meaningless the clear "one acre" federal permitting threshold and would potentially trigger permitting of almost any construction activity that occurs within an area that had previously received area-wide utility or road improvements.

**Community Based Social Marketing (CBSM)** – A systematic way to change the behavior of communities to reduce their impact on the environment. Realizing that simply providing information is usually not sufficient to initiate behavior change, CBSM uses tools and findings from social psychology to discover the perceived barriers to behavior change and ways of overcoming these barriers.

**Construction Site** – Any project, including projects requiring coverage under the General Construction Permit, that involves soil disturbing activities including, but not limited to, clearing, grading, paving, disturbances to ground such as stockpiling, and excavation.

**Design Storm** – For purposes of these Special Protections, a design storm is defined as the volume of runoff produced from one inch of precipitation per day or, if this definition is inconsistent with the discharger's applicable storm water permit, then the design storm shall be the definition included in the discharger's applicable storm water permit.

**Direct Discharge** – A discharge that is routed directly to waters of the United States by means of a pipe, channel, or ditch (including a municipal storm sewer system), or through surface runoff.

**Discharge of a Pollutant** – The addition of any pollutant or combination of pollutants to waters of the United States from any point source, or any addition of any pollutant or combination of pollutants to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. The term includes additions of pollutants to waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works.

**Discharger** – Any responsible party or site owner or operator within the Permittees' jurisdiction whose site discharges storm water runoff, or a non-storm water discharge.

**Detached Single-family Home Project** – The building of one single new house or the addition and/or replacement of impervious surface associated with one single existing house, which is not part of a larger plan of development.

**Dry Weather** – Refers to season where prolonged dry periods occur; in California's Mediterranean climate, it usually corresponds to the period between May and September.

**Erosion** – The physical detachment of soil due to wind or water. Often the detached fine soil fraction becomes a pollutant transported storm water runoff. Erosion occurs naturally, but can be accelerated by land disturbance and grading activities such as farming, development, road building, and timber harvesting.

**Erosion Control Measures** – Measures used to minimize soil detachment. These may include: Vegetation, either undisturbed or planted (e.g., grasses, wildflowers), and other materials, such as straw (applied over bare soil, crimped into soil); protective erosion control blankets; fiber (applied as mulch or hydromulch); and mulch (avoid plastics if possible).

**Sediment Control Measures** – Measures used to trap and/or retain detached soil before discharging to receiving waters. These may include: fiber rolls (e.g., keyed-in straw wattles, compost rolls); silt fence; retention basins; and active treatment systems.

**Flood Management Facilities** – Facilities or structures designed for the explicit purpose of controlling flood waters safely in or around populated areas. (e.g., dams, levees, bypass areas). Facilities or structures designed for the explicit purpose of controlling flood waters safely in or around populated areas (e.g., dams, levees, bypass areas). Flood management facilities do not include traditional stormwater conveyance structures (e.g. stormwater sewerage, pump stations, catch basins, etc.)

**Grading** – The cutting and/or filling of the land surface to a desired slope or elevation.

**Healthy Watershed** – Healthy watersheds are watersheds that function well ecologically and are sustainable. They support healthy, diverse aquatic habitat, have healthy riparian areas and corridors with sufficient vegetative buffer area to minimize land pollutant runoff into surfaces waters, sufficient cover and canopy to maintain healthy habitat, and have near natural levels of sediment transport. Surface waters meet water quality objectives, and sediments are sufficiently low in pollutants to provide for healthy habitat. Groundwaters are near natural levels in quantity and quality, for water supply purposes and for base flow for sustaining creek habitat and migratory fish routes. A Healthy Watershed sustains these characteristics through measures that ensure the dynamics that provide these healthy factors and functions are protected. For example, watersheds must be protected, through low impact development or other forms of protection, from hydromodification that adversely affects recharge areas' function or creeks' bed or bank stability. Creek buffer/riparian areas must be protected from land disturbance activities. Healthy sustainable watersheds use less energy for imported water, have fewer greenhouse gas emissions, and a lesser carbon footprint than unhealthy watersheds.

**Hotspot** – Hotspots are specific operations and areas in a sub watershed that may generate high storm water pollution. Hotspots are high priority sites.

**Hydromodification** – Modification of hydrologic pathways (precipitation, surface runoff, infiltration, groundwater flow, return flow, surface-water storage, groundwater storage, evaporation and transpiration) that results in negative impacts to watershed health and functions.

**HUC 12 Watershed** – The hydrologic unit code (HUC) is the “address” of the watershed. The HUC is the numerical code of the USGS watershed classification system used to identify the watersheds, or drainage basins, at various scales. The HUC organizes watersheds by a nested size hierarchy, so large scale watershed boundaries for an entire region may be assigned a two- digit HUC, while small scale, local watershed boundaries (within the larger regional watershed) may be assigned a 12-digit HUC. A HUC-12 watershed averages 22 square miles in size.

**Illicit Discharge** – Any discharge to a municipal separate storm sewer (storm drain) system (MS4) that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term illicit discharge includes all non-storm water discharges not composed entirely of storm water and discharges that are identified under the Discharge Prohibitions section of this General Permit. The term illicit discharge does not include discharges that are regulated by an NPDES permit (other than the NPDES permit for discharges from the MS4).

**Impaired Waterbody** – A waterbody (i.e., stream reaches, lakes, waterbody segments) with chronic or recurring monitored violations of the applicable numeric and/or narrative water quality criteria. An impaired water is a water that has been listed on the California 303(d) list or has not yet been listed but otherwise meets the criteria for listing. A water is a portion of a surface water of the state, including ocean, estuary, lake, river, creek, or wetland. The water currently may not be meeting state water quality standards or may be determined to be threatened and have the potential to not meet standards in the future. The State of California’s 303(d) list can be found at http://www.swrcb.ca.gov/quality.html.

**Impervious Surface** – A surface covering or pavement of a developed parcel of land that prevents the land's natural ability to absorb and infiltrate rainfall/storm water. Impervious surfaces include, but are not limited to; roof tops, walkways, patios, driveways, parking lots, storage areas, impervious concrete and asphalt, and any other continuous watertight pavement or covering. Landscaped soil and pervious pavement, including pavers with pervious openings and seams, underlain with pervious soil or pervious storage material, such as a gravel layer sufficient to hold the specified volume of rainfall runoff are not impervious surfaces.

**Industrial Development** – Development or redevelopment of property to be used for industrial purposes, such as factories, manufacturing buildings, and research and development parks.

**Infill Site** – A site in an urbanized area where the immediately adjacent parcels are developed with one or more qualified urban uses or at least 75% of the perimeter of the site adjoins parcels that are developed with qualified urban uses and the remaining 25% of the site adjoins parcels that have previously been developed for qualified urban uses and no parcel within the site has been created within the past 10 years.

**Joint Storm Water Treatment Facility** – A storm water treatment facility built to treat the combined runoff from two or more Regulated Projects.

**Linear Underground/Overhead Projects (LUPs)** – Include, but are not limited to, any conveyance, pipe, or pipeline for the transportation of any gaseous, liquid (including water and wastewater for domestic municipal services), liquiescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g., telephone, telegraph, radio, or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to, (a) those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment, and associated ancillary facilities); and include, but are not limited to,(b) underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/ or pavement repair or replacement, and stockpile/borrow locations.

**Low Impact Development** – A sustainable practice that benefits water supply and contributes to water quality protection. Unlike traditional storm water management, which collects and conveys storm water runoff through storm drains, pipes, or other conveyances to a centralized storm water facility, Low Impact Development (LID) takes a different approach by using site design and storm water management to maintain the site's pre-development runoff rates and volumes. The goal of LID is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall. LID has been a proven approach in other parts of the country and is seen in California as an alternative to conventional storm water management.

**Marine Operations** – Marinas or mooring fields that contain slips or mooring locations for 10 or more vessels.

**Maximum Extent Practicable (MEP)** – The minimum required performance standard for implementation of municipal storm water management programs to reduce pollutants in storm water. Clean Water Act § 402(p)(3)(B)(iii) requires that municipal permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." MEP is the cumulative effect of implementing, evaluating, and making corresponding changes to a variety of technically appropriate and economically feasible BMPs, ensuring that the most appropriate controls are implemented in the most effective manner. This process of implementing, evaluating, revising, or adding new BMPs is commonly referred to as the iterative process.

**Mixed-use Development or Redevelopment** – Development or redevelopment of property to be used for two or more different uses, all intended to be harmonious and complementary. An example is a high-rise building with retail shops on the first 2 floors, office space on floors 3 through 10, apartments on the next 10 floors, and a restaurant on the top floor.

**Municipal Separate Storm Sewer System (MS4)** – The regulatory definition of an MS4 (40 CFR 122.26(b)(8)) is "a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created to or pursuant to state law) including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into waters of the United States. (ii) Designed or used for collecting or conveying storm water;(iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2."In practical terms, operators of MS4s can include municipalities and local sewer districts, state and federal departments of transportation, public universities, public hospitals, military bases, and correctional facilities. The Storm water Phase II Rule added federal systems, such as military bases and correctional facilities by including them in the definition of small MS4s.

**National Pollutant Discharge Elimination System (NPDES)** – A national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the CWA.

**Natural Ocean Water Quality** – The water quality (based on selected physical, chemical and biological characteristics) that is required to sustain marine ecosystems, and which is without apparent human influence, *i.e.*, an absence of significant amounts of: (a) man-made constituents (*e.g.,* DDT); (b) other chemical (*e.g.,* trace metals), physical (temperature/thermal pollution, sediment burial), and biological (*e.g.*, bacteria) constituents at concentrations that have been elevated due to man's activities above those resulting from the naturally occurring processes that affect the area in question; and (c) non-indigenous biota (*e.g.,* invasive algal bloom species) that have been introduced either deliberately or accidentally by man. Discharges "*shall not alter natural ocean water quality*" as determined by a comparison to the range of constituent concentrations in reference

areas agreed upon via the regional monitoring program(s). If monitoring information indicates that *natural ocean water quality* is not maintained, but there is sufficient evidence that a discharge is not contributing to the alteration of natural water quality, then the Regional Water Board may make that determination. In this case, sufficient information must include runoff sample data that has equal or lower concentrations for the range of constituents at the applicable reference area(s).

**New Development** – New Development means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision on an area that has not been previously developed.

**Non-Traditional Small MS4** – Federal and State operated facilities that can include universities, prisons, hospitals, military bases (e.g. State Army National Guard barracks, parks and office building complexes.)

**Notice of Intent (NOI)** – The application form by which dischargers seek coverage under General Permits, unless the General Permit requires otherwise.

**Nuisance** – Anything that meets all of the following requirements: (1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; (2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; (3) occurs during, or as a result of, the treatment or disposal of wastes.

**Open Channel** – Flow within a distinct natural or modified channel, calculated as flow velocity times channel cross-sectional area.

**Outfall** – A point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States. Specific to Ocean Plan monitoring, outfalls include those measuring 18 inches or more in diameter.

**Parking Lot** – Land area or facility for the parking or storage of motor vehicles used for business, commerce, industry, or personal use.

**Permittee/Permittees** – Municipal agency/agencies and Non-traditional Small MS4s that are named in and subject to the requirements of this General Permit.

**Permit Effective Date** – July 1, 2013. The date at least 100 days after General Permit adoption, provided the Regional Administrator of U.S. EPA Region 9 has no objection.

**Pervious Pavement** – Pavement that stores and infiltrates rainfall at a rate that exceeds conventional pavement.

**Point Source** – Any discernible, confined, and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operations, landfill leachate collection systems, vessel, or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

**Pollutant** – Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 *et seq.*)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.

**Pollutants of Concern** – Pollutants of concern found in urban runoff include sediments, non-sediment solids, nutrients, pathogens, oxygen-demanding substances, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons (PAHs), trash, and pesticides and herbicides.

**Pollution** – An alteration of the quality of the waters of the state by waste to a degree which unreasonably affects the beneficial uses of the water or facilities which serve those beneficial uses.

**Potable Water** – Water that is safe for domestic use, drinking, and cooking.

**Prioritized BMPs** – BMPs installed and/or implemented to address pollutants of concern. Where pollutant(s) of concern are undocumented or unidentified, prioritized BMPs are defined as BMPs installed and/or implemented to address common pollutants of concern (see pollutants of concern definition).

**Priority Storm Drain Inlets** – Storm drain inlets that drain to sensitive receiving water bodies or water bodies with history of illegal dumping. Storm drain inlets that are located in areas where the maximum number of citizens are exposed (this may include areas of high foot traffic).

**QAPrP** – Quality Assurance Project Plan

**Receiving Water** – Surface water that receives regulated and unregulated discharges from activities on land.

**Redevelopment** – Land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred. Redevelopment does not include trenching, excavation and resurfacing associated with LUPs; pavement grinding and resurfacing of existing roadways; construction of new sidewalks, pedestrian ramps, or bike lanes on existing roadways; or routine replacement of damaged pavement such as pothole repair or replacement of short, non-contiguous sections of roadway.

**Regulated Project** – Refers to projects subject to the new and redevelopment standards in Section E.11 in this Order.

**Regulated Small MS4** – A Small MS4 that discharges to a water of the United States (U.S.) or to another MS4 regulated by an NPDES permit and has been designated as regulated by the State Water Board or Regional Water Board under criteria provided in this Order.

**Residential Housing Subdivision** – Any property development of multiple single-family homes or of dwelling units intended for multiple families/households (e.g., apartments, condominiums, and town homes).

**Retrofitting** – Improving pollution and/or flow control at existing developments and facilities to protect or restore beneficial uses and watershed functions.

**Riparian Areas** – Plant communities contiguous to and affected by surface and subsurface hydrologic features of perennial or intermittent waterbodies. Riparian areas have one or both of the following characteristics: 1) distinctively different vegetative species than adjacent areas, and 2) species similar to adjacent areas but exhibiting more vigorous or robust growth forms. Riparian areas are usually transitional between wetland and upland.

**Rural Area** – Encompasses all population, housing, and territory not included within an urban area.

**Sediments** – Solid particulate matter, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface either above or below sea level.

**Sensitive Waterbody** – Receiving waters which are a priority to protect. They include: 1) Areas of Special Biological Significance (ASBS), 2) areas providing or known to provide habitat for chinook and coho salmon and steelhead, and 3) beaches that serve more than 50,000 people between April 1 and October 31 and are adjacent to flowing storm drains or creeks.

**Separate Implementing Entity (SIE)** – An entity that a permittee may utilize to satisfy one or more of the permit obligations. SIE may include a flood control agency, a Phase I permittee, a storm water consulting firm, etc.

**Small MS4** – An MS4 that is not permitted under the municipal Phase I regulations, and which is "owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity…." (40 CFR §122.26(b)(16)).

**Smart Growth Projects** – Projects that produce multiple-benefits such as economic, social and environmental benefits. Smart growth projects commonly include high density development projects that result in a reduction of runoff volume per capita as a result of reduced impervious surface.

**Solid Waste** – All putrecible and nonputrecible solid, semisolid, and liquid wastes as defined by California Government Code Section 68055.1(h).

**Source Control** – Land use or site planning practices, or structural or nonstructural measures, that aim to prevent runoff pollution by reducing the potential for contact with rainfall runoff at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff.

**Surface Drainage** – Any above-ground runoff (sheet, shallow concentrated, and open channel) that flows into the storm drain system.

**Standard Industrial Classification (SIC)** – A federal system for classifying establishments by the type of activity, in which they are engaged, using a four-digit code.

**Storm Drain System** – The basic infrastructure in a municipal separate storm sewer system that collects and conveys storm water runoff to a treatment facility or receiving water body.

**Storm Water** – Storm water is generated when precipitation from rain and snowmelt events flows over land or impervious surfaces and does not percolate into the ground. As storm

water flows over the land or impervious surfaces, it accumulates debris, chemicals, sediment or other pollutants that could adversely affect water quality if the storm water is discharged untreated.

**Storm Water Treatment System** – Any engineered system designed to remove pollutants from storm water runoff by settling, filtration, biological degradation, plant uptake, media absorption/adsorption or other physical, biological, or chemical process. This includes landscape-based systems such as grassy swales and bioretention units as well as proprietary systems.

**Structural Controls** – Any structural facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution.

**Subwatershed** – An area approximately 10,000 to 40,000 acres in area identified by Hydrologic Unit Code 12 in the federal Watershed Boundary Dataset.

**Surface Water Ambient Monitoring Program (SWAMP)** – The State Water Board's program to monitor surface water quality; coordinate consistent scientific methods; and design strategies for improving water quality monitoring, assessment, and reporting.

**Time of Concentration** – The time it takes the most hydraulically-remote drop of water to travel through the watershed to a specific point of interest.

**Total Maximum Daily Loads (TMDLs)** – The maximum amount of a pollutant that can be discharged into a waterbody from all sources (point and nonpoint) and still maintain water quality standards. Under CWA section 303(d), TMDLs must be developed for all waterbodies that do not meet water quality standards even after application of technology-based controls, more stringent effluent limitations required by a state or local authority, and other pollution control requirements such as BMPs.

**Targeted Audience** – Group(s) of people the Permittee has targeted to receive educational message.

**Trash and Debris** – Trash consists of litter and particles of litter. California Government Code Section 68055.1 (g) defines litter as all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or containers constructed of steel, aluminum, glass, paper, plastic and other natural and synthetic materials, thrown or deposited on the lands and waters of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing.

**Treatment** – Any method, technique, or process designed to remove pollutants and/or solids from polluted storm water runoff, wastewater, or effluent.

**Urban Rural Interface** – The urban/rural interface is identified as the geographical location at which urban land use and rural land use interact.

**Urbanized Area** – A densely settled core of census tracts and/or census blocks that have population of at least 50,000, along with adjacent territory containing non-residential urban land uses as well as territory with low population density included to link outlying densely settled territory with the densely settled core. It is a calculation used by the Bureau of the Census to determine the geographic boundaries of the most heavily developed and dense urban areas. From the Phase II Final Rule (Revised June 2012)

http://www.epa.gov/npdes/pubs/fact2-2.pdf Data utilized in this Order was derived from 2010 U.S. Census Data.

**Waste** – Includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

**Waste Load Allocation** – The portion of a receiving water's total maximum daily load that is allocated to one of its existing or future point sources of pollution. Waste load allocations constitute a type of water quality-based effluent limitation.

**Water Efficient Landscape Ordinance** – The Model Water Efficient Landscape Ordinance (Title 23, Division 2, Chapter 2.7 of the California Code of Regulations) took effect January 1 2010 and is designed to: (1) promote the values and benefits of landscapes while recognizing the need to invest water and other resources as efficiently as possible; (2) establish a structure for planning, designing, installing, maintaining and managing water efficient landscapes in new construction and rehabilitated projects; (3) establish provisions for water management practices and water waste prevention for existing landscapes; (4) use water efficiently without waste by setting a Maximum Applied Water Allowance as an upper limit for water use and reduce water use to the lowest practical amount; (5) promote the benefits of consistent landscape ordinances with neighboring local and regional agencies; (6) encourage local agencies and water purveyors to use economic incentives that promote the efficient use of water, such as implementing a tiered-rate structure; and (7) encourage local agencies to designate the necessary authority that implements and enforces the provisions of the Model Water Efficient Landscape Ordinance or its local landscape ordinance.

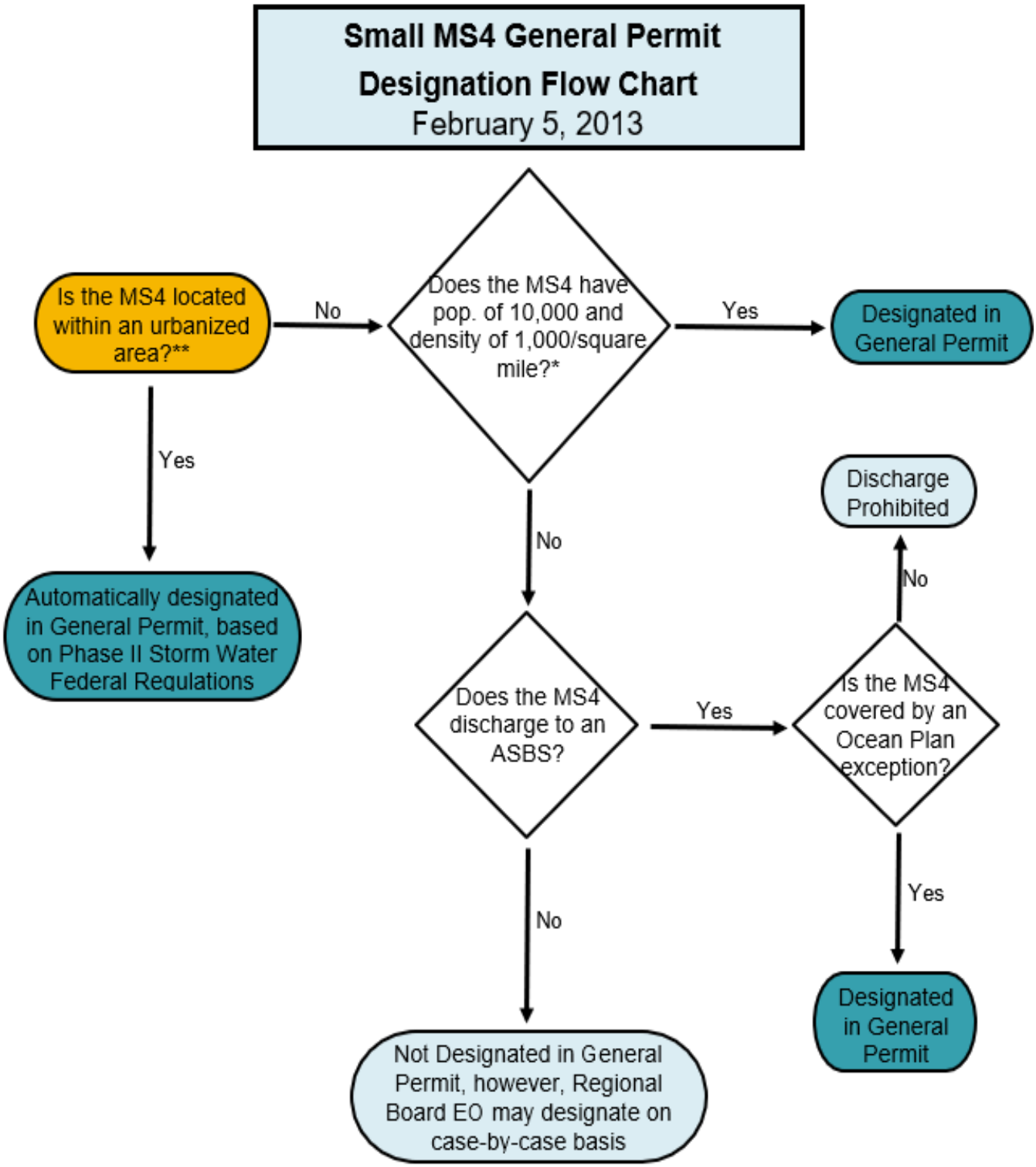
**Water Quality Control Plan (Basin Plan)** –The Regional Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State within each Region, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives and discharge prohibitions. Basin Plans are adopted and approved by the State Water Board, U.S. EPA, and the Office of Administrative Law where required.

**Water Quality Objectives** – The limits or levels of water quality elements or biological characteristics established to reasonably protect the beneficial uses of water or to prevent pollution problems within a specific area. Water quality objectives may be numeric or narrative.

**Water Quality Standards** – State-adopted and U.S. EPA-approved water quality standards for waterbodies. The standards prescribe the use of the waterbody and establish the water quality criteria that must be met to protect designated uses. Water quality standards also include the federal and state anti-degradation policy.

**Watershed Management Zone** – Post-construction management zones based on common key watershed processes and receiving water type (creek, marine nearshore waters, lake, etc.).

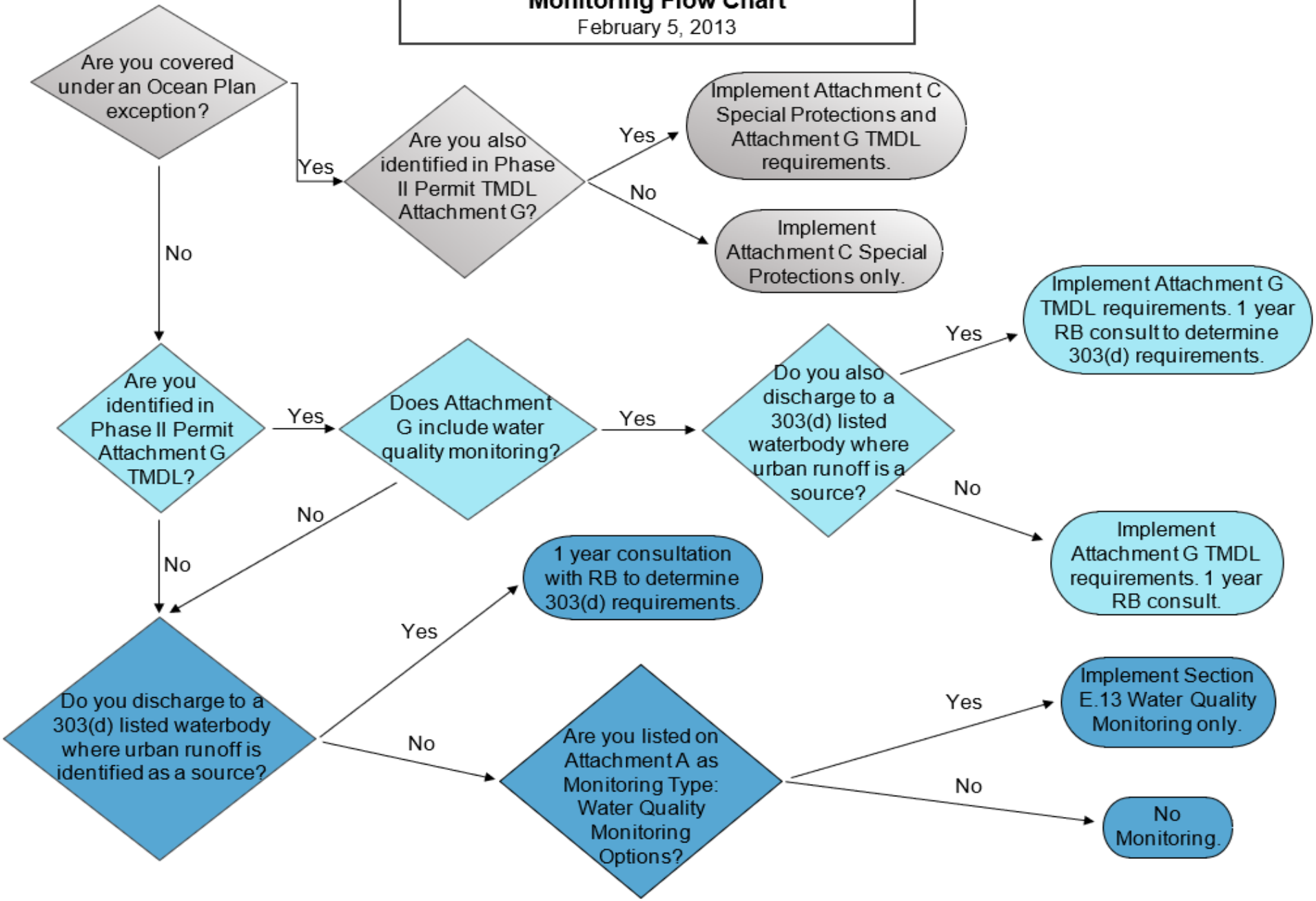
**Watershed Processes** – Functions that are provided by watersheds, including but not limited to, groundwater recharge, sediment supply and delivery, streamflow, and aquatic habitat.




*Current designation based on U.S. Decennial Census Date 2010.
**Assumes MS4 population greater than 5000.

# Phase II Permit Traditional Small MS4 Monitoring Flow Chart

February 5, 2013



**STATE OF CALIFORNIA**
**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD**
**SANTA ANA REGION**

**3737 Main Street, Suite 500, Riverside, CA 92501-3348**
Phone (951) 782-4130 | Fax (951) 781-6288
www.waterboards.ca.gov/santaana

**ORDER NO. R8-2018-0069**
**NPDES PERMIT NO. CAG618001**

# NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND WASTE DISCHARGE REQUIREMENTS

# SECTOR-SPECIFIC GENERAL PERMIT FOR STORM WATER RUNOFF ASSOCIATED WITH INDUSTRIAL ACTVITIES FROM SCRAP METAL RECYCLING FACILITIES WITHIN THE SANTA ANA REGION

The following Permittee (or Dischargers) are subject to waste discharge requirements as set forth in this General Order (or Permit):

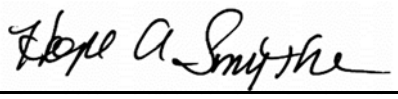
**PERMITTEES:** All those facilities engaged in scrap metal recycling (collectively hereinafter referred to as scrap metal facilities) within the Santa Ana Region of the California Regional Water Quality Control Board (Regional Board) and have filed Permit Registration Documents*[1] (PRDs) with the State Water Resources Control Board (State Board) for coverage under this Permit. This Permit is not applicable to recycling facilities commonly referred to as material recovery facilities that only receive recyclable materials, primarily from non-industrial and residential sources, where no processes are performed on metal scrap other than sorting, compaction, storage and transport.

**ADMINISTRATIVE INFORMATION:**

| | |
|---|---|
| This Order was adopted by the Santa Ana Regional Water Quality Control Board on: | October 19, 2018 |
| This Order shall become effective on: | December 19, 2018 |
| This Order shall expire on: | October 18, 2023 |
| The U.S. Environmental Protection Agency (USEPA) and the Regional Board have classified this discharge as a minor discharge. | |

IT IS HEREBY ORDERED that the Permittees subject to this Permit, in order to meet the provisions contained in division 7 of the California Water Code (commencing with section 130000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, shall comply with the requirements in this Permit.

I, Hope A. Smythe, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on October 19, 2018.



Hope A. Smythe, Executive Officer

[1] An asterisk (*) indicates that the term is defined in the Glossary of Terms.

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## I. FACILITY INFORMATION (FACILITIES REGULATED UNDER THIS ORDER)

This Permit regulates the discharge of storm water associated with industrial activities* and authorized non-storm water discharges* from facilities that are engaged in metals recycling. These are facilities that are listed under Standard Industrial Classification (SIC) Code 5093 and engaged in the following types of activities: (1) automotive wrecking for scrap-wholesale [this category does not include facilities engaged in automobile dismantling for the primary purpose of selling secondhand parts]; (2) iron and steel scrap-wholesale; (3) junk and scrap metal-wholesale; (4) metal waste and scrap-wholesale; and (5) non-ferrous metals scrap-wholesale. Other types of facilities listed under SIC Code 5093 and engaged in wastes recycling are not required to get coverage under this Permit. A No Exposure Certification (NEC) is required for facilities that do not have any exposure of industrial activities to storm water. If there is no discharge of storm water or authorized non-storm water to surface waters, permit coverage is not required and the facility must provide proof of no discharge (e.g., a certification from a professional engineer that the facility has a retention basin designed to retain all runoff from a 100-year, 24-hour storm event). Procedures for these certifications are described under Part III.J of this Permit. This Permit does not regulate storm water runoff from construction activities and other types of industrial activities.

## II. FINDINGS

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board), finds that:

### A. BACKGROUND

1. In 2010 A Metal Recyclers Water Quality Standards Committee (the Committee) was established by stakeholders consisting of industry, environmental, regulatory, and other interested parties and/or persons, to address pollutants in storm water runoff from scrap metal facilities within the Santa Ana Regional Board's jurisdiction. The Committee recommended[2] that the Regional Board issue a sector-specific storm water general permit for all scrap metal facilities within the Region. Shortly after the adoption of the Sector-Specific Scrap Metal Permit (Order No. R8-2012-0012), the Committee disbanded.

2. Prior to the adoption of the Scrap Metal Permit, Order No. R8-2012-0012, most scrap metal facilities within the region were regulated under the State Board's General Permit for Storm Water Discharges Associated with Industrial Activities, Order No. 97-03-DWQ (Industrial General Permit). Upon adoption of Order No. R8-2012-0012, all scrap metal facilities within Region 8 were required to enroll under the Scrap Metal Permit as coverage under the Industrial General Permit was no longer required.

### B. GOVERNING FEDERAL AND STATE LAWS AND REGULATIONS

3. The Fact Sheet attached to this Order includes the regulatory basis for each of the requirements specified in this Order. The Fact Sheet is incorporated into the terms of this Permit.

4. Section 402(p) of the federal Clean Water Act (CWA) requires a National Pollutant Discharge Elimination System (NPDES)* permit for storm water discharges associated with industrial activity. This Order serves as an NPDES permit for storm water and authorized non-storm water discharges* from scrap metal facilities that are located within the Regional Board's jurisdiction.

[2] Preamble, Metal Recyclers WQ Standards Committee:
http://www.waterboards.ca.gov/santaana/water_issues/programs/stormwater/scrap_metal_committee.shtml

5. CWA section 402(p)(3)(A) requires that NPDES permits for storm water discharges associated with industrial activity include requirements necessary to meet water quality standards* (40 CFR § 122.44).

6. In California, the nine regional boards and the State Board* implement the requirements of the CWA, including issuance of NPDES* permits.

7. The CWC and the CWA require the regional boards to develop regional water quality control plans or Basin Plans (CWC, Chapter 4, Article 3). The Regional Board adopted the current Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) in 1995 and was updated in February 2008, June 2011, and February 2016. The Basin Plan identifies the beneficial uses* of waters in the region and contains water quality objectives to protect those beneficial uses. The Basin Plan also incorporates by reference statewide water quality control plans and policies. The water quality objectives*, beneficial uses*, and the State Board's anti-degradation policy constitute the water quality standards* for the Santa Ana River Basin.

8. The Basin Plan, CWC, CWA and related federal and state regulations are the basis for the requirements contained in this NPDES permit. These statutes and regulations require that: (1) storm water discharges associated with industrial activities* be regulated under an NPDES permit; (2) these facilities implement Best Available Technology Economically Achievable (BAT)* and Best Conventional Pollutant Control Technology (BCT)* to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges*.

9. Consistent with the federal statutes and regulations, this Permit includes numeric effluent limits*, numeric action levels*, and technology and water quality-based effluent limitations. (CWA §§ 301(b)(1)(A) and 402(p)(3)(A), 40 CFR §§ 122.26, 122.28 and 125.3).

10. Storm water regulations provide conditional exemption from NPDES permit requirements for facilities where there is no exposure of industrial activities to storm water. In addition, an NPDES permit is not required if there is no discharge to waters of the U.S.*

11. The monitoring requirements specified in this Order are consistent with the federal regulations (40 CFR §§ 122.44(i)(3) and (4)).

12. The requirements specified in this Permit are consistent with the federal statutes and regulations and with those provisions of the CWC that incorporate the federal laws and regulations.

## C. WATER QUALITY CONTROL PLAN (BASIN PLAN*)

13. The Regional Board adopted a revised Water Quality Control Plan for the Santa Ana River Basin (hereinafter Basin Plan*) that became effective on January 24, 1995. The Basin Plan has been amended a number of times since 1995. The Basin Plan designates beneficial uses*, establishes water quality objectives*, and contains implementation programs and policies to achieve those water quality objectives for all waters in the Santa Ana Region.

14. Beneficial uses* designated in the Basin Plan* for surface waters in the Permit Area* are as follows:
    a) Municipal and Domestic Supply,
    b) Agricultural Supply,
    c) Industrial Service Supply,

d) Industrial Process Supply,
e) Groundwater Recharge,
f) Hydropower Generation,
g) Water Contact Recreation,
h) Non-contact Water Recreation,
i) Warm Freshwater Habitat,
j) Limited Warm Freshwater Habitat,
k) Cold Freshwater Habitat,
l) Preservation of Biological Habitats of Special Significance,
m) Wildlife Habitat,
n) Rare, Threatened, or Endangered Species, and
o) Spawning, Reproduction, and Development

15. The existing and potential beneficial uses of groundwater that could be impacted by the discharge of storm water associated with industrial activities include one or more of the following:
    a) Municipal and Domestic Supply,
    b) Agricultural Supply,
    c) Industrial Service Supply, and
    d) Industrial Process Supply

16. The Basin Plan* also incorporates by reference all State Board* water quality control plans and policies including the 2015 Water Quality Control Plan for Ocean Waters of California (Ocean Plan)[3] and the 2018 Water Quality Control Policy for Enclosed Bays and Estuaries of California (Enclosed Bays and Estuaries Policy)[4]. The Trash Provisions amendment was adopted in 2015 and the Sediment Quality Provisions amendment was adopted in 2018. These amendments, together with existing quality provisions of the Enclosed Bays and Estuaries Plan, will be incorporated into the Inland Surface Waters, Enclosed Bays and Estuaries Plan of California (ISWEBE). Water quality objectives* specified in the Basin Plan* include numeric and narrative objectives that may be more stringent than the national or statewide water quality criteria*.

## D. NATIONAL TOXICS RULE (NTR, 40 CFR § 131.36) AND CALIFORNIA TOXICS RULE (CTR, 40 CFR § 131.37)[5]

17. NTR and CTR are the water quality criteria for priority toxic pollutants that apply to all surface water discharges. The Regional Board finds that compliance with Water Quality Standards through a combination of effluent limits based on numeric effluent limits, numeric action levels and implementation of BMPs is appropriate for regulating storm water runoff from industrial facilities. This approach is consistent with the USEPA's position on the use of BMPs in storm water permits as set forth in the policy memorandum entitled, ''Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits'' (61 FR 43761, August 9, 1996).[6]

[3] Water Quality Control Plan for Ocean Waters of California is available at: https://www.waterboards.ca.gov/water_issues/programs/ocean/docs/cop2015.pdf
[4] The Water Quality Control Plan for Enclosed Bays and Estuaries of California and amendments are available: https://www.waterboards.ca.gov/plans_policies/
[5] https://www.gpo.gov/fdsys/pkg/CFR-2017-title40-vol24/pdf/CFR-2017-title40-vol24-sec131-38.pdf
[6] See discussions on Wet Weather Flows in the Federal Register/Vol. 65, No. 97/Thursday, May 18, 2000/Rules and Regulations

## E. DISCHARGE CHARACTERISTICS

18. In 1983, the USEPA published the results of its Nationwide Urban Runoff Program (NURP) study[7]. This study indicated that urban runoff and industrial storm water runoff are major sources of pollutants in receiving waters. The results of this study were used for the 1987 CWA amendments that laid the foundation for regulating storm water discharges through NPDES permits. This Order regulates storm water runoff from scrap metal facilities under the jurisdiction of this Regional Board. Storm water runoff associated with industrial activities include storm water runoff, snowmelt runoff and surface runoff and drainage that has come in contact with industrial activities as defined in the Glossary.

19. Pollutants in storm water runoff from scrap metal facilities include: oil and grease from waste materials being recycled at the facility and from leaks and spills from equipment and machinery used at the facility; gasoline, diesel and other petroleum products used at the facility; metals from scrap metals being recycled; biochemical oxygen demand (BOD*)/ chemical oxygen demand (COD*) from wastes being recycled or from the recycling operations; suspended solids from the recycled wastes or from the operations at the facility; and acidity or alkalinity (pH) from waste materials. These pollutants can threaten and adversely affect human health and the environment and can bioaccumulate* in receiving waters in the tissues of invertebrates and fish and eventually be consumed by humans and other animals.

20. These pollutants are carried to rivers, streams, lakes and the Pacific Ocean (collectively the Receiving Waters*) through storm water and non-storm water runoff from these facilities.

21. The Permittees discharge storm water associated with industrial activities* into municipal separate storm sewer systems (MS4s)*, creeks and channels, lakes, rivers, streams, the ocean and tributaries thereto within the Region. Some of the receiving waters* have been designated as impaired waterbodies* by the Regional Board pursuant to CWA section 303(d)[8]. The Regional Board has developed and the State Board, Office of Administrative Law and the USEPA have approved, total maximum daily loads (TMDLs)* for some of these impaired waterbodies*. Special provisions are included in this Permit for discharges to impaired waterbodies*, including those with approved TMDLs*.

## F. DISCHARGE PROHIBITIONS

22. Pursuant to Water Code section 13377, the Regional Board is authorized to adopt waste discharge requirements as required or authorized by the Federal Clean Water Act that prohibit discharges from containing pollutants that cause or threaten to cause pollution, contamination, or nuisance together with any more stringent effluent standards or limitations necessary to implement the Basin Plan*. This Permit also incorporates the discharge prohibitions contained in the Basin Plan.

23. This Permit prohibits the discharge of unauthorized non-storm water discharges*. Prohibited non-storm water discharges must be either eliminated or permitted by a separate NPDES permit. Non-storm water discharges* may contribute significant pollutant loads to receiving waters*. Measures to control spills, leakage, and dumping, must be addressed through structural as well as non-structural Best Management Practices (BMPs)*. The Regional Board recognizes, however, that certain non-storm water discharges* may not be significant sources

[7]https://www3.epa.gov/npdes/pubs/sw_nurp_vol_1_finalreport.pdf
[8] 2016 303(d) list is available at: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml

of pollutants when managed appropriately. This Permit allows certain non-storm water discharges (authorized non-storm water discharges)* provided that those discharges are not significant sources of pollutants to receiving waters*.

## G. TECHNOLOGY-BASED EFFLUENT LIMITATIONS (TBELs)

24. Section 402((p)(3)(A) of the CWA requires that discharges of storm water runoff from industrial facilities comply with technology-based effluent limitations per Section 301 and any more stringent limitations necessary to meet water quality standards.

25. All NPDES permits are generally required to have technology-based effluent limitations (TBELS) and water quality-based effluent limitations* (WQBELs). Technology-based effluent limitations are established by USEPA in regulations known as effluent limitations guidelines for specific industry categories or subcategories after conducting an in-depth analysis of treatment technologies available for that industry. The USEPA has not established effluent limitation guidelines for the scrap metal industry. Therefore, Regional Board staff has used best professional judgment*(BPJ) in establishing numeric action levels in this Permit. In using best professional judgment approach, staff used its knowledge of the scrap metal industry, the treatment technologies that are currently available, and the effluent quality expected from the use of those treatment technologies and/or good housekeeping practices. Staff also reviewed the analytical results of storm water runoff in the annual reports for scrap metal facilities within the region.

26. In 2005 the State Board convened an expert panel (Blue Ribbon Panel or Panel) that submitted a report entitled, "The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities," dated June 19, 2006[9]. The Panel concluded that numeric limits are feasible for some industrial categories. They recommended that numeric limits should be based on sound and established practices for storm water pollution prevention and treatment. For the construction category, the Panel stated, "Board should consider the phased implementation of Numeric Limits and Action Levels, commensurate with the capacity of the Permittees and support industry to respond." The Panel observed that in certain cases where the activities and pollutants are comparable, a similar approach could be considered for industrial activities. The Panel also expressed its concerns about the reliability of analytical data produced as required under the State's General Permit.

27. The Regional Board has considered the recommendations of the Blue Ribbon Panel and other available data in prescribing numeric action levels and numeric effluent limits in this Permit. This Order offers two options to permitted facilities. The first option (Option 1) takes a phased approach* to implement numeric action levels (NALs) with the intent of using the data produced during this and the previous permit term to develop technology-based effluent limitations. For the second option (Option 2), the Permittees are required to meet the limits established by the California Toxics Rule and are not required to implement the mandatory minimum BMPs* discussed in this Permit under Option 1. However, Permittees that select the Option 2 will be required to meet the water quality-based numeric effluent limits (NELs) specified in Table 1b, upon submittal of their permit registration documents (PRDs).

28. During Phase I, the Permittees that opt for Option 1 are required to implement mandatory minimum BMPs*, conduct monitoring, and evaluate the data. This Permit uses a modified

[9] "The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities" report is available at: http://www.swrcb.ca.gov/water_issues/programs/stormwater/docs/numeric/swpanel_final_report.pdf

version of the USEPA benchmarks listed in its industrial Multi-Sector General Permit (USEPA's MSGP)[10] for storm water and best professional judgment for the NALs in Option 1.

29. The three-phased compliance strategy of Option 1 imposes stringent time lines for the implementation of improved BMPs where numeric action levels are not met. The Committee conducted an independent evaluation of a number of treatment technologies for the scrap metal industry, including a number of treatment controls installed at various scrap metal facilities located within Southern California. The Regional Board evaluated the results of these studies and may determine the need to reopen this Permit to incorporate any additional technology-based effluent limitations developed through this process.

30. The NELs and NALs in this Permit are appropriate numeric thresholds. A Permittee shall take corrective actions when any of the criteria for exceedance is triggered.

31. The Regional Board finds that the NELs and NALs serve as an appropriate set of effluent limitations that demonstrate compliance with BAT/BCT. Pollutants in storm water discharges caused by atmospheric deposition or from offsite sources and/or run-on from forest fires, or any other natural disaster do not apply towards any NAL corrective action trigger determinations. While NALs are not effluent limitations and an exceedance of an NAL trigger is not considered a violation of this Permit, this Permit requires the Permittees to implement specified control measures upon a determination that one of the triggers has been exceeded. An exceedance of an NEL is considered a violation of the Permit.

32. Consistent with federal regulations, this Order also includes BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges in addition to the NELs and NALs. (40 CFR § 122.44(k)(2)).

## H. WATER QUALITY-BASED EFFLUENT LIMITATIONS (WQBELs)

33. 40 CFR § 122.44(d) requires that NPDES permits include WQBELs to attain and maintain applicable numeric and narrative water quality standards of the receiving waters.

34. Where numeric water quality criteria have not been established, 40 CFR § 122.44(d) provides that WQBELs may be established using USEPA criteria guidance under CWA section 304(a), proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information, or an indicator parameter.

35. The use of BMPs to control or abate the discharge of pollutants is allowed by 40 CFR § 122.44(k)(3) when numeric effluent limitations are infeasible or when practices are reasonably necessary to achieve effluent limitations and standards [40 CFR § 122.44(k)(4)] or to carry out the purposes and intent of the CWA [40 CFR § 122.44(k)(4)]. It is the Regional Board's intent to require the Permittees either to implement BMPs, including treatment controls where necessary (Option 1), or to have treatment controls (Option 2), in order to support attainment of water quality standards*.

36. This Order includes receiving water limitations based on water quality objectives* and it prohibits the creation of nuisance or pollution. The Order establishes a phased approach through Option 1, to determine the most appropriate method to control pollutants from scrap metal facilities and to achieve water quality standards* in the receiving waters*.

[10] USEPA's Multi-Sector Permit is available at: https://www.epa.gov/sites/production/files/2015-10/documents/msgp2015_finalpermit.pdf

37. Federal regulations (40 CFR § 122.44(d)(1)(vii)(B)) require inclusion of effluent limits that are "consistent with the assumptions and requirements of any available Waste Load Allocation (WLA)* for the discharge prepared by the State and approved by USEPA." The Permittees are required to develop and implement a comprehensive storm water pollution prevention plan (SWPPP) designed to meet water quality standards and the applicable WLAs by the applicable compliance dates specified in the TMDL implementation plans that have WLAs specified for the Permittees. If the Regional Board does not approve the comprehensive SWPPP prior to the compliance date, the WLAs will become the final WQBEL(s) on the applicable compliance date. The comprehensive plan will be updated, as necessary, to reflect evaluations of the effectiveness of the BMPs, including evaluations presented in the annual reports.

38. These WQBELs are consistent with the assumptions and requirements identified in the TMDL Implementation Plans adopted with the TMDLs* because the WQBELs are expected to be sufficient to meet the WLAs by the compliance dates.

## I. RECEIVING WATER LIMITATIONS

39. Discharges from permitted facilities that cause or contribute to a violation of water quality standards* are prohibited. The Permittees are required to meet water quality standards* in the receiving waters through implementation of BMPs in Option 1 or through treatment controls in Option 2. For discharges introduced upstream of an impaired waterbody*, additional control measures, including a comprehensive SWPPP designed to meet any applicable WLAs in the TMDL implementation plans, are required.

## J. MONITORING AND REPORTING

40. 40 CFR § 122.48 requires that all NPDES permits specify requirements for monitoring and reporting. Sections 13267 and 13383 of the CWC authorize the Regional Board to require technical and monitoring reports. The Monitoring and Reporting Program attached to this Order establishes monitoring and reporting requirements to implement federal and State requirements.

41. Federal regulations at 40 CFR §§ 122.44(i)(3) and (4) establish minimum monitoring requirements that must be included in storm water permits. These regulations require storm water permits to include at least one annual inspection and other applicable monitoring requirements. The minimum requirements in the regulations are that the Permittees must: (1) conduct an annual comprehensive facility compliance evaluation to identify areas of the facility contributing pollutants to storm water discharges; (2) evaluate whether measures to reduce industrial pollutant loads identified in the Permittee's SWPPP are adequate and properly implemented in accordance with the terms of this Permit; and (3) determine whether additional control measures are needed.

42. The Regional Board finds that discharge monitoring is the best option to determine compliance with the NELs, NALs and other requirements specified in this Order. Therefore, this Order includes monitoring of four storm events per year and a monthly visual inspection schedule to determine whether pollutants are being discharged, the control measures are working properly and to ascertain the need for any additional controls. However, these monitoring and inspection frequencies can be reduced upon attaining consistent compliance with all Permit requirements, including compliance with NELs and NALs.

43. Permittees are required to participate in individual monitoring programs. Permittees developing an individual monitoring program are required to undergo appropriate training programs and follow strict quality control protocols.

## K. TRAINING REQUIREMENTS

44. In order to improve compliance with and to maintain consistent enforcement of this Permit, all Permittees are required to have the SWPPP developed and implemented by a properly trained "Scrap Metal - Qualified SWPPP Developer" (SM-QSD) and a "Scrap Metal - Qualified SWPPP Practitioner" (SM-QSP), respectively. Only those with proper certification as SM-QSDs and SM-QSPs should develop and implement the SWPPP. Training is also required for sample collection, preservation, and handling.

## L. STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

45. This Permit requires a SM-QSD to develop and a SM-QSP to implement a site-specific SWPPP for each facility. The minimum requirements for the SWPPP are specified in this Order. The training and certification requirements for the SM-QSD and SM-QSP will become effective upon the effective date of this Permit.

## M. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

46. This action to adopt an NPDES permit is exempt from the provisions of CEQA set forth in Chapter 3 of Division 13 of the Public Resources Code and from any other form of environmental review specified in CEQA. (Wat. Code section 13389; *County of Los Angeles v. California State Water Resources Control Board* (2006) 143 Cal App.4th. 985, 1004-1007).

## N. ANTI-DEGRADATION POLICY

47. The Regional Board has considered anti-degradation requirements, pursuant to 40 CFR § 131.12 and State Board Resolution No. 68-16, for the discharges permitted under this Order. The Regional Board finds that the storm water and authorized non-storm water runoff regulated under this Order are consistent with the federal and state antidegradation requirements and a complete anti-degradation analysis is not necessary. This Order requires the continued implementation of programs and policies to reduce the discharge of pollutants in storm water runoff associated with industrial activities from scrap metal recycling facilities and include additional requirements to control the discharge of pollutants from the regulated facilities.

## O. ANTI-BACKSLIDING

48. Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR §122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a renewed, reissued, or modified NPDES permit to be as stringent as those in the previous permit, with some exceptions where effluent limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Scrap Metal Permit, Order No R8-2012-0012.

## P. THREATENED OR ENDANGERED SPECIES ACT (ESA)

49. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits*, receiving water limits*, and other requirements to protect the beneficial uses* of Waters of the U.S.* The Permittees are responsible for meeting all requirements of the applicable Endangered Species Act.

## Q. STANDARD AND SPECIAL PROVISIONS

50. This Order incorporates all the applicable provisions from the federal NPDES permit regulations.

## R. NOTIFICATION OF INTERESTED PARTIES

51. The Regional Board has notified the Permittees and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet for this Order.

## S. CONSIDERATION OF PUBLIC COMMENTS

52. The Regional Board notified the Permittees, all known interested parties, and the public of its intent to issue waste discharge requirements for the covered discharges and has provided them with an opportunity to submit their written views and recommendations.

53. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge and the requirements of this Order. Details of the Public Hearing are provided in the Fact Sheet for this Order.

## T. ALASKA RULE

54. On March 30, 2000, USEPA revised its regulation that specifies when new and revised State and Tribal Water Quality Standards become effective for CWA purposes (40 CFR § 131.21, 65 FR 24641, April 27, 2000). Under the revised regulation (also known as the Alaska rule), USEPA must approve new and revised Water Quality Standards submitted to USEPA after May 30, 2000 before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

## U. COMPLIANCE WITH CZARA

55. The Coastal Zone Act Reauthorization Amendments of 1990 (CZARA), Section 6217(g), requires coastal states with approved coastal zone management programs to address Non-Point Source Pollution impacting or threatening coastal water quality. The CZARA addresses five sources of non-point pollution: agriculture, silviculture, urban, marinas, and hydromodification. This Order addresses the management measures required for the urban category. Compliance with requirements specified in this Order relieves the Permittees from developing a Non-Point Source Plan, for the urban category, under CZARA.

**THEREFORE, IT IS HEREBY ORDERED** that Order No. R8-2012-0012 (previous order) is rescinded upon the effective date of this Order, except for enforcement purposes, and, in order to meet the provisions of Water Code division 7 (commencing with § 13000) and regulations adopted thereunder and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this General Order. This action in no way prevents the Regional Board from taking enforcement action for past violations of the previous order.

## III. PERMIT REQUIREMENTS

The Permit provides two options for the Permittees to comply with this Order: (1) Option 1- Phased Approach; and (2) Option 2- Non-Phased Approach. The Permittees must select either Option 1 or Option 2 when completing the online Notice of Intent* through the State Board's Storm Water Multiple Application and Report Tracking System (SMARTS) at the time of submitting Permit Registration Documents* (PRDs).

### A. AUTHORIZED NON-STORM WATER DISCHARGES

1. The following types of non-storm water discharges are authorized provided the Permittees identify each source and its discharge location, characterize the discharge including potential pollutants and the flow volume, and identify appropriate pollutant control measures for each discharge including source control BMPs and other control measures to eliminate or reduce such discharges. Storm water which is containerized prior to treatment shall be specifically excluded from the definition of non-storm water. This information shall be documented in the SWPPP*.
    a) Uncontaminated condensate from refrigeration, air conditioning and compressor units,
    b) Discharges covered by a NPDES* permit, waste discharge requirements*, or waivers issued by the Regional Board or State Board,
    c) Discharges from landscape irrigation, lawn/garden watering and other irrigation waters. These shall be minimized through water conservation efforts and by developing draught tolerant landscapes,
    d) Passive foundation drains[11],
    e) Passive footing drains[12],
    f) Water from crawl space pumps[13],
    g) Rising groundwater[14] and natural springs,
    h) Uncontaminated groundwater infiltration as defined in 40 CFR § 35.2005 (20) and uncontaminated pumped groundwater (as defined in the glossary),
    i) Emergency firefighting flows (i.e., flows necessary for the protection of life and property) do not require BMPs and need not be prohibited. However, appropriate BMPs to reduce the discharge of pollutants to the extent practicable must be implemented when they do not interfere with health and safety issues; and
    j) Waters not otherwise containing wastes as defined in CWC § 13050(d), fully characterized and identified in the SWPPP.

2. When types of discharges listed above are identified as a significant source of pollutants to waters of the U.S., Permittees must either eliminate the discharge category from entering the

[11] Allowed discharges only if the source water drained from the foundation is storm water or uncontaminated groundwater. Discharges of contaminated groundwater will require coverage under the De Minimus Permit (Order No. R8-2015-0004, NPDES No. CAG998001) or General Groundwater Cleanup Permit (Order No. R8-2012-0027, NPDES Permit No CAG918001) or its latest version.
[12] See footnote 10, above.
[13] Allowed discharges only if the discharge is uncontaminated, otherwise permit coverage under the De Minimus Permit or Order No 2014-0174-DWQ (NPDES No. CAG990002), General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Waters of the United States.
[14] Discharge of rising groundwater and natural springs into surface water is only allowed if groundwater is uncontaminated. Otherwise, coverage under the General Groundwater Cleanup Permit, Order No. R8-2012-0027 may be required.

MS4s and/or surface waters or ensure that source control BMPs and/or treatment control BMPs are implemented to reduce or eliminate pollutants resulting from the discharge.

## B. DE MINIMUS TYPES OF DISCHARGES

1. The Regional Board regulates certain de minimus types of discharges including water from potable water sources related to operation, maintenance, or testing of potable water systems; dewatering wastes; well development and testing wastes; etc., through its De Minimus Permit, Order No. R8-2015-0004. Permittees shall obtain coverage under the De Minimus Permit for any de minimus types of discharges.

2. Discharges from fire protection system flushing, testing, and maintenance either should be discharged to a sanitary sewer (with permission of the local sewering agency) or must be regulated under the De Minimus Permit.

## C. DISCHARGE PROHIBITIONS

1. There shall be no trash, debris*, floating materials, foam, plastics, or any deleterious materials in storm water runoff from the permitted facilities.

2. All non-storm discharges, except those authorized under Section A, above, shall be eliminated unless authorized by an individual NPDES permit or waste discharge requirements issued by the Regional Board or the State Board. This includes all process wastewater, storm water comingled with process wastewater and any illicit discharges* (authorized non-storm water discharges are not considered illicit discharges).

3. Discharges of storm water or authorized non-storm water* from the Permittee's facilities shall not cause or contribute to a condition of pollution, contamination, or nuisance (as defined in CWC § 13050).

4. Discharges from facilities regulated under this Order shall not contain any hazardous substance equal to or in excess of a reportable quantity listed in 40 CFR Part 117 and/or 40 CFR Part 302.

5. There shall be no discharge of wastes in violation of prohibitions contained in Chapter 5 of the Basin Plan.

6. The discharge of any substances in concentrations toxic to animal or plant life is prohibited.

## D. GENERAL REQUIREMENTS

### 1. Design Storm for Treatment Control Measures

All treatment systems shall be sized and designed to treat the design volume that shall be greater than or equal to 95th percentile* storm event based on historical daily rainfall information available for the location where the regulated facility is located. An analytical result from flows exceeding a design storm shall not be used in determining any exceedances of NALs, NELs or other permit violations and shall not be used in calculations leading to revised NALs or NELs.

### 2. Training and Qualifications Requirements (SM-QSD/SM-QSP/Certified Persons)

All Corrective Action Plans and Storm Water Pollution Prevention Plans (SWPPPs)* shall be developed and certified by those who have completed a Regional Board sponsored or approved

Scrap Metal - Qualified SWPPP Developer (SM-QSD) program and a Scrap Metal - Qualified SWPPP Practitioner (SM-QSP) shall implement the SWPPP. Sample collection, preservation and handling shall be conducted by a Certified Person who has undergone appropriate training. For these certification programs, the SM-QSD, SM-QSP, and Certified Persons are required to retake the exam every permit term.

**3. Storm Water Pollution Prevention Plans (SWPPPs*)**

Each Permittee shall select, design, and install facility-specific control measures designed to meet either the BAT/BCT effluent limitations for Option 1 or the water quality-based NELs in Table 1.b for Option 2. These control measures shall include good housekeeping practices including best management practices* and these practices shall be documented in the facility's SWPPP*. A site-specific SWPPP shall be developed and implemented prior to start of operations at each facility regulated under this Order. The SWPPP is a dynamic document and must be updated, as needed. The SWPPP shall be kept on site and made available to Regional Board staff upon request. At a minimum, the SWPPP shall include the following elements:

a) Facility Information: The SWPPP shall include relevant facility information as per the details provided in Phase I, below.

b) Preventative Measures: The SWPPP shall document the Preventative Measures as per the details provided in Phase I, below.

c) Mitigative Measures: The SWPPP shall document the Mitigative Measures as per the details provided in Phases I, II, and III, below.

d) Visual Inspections and Monitoring and Reporting Requirements: The SWPPP shall include a monitoring and reporting program in accordance with the Monitoring and Reporting Program included in this Order.

## E. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Storm water runoff associated with industrial activities* from the regulated facilities shall be in compliance with either Option 1 or Option 2 below.

**1. Option 1: Three-Phased Approach**

a) Numeric Action Levels for Option 1*: The Permittees shall design the SWPPPs to document compliance with the numeric action levels specified in Table 1a, below (or the numeric effluent limits in Table 1b, under Option 2). Any exceedance of a numeric action level is not considered a violation of the Permit; however, the Permittees are required to take additional steps to meet the numeric action levels as outlined under Phases I, II, and III, below.

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**Table 1a: Numeric Action Levels for Option 1**
(Also see Attachment A for Alternative Action Levels for Copper, Lead, and Zinc)

| Item No. | Constituent[15] | Units | Action Level (Annual Average)[16] |
|---|---|---|---|
| 1 | pH | pH Units | < 6.5 or > 8.5[17] |
| 2 | Turbidity | NTU | 250[18] |
| 3 | Specific Conductance | µmhos/cm or µsiemen/cm | 2000[19] |
| 4 | Oil and Grease | milligrams/liter | 15[20] |
| 5 | Zinc (total recoverable) | micrograms/liter | 160[21] |
| 6 | Lead (total recoverable) | micrograms/liter | 122[21] |
| 7 | Aluminum (total recoverable) | micrograms/liter | 750[20] |
| 8 | Copper (total recoverable) | micrograms/liter | 18.9[21] |
| 9 | Iron (total recoverable) | micrograms/liter | 1000[20] |
| 10 | Chemical Oxygen Demand | milligrams/liter | 120[20] |

b) Triggers for Exceedances of NALs for Option 1: In most cases a single exceedance of a NAL is not a good indicator of sustained water quality impacts in the receiving waters. To account for the high variability in the storm water runoff quality, this Permit establishes a mechanism for determining exceedances of the NALs for consideration of additional control measures.

(1) If a facility has multiple discharge points for storm water that has come in contact with industrial areas, processes, materials, products or wastes, area-weighted averages of the geometric means of all sampling results for the reporting period shall be calculated using the relative tributary area for each discharge point for all constituents except pH. For pH, an arithmetic mean shall be calculated.

(2) If a single sampling event (either a grab sample from a storm event or a composited sample from a single storm event) exceeds the NAL by two times the specified Permit limit (except for pH), it is considered an exceedance that would require additional steps as outlined under Phases I, II and III, below. For pH, any values less than 6.5 or more than 8.5 pH units are considered as an exceedance requiring additional steps outlined under Phases I, II, and III.

(3) If the annual average (geometric mean of all the analytical results during the reporting period except for pH; for pH, the arithmetic mean) of any of the

[15] pH, turbidity, and specific conductance shall be measured in the field as soon as a sample is collected.
[16] Annual average: Geometric mean of all analytical results obtained during the reporting period (July 1 to June 30); see footnote 17 for pH.
[17] Based on Basin Plan objectives. For pH, the annual average shall be an arithmetic mean (geometric mean is not appropriate for log transformed data such as pH).
[18] Based on Best Professional Judgement.
[19] Based on Basin Plan prohibition on discharges to ground.
[20] Based on USEPA's benchmark values.
[21] Total recoverable zinc, lead, and copper are based on an average hardness of 125-150 mg/L for the region's receiving waters during a storm event.

constituents exceeds the NAL, then it is considered as an exceedance that would trigger additional steps as outlined under Phases I, II, and III, below.

(4) If a facility has implemented volume reduction BMPs (e.g., percolation basins) or preventative measures (e.g., having industrial operations under a roof), a credit may be applied to the above calculations. For example, if a Permittee installs a non-polluting roof over 25% of its operational area, the geometric mean for that facility will be reduced by 25% to arrive at an adjusted geometric mean (pH cannot be adjusted). These BMPs and applied credit must be clearly identified in the SWPPP. The credit will be applied based on areas addressed without regard to whether the BMP was implemented before the adoption of this Permit.

c) Phased Implementation of Control Measures: The phased implementation of control measures specified below is considered as a practicable progression towards meeting the technology-based standards in a timely manner. If the Permittees have opted for Option 1 and fully implement each phase as per the time schedules specified below, they will not be found in violation of Section III.E of this Permit consistent with the BAT/BCT effluent limitations required under the federal regulations.

(1) ***Phase I Requirements***: Each currently enrolled Permittee who selected Option 1 shall continue to implement Option 1 requirements. Each new discharger who selects Option 1 shall implement and maintain the following minimum control measures within 30 days of a new facility filing their NOI.

(a) *Facility Information*: (1) The following information shall be included on a site map in the SWPPP: Location of the facility; locations of storm water conveyance systems, discharge points and monitoring locations; locations of any non-storm water discharges; locations of fueling areas, chemicals and other materials storage areas, industrial process locations, loading and unloading areas, spill cleanup kits, run-on locations and treatment control locations; (2) The following facility information shall be included in the SWPPP: name and title of the person preparing and implementing the SWPPP (see SM-QSD/SM-QSP requirements under Subsection D.2, above); name and title of the facility contact if different from the SM-QSD/SM-QSP; and a description of the industrial activities at the site.

(b) *Preventative Measures*: Each facility shall implement the following preventative measures:

(i) Maintain a current inventory of materials and chemicals used at the facility and identify proper storage locations and handling procedures. This list must be maintained monthly with signature, date and name of preparer.

(ii) Identify potential pollutant sources throughout the facility and the control measures used for each source/area, including good housekeeping practices. Control measure documentation shall include procedures, specific equipment used, maintenance schedules, and a record of all maintenance performed with dates and signatures.

(iii) Pave industrial areas prone to erosion. Paving industrial areas will minimize dust generation and erosion from the site which can control metals from leaving the site.

(iv) Maintain effective perimeter controls and stabilize all site entrances and exits to sufficiently control discharges of erodible materials from discharging or being tracked off the site.

(v) Properly dispose of waste materials, garbage, and debris, and cover all trash containers.

(vi) Develop and implement a Rain Event Action Plan (REAP). The REAP is a written document for each rain event. The plan shall be implemented in the event of a predicted storm with a 40% or greater probability. The probability of a storm shall be determined no more than three days in advance and need only be documented once a day. The facility shall refer to the National Oceanic and Atmospheric Administration (NOAA) website to determine the storm probability. The REAP shall consider the following additional measures: (a) temporarily covering exposed materials; (b) ensuring that all control measures are fully functional; (c) sweeping the site and clearing debris and trash; (d) ensuring that trash bins are covered; and (e) other measures to isolate industrial areas from contact with rainfall and runoff. A record of all activities related to the REAP shall be documented in the SWPPP and shall be dated and signed for each rain event.

(vii) To the extent practicable, minimize the runoff from the site through low impact development (LID) type of BMPs, such as: onsite infiltration including percolation and retention basins, pervious pavement, evapotranspiration and onsite storage (e.g., rain barrels or cisterns to store storm water) and use, green roofs, etc.; control flow volume and velocity through vegetated swales, bioretention facilities, etc. The discharger shall collect samples before runoff comes into contact with the LID BMPs and after runoff passes through the LID BMPs. Dischargers who appropriately implement percolation or other infiltration LID type BMPs, are required to collect samples prior to the discharge entering into the LID BMPs. The data collected by Dischargers prior to the runoff entering the LID BMP is not considered compliance data.

(viii) Develop and implement a program, to the maximum extent practicable, to percolate, evaportranspirate, or use onsite, the design volume of runoff from non-industrial areas and uncontaminated runoff from industrial areas. These onsite systems shall be designed such that they do not cause or contribute to an exceedance of groundwater quality objectives, including an appropriate level of pre-treatment controls. The bottom of the infiltration system shall be at least 10 feet above the historic high groundwater level; discharges to the infiltration system shall receive an appropriate level of pre-treatment; the infiltration system shall not be located in areas with soil or groundwater contamination and shall be at least 100 feet away from any water supply wells.

(ix) Runoff from the non-industrial areas shall not be commingled with uncontaminated runoff from industrial areas. Divert run-ons and flows from non-industrial areas away from industrial areas using berms, curbs, sub-surface piping, grading, or other structural controls, where practicable.

(x) Eliminate all unauthorized non-storm water discharges and identify proper management techniques for authorized non-storm water discharges.

(xi) Where practicable, minimize exposure of industrial activities to storm water by roofing or other types of covers. Roofing materials and other types of covers shall be non-polluting.

(xii) Inspect all industrial areas on a monthly basis and properly remove and dispose of all debris, wastes, trash and spilled or leaked materials. Keep a record of all inspections required in this Permit.

(xiii) Drain fluids from vehicles and equipment prior to storage, disposal, or shredding.

(xiv) Use drip pans and absorbent materials under or around leaky industrial vehicles and equipment. Keep records of drip pan use and maintenance with inspection records.

(xv) Build secondary containment and roofs over chemicals and hazardous materials storage areas.

(xvi) Conduct equipment cleaning and vehicle washing in designated areas and divert flows into sanitary sewer (with approval from the sanitation district) or recycle the wash water.

(xvii) Sweep industrial areas on a regular basis, preferably using a vacuum sweeper. Keep records of sweeping activities with inspection records.

(xviii) Clean catch basins and other storm water conveyance systems on as needed basis, and at least as part of the inspection routine identified.

(xix) Inspect all vehicles and equipment on a regular schedule (e.g., on a weekly basis) for leaks spills or other malfunctions.

(xx) Label all containers.

(xxi) Develop and implement an employee training program for the implementation of the site SWPPP, including documentation of training materials and attendance. All new employees shall receive training within 30 days of employment and all employees shall have refresher training at least on an annual basis.

(xxii) Identify spill prevention and response procedures, including management of any non-storm water runoff.

(xxiii) Consolidate all industrial area discharges to as few discharge points as practicable, preferably to one discharge point and where practicable, divert all non-industrial area runoff away from industrial areas. Manage run-on to the facility by diversion or other means.

(xxiv) Minimize storm water contact with contaminating building materials by removal, painting, or other measures.

(xxv) Determine the possibility of diverting first flush or any contaminated storm water to the sanitary sewer system. This option should only be considered if the sanitary sewage collection agency reclaims and distributes and/or uses reclaimed water.

(xxvi) Develop and implement a monitoring program. The individual(s) responsible for sample collection, preservation, and handling shall be identified in the monitoring program and must have received the requisite training.

(c) *Mitigative Measures*: The following mitigative measures shall be implemented within 30 days of the new facility filing their NOI:

(i) Develop and implement a spill response procedure; identify all spill response equipment, location and proper maintenance of the equipment; identify spill response personnel and any training needed for the spill response personnel and establish a procedure to notify proper personnel within the facility and regulatory agencies.

(ii) Cleanup spills and leaks promptly using dry methods (e.g., absorbents).

(iii) Identify pollutants that cannot be eliminated without treatment controls include the treatment control methods, individual(s) responsible for their maintenance, and maintenance frequency.

(iv) Develop and implement control measures for oily wastes from the site, such as canopies, covers, roofs, oil-water separator, etc., and implement a plan for proper operation and maintenance of those systems; identify its location on the site map, individual(s) responsible for its maintenance and maintenance frequency.

(v) Evaluate the need for advanced treatment systems (or equivalent systems) during the planning stages by evaluating the monitoring reports for the last three years. An advanced treatment system may not be needed if the monitoring results were below the triggers specified above.

(vi) Identify all treatment controls installed at the facility, the individual(s) responsible for regular operation and/or maintenance of the system, the schedule for any required maintenance, and a record of the maintenance activities including the name of the individual(s) performing the maintenance, the date and a signature.

(2) ***Phase II Requirements***

(a) Annually, each Permittee that is in Phase I of Option 1 shall assess the effectiveness of Phase I BMPs by evaluating the monitoring results and by determining if any of the triggers have been exceeded. If none of the triggers has been exceeded, Phase II and III may not be necessary. If any of the triggers has been exceeded, implement Phase II, steps b) through d), below.

(b) Upon a determination that any one of the triggers has been exceeded, the Permittee shall immediately reassess the Phase I BMPs to identify the sources of exceedances. Once the source is identified, determine if additional BMPs or treatment controls are needed to address the pollutant source.

(c) Within 30 days of Phase I exceedance determinations, develop and submit for Regional Board staff approval, a Phase II Corrective Action Plan. This Plan should identify the sources of pollutant(s) causing the exceedance, proposed control measures, and the expected discharge quality once the Plan is implemented. It is expected that the Phase II Corrective Action Plan will focus on Preventative Measures identified above. If necessary, the facility shall select and design an advanced treatment system or an equivalent treatment system to treat the design volume from exposed industrial areas. All proposals for advanced treatment systems or other equivalent treatment systems shall be submitted to the Regional Board staff for approval and shall be implemented within 90 days of approval by Board staff. The treatment systems shall be designed to treat runoff from at least the 95$^{th}$ percentile storm event.

(d) Within 90 days of approval of the Phase II Corrective Action Plan, the Permittee shall implement the Plan.

(3) ***Phase III Requirements***: Phase III includes development and implementation of a Phase III Corrective Action Plan and is not needed if none of the triggers has been exceeded after implementation of Phase II, above.

(a) Annually, each Permittee that is in Phase II of Option 1 shall assess the water quality monitoring data. If no triggers have been exceeded, Phase III actions described below are not necessary.

(b) If the assessment in Paragraph (a), above, indicates that any trigger has been exceeded, the Permittee shall develop and submit for Regional Board staff approval, a Phase III Corrective Action Plan within one month for Phase II exceedance determinations. This Plan shall include an evaluation of the existing treatment controls and operation and maintenance procedures to improve system performance. The Plan shall also include additional reasonable source control measures that can be implemented to improve quality of storm water runoff from the site and a time schedule for implementing the proposed corrective actions. The approved Phase III Corrective Action Plan, when fully implemented, will meet the BAT/BCT effluent limitations and constitutes a water-quality based effluent limitation as per 40 CFR §122.44(k). The Permittee will be deemed to be in compliance with the BAT/BCT effluent limitations once the approved Phase III Corrective

Action Plan is fully implemented. If the NALs are still exceeded after a Phase III Corrective Action Plan has been approved and implemented, the discharger is required to reevaluate the Corrective Action Plan and propose modifications to the plan which requires additional approval by the Executive Officer.

(4) ***Development of Sector-Specific Technology-Based NELs***: Based on data generated from the treatment technology evaluations conducted under the auspices of the Metal Recyclers Water Quality Standards Committee, the Regional Board may consider establishing technology-based NELs. After the adoption of Scrap Metal Permit Order No. R8-2012-0012, the Committee disbanded. This Permit may be reopened to incorporate technology-based NELs developed through this process or by the USEPA.

**2. Option 2: Non-Phased Approach**

All discharges under Option 2 shall be in compliance with the water quality-based numeric effluent limitations in Table 1b, below.

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**Table 1b: Water Quality-Based Numeric Effluent Limits for Option 2[22]**
(The effluent limits for zinc, lead, copper, and cadmium are hardness dependent. Hardness of a receiving water should be determined for each site.)

| Item No. | Constituent[23] | Units | Effluent Limit (Annual Average)[24] |
|---|---|---|---|
| 1 | pH | pH Units | < 6.5 or > 8.5[25] |
| 2 | Specific Conductance | µmhos/cm or µsiemen/cm | 2000[26] |
| 3 | Zinc (total recoverable) | micrograms/liter | 120[27] |
| 4 | Lead (total recoverable) | micrograms/liter | 65[27] |
| 5 | Copper (total recoverable) | micrograms/liter | 13[27] |
| 6 | Cadmium (total recoverable) | micrograms/liter | 4.3[27] |

## F. SPECIAL PROVISIONS FOR DISCHARGES TO IMPAIRED WATERS (EXISTING FACILITIES)

1. Discharges from Facilities with an Assigned Waste Load Allocation: The SWPPP for all discharges from a facility regulated under this Order shall be designed to comply with the wasteload allocations as per the approved TMDLs provided that the TMDL includes a wasteload allocation for the regulated facility[28]. The SWPPP shall document specific control measures for the listed pollutant, implementation schedules for the control measures and design and other technical details to show how the proposed measures are designed to meet the wasteload allocations. The monitoring program in the SWPPP shall document specific monitoring requirements for the listed pollutant to verify that the control measures are effective in meeting the wasteload allocations by the dates specified in the approved TMDLs. TMDL information that was current at the time of this permit's adoption is listed in Attachment B.

2. Discharges to 303(d) listed Waterbodies without an Approved TMDL: The SWPPPs for facilities that discharge into 303(d) listed waterbodies[29] shall be designed to eliminate or control the discharge of the listed pollutant* and the SWPPP shall document the control measures. Any discharge from the regulated facility shall not contain the listed pollutant in

[22] These NELs become effective on December 19, 2018 for those facilities option for Option 2.
[23] pH and specific conductance shall be measured in the field as soon as a sample is collected. Zinc, lead, copper, and cadmium are to be analyzed by a State-certified laboratory.
[24] Annual average: Geometric mean of all analytical results obtained during the reporting period (July 1 to June 30); see footnote 25 for pH.
[25] Based on Basin Plan objectives. For pH, the annual average shall be an arithmetic mean (geometric mean is not appropriate for log transformed data such as pH).
[26] Based on Basin Plan prohibition.

[27] Based on the California Toxics Rule
[28] Santa Ana Region Total Maximum Daily Loads webpage is available: https://www.waterboards.ca.gov/santaana/water_issues/programs/tmdl/index.html
[29] 2016 303(d) list is available at: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml

quantities that would cause or contribute to an exceedance of water quality standards* for the listed pollutant. The monitoring program shall include the listed pollutant*. 303(d) listed waterbodies that were current at the time of this permit's adoption are listed in Attachment B.

## G. SPECIAL PROVISIONS FOR DISCHARGES TO IMPAIRED WATERS (NEW DISCHARGERS)

New Dischargers proposing to discharge to a 303(d) listed waterbody are not eligible for coverage under this Order unless the following conditions are met:

1. The facility provides verifiable documentation indicating that the listed pollutant will not be present in the discharges from the facility. This information shall be documented in the SWPPP.

2. The facility has implemented proper control measures to eliminate all exposure of the listed pollutant and documented the control measures in the SWPPP.

3. The facility provides verifiable information to indicate that the discharges from the facility will meet the in-stream water quality standard at the point of discharge to the waterbody or provides technical information to show that there is excess wasteload allocation available in the waterbody to allow such discharges without violating the approved TMDLs/ wasteload allocations.

## H. SPECIAL PROTECTIONS FOR ENDANGERED AND THREATENED SPECIES

Storm water discharges or authorized non-storm discharges from facilities regulated under this Order shall not adversely affect any species that are federally-listed as endangered or threatened either under the California Endangered Species Act (Fish and Game Code §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544).

## I. RECEIVING WATER LIMITATIONS

1. Storm water discharges or authorized non-storm water discharges shall not cause or contribute to a violation of water quality standards* (water quality objectives* and beneficial uses*) contained in the Basin Plan, Statewide Water Quality Control Plans, the National Toxics Rule, and/or the California Toxics Rule.

2. Storm Water discharges or authorized non-storm water discharges to waters of the U.S. or to waters of the State, including groundwater, shall not adversely impact human health or threaten to cause pollution or nuisance.

## J. OBTAINING PERMIT COVERAGE

All industrial facilities within this Regional Board's jurisdiction and engaged in scrap metal recycling operations with an SIC code of 5093 shall obtain coverage under this Order.

1. Coverages: This Order includes requirements for two types of permit coverage, Notice of Intent coverage and No Exposure coverage.

   a) Notice of Intent (NOI) coverage:

      (1) Permittees that discharge storm water associated with industrial activity to waters of the United States are required to meet all applicable requirements of this Order.

(2) The Permittee shall register for coverage under this Order by certifying and submitting the following Permit Registration Documents (PRDs) via SMARTS[30].
   (a) A completed NOI and signed certification statement;
   (b) A copy of a current site map from the Storm Water Pollution Prevent Plan (SWPPP);
   (c) A SWPPP.

(3) The Permittees shall submit the appropriate annual fee in accordance with California Code of Regulations, title 23, section 2200 et seq. 5.

b) No Exposure Certification (NEC) coverage:

(1) If all industrial activities are carried out under a roof without exposure and if materials, processes, wastes, finished products, byproducts, and intermediate products are not exposed to storm water, Permittees shall certify and submit a No Exposure Certification via SMARTS.

(2) Initial submission of NECs shall include analytical results of runoff from each discharge point of the facility from two storm events. If initial samples could not be collected at the time of filing a NEC, the application may be kept pending for up to a year until analytical data is received. At a minimum, the analysis shall include pH, turbidity, specific conductance, oil and grease and the parameters listed in Table 1a, Numeric Action Levels.

(3) The NEC must be renewed by June 30 of each year. The renewal application submitted for every 5th year shall also include an analysis of storm water runoff from each discharge point of the facility for one storm for the constituents listed in Table 1a.

(4) The Permittee shall submit the appropriate annual fee in accordance with California Code of Regulations, title 23, section 2200 et seq. 5.

2. Schedule for Submitting PRDs

a) Existing Dischargers Under the Previous Permit:

(1) All scrap metal facilities currently regulated under Order No. R8-2012-0012 shall re-certify under this Order within 90 days of adoption of this Order. The recertification shall be done electronically via SMARTS by the LRP of the facility seeking coverage. The LRP shall submit and certify all PRDs including the NOI, facility-specific SWPPP, and a site map.

(2) Existing Dischargers that do not register for NOI or NEC coverage within 90 days of adoption of this Order may have their permit coverage administratively terminated.

(3) Existing Permittees shall continue to comply with the SWPPP requirements in Order R8-2012-0012 up to but no later than 90 days after the adoption of this Order.

[30] SMARTS webpage: http://smarts.waterboards.ca.gov

b) New Dischargers:

(1) All new facilities shall upload the PRDs via SMARTS, as described above, at least 30 days prior to start of operations at the facility. If the new facility elects to comply with Option 2, compliance with the water quality-based NELs specified in Table 1.b is required upon start of facility operations. If the facility elects to comply with Option 1, compliance with Phase I requirements (except REAP) is required within 30 days of start of facility operations.

3. General PRD Requirements

a) SWPPP: Fully implement the SWPPP to control/eliminate the discharge of pollutants from the facility.

b) Site Maps:

(1) The Discharger shall prepare a site map that includes notes, legends, a north arrow, and other data as appropriate to ensure the map is clear, legible, and understandable;

(2) The facility boundary, storm water drainage areas within the facility boundary, and portions of any drainage area impacted by discharges from surrounding areas. Include the flow direction of each drainage area, on-facility surface water bodies, areas of soil erosion, and location(s) of nearby water bodies (such as rivers, lakes, wetlands, etc.) or municipal storm drain inlets that may receive the facility's industrial storm water discharges and authorized NSWDs;

(3) Locations of storm water collection and conveyance systems, associated discharge locations, and direction of flow. Include any sample locations if different than the identified discharge locations;

(4) Identification of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures;

(5) Locations where materials are directly exposed to precipitation and the locations where identified significant spills or leaks have occurred; and,

(6) Areas of industrial activity subject to this General Permit. Identify all industrial storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and material reuse areas, and other areas of industrial activity that may have potential pollutant sources.

c) Any information provided to Water Board by the Permittee shall comply with the Homeland Security Act and other federal law that addresses security in the United States; any information that does not comply should not be submitted in PRDs. The Permittee must provide justification to the Regional Board regarding redacted information within any submittal.

d) Dischargers may redact trade secrets from information that is submitted via SMARTS. Dischargers who certify and submit redacted information via SMARTS must include a general description of the redacted information and the basis for the redaction in the version that is submitted via SMARTS. Dischargers must submit complete and unredacted versions of the information that are clearly labeled "CONFIDENTIAL" to the Regional Board within 30 days of the submittal of the redacted information. All information labeled "CONFIDENTIAL" will be maintained by the Water Boards in a separate, confidential file.

4. Industrial Activities not Covered under this Order

Permit coverage is not required for facilities that do not discharge storm water associated with industrial activities to surface waters. If the discharge is to a retention facility, it shall have the capacity to hold at least the volume of runoff from a 100-year, 24-hour storm event. The design details of the retention facility shall be certified by a professional engineer and shall be submitted to the Regional Board. The Regional Board may issue individual waste discharge requirements for such facilities.

### K. TERMINATING PERMIT COVERAGE

1. A Notice of Termination (NOT) shall be certified and submitted via SMARTS upon: (1) cessation of all industrial activities at the facility and the site is no longer a threat to water quality; (2) cessation of discharges to the MS4 and surface waters; (3) operation of the facility has been transferred to another entity and the new entity has taken responsibility for the facility (new entity has uploaded PRDs; (4) change in location of the facility; or (5) obtaining coverage under an individual permit.

2. Where there is a change in the facility location, the Permittee shall certify and submit new PRDs via SMARTS. When ownership changes, the prior Discharger (seller) must inform the new Permittee (buyer) of the Permit applications and regulatory coverage requirements. The new Permittee must certify and submit new PRDs via SMARTS to obtain coverage under this Order.

3. Permittees shall provide additional information supporting an NOT, or revise their PRDs via SMARTS, upon request by the Regional Board.

## IV. MONITORING AND REPORTING REQUIREMENTS

Each Permittee shall comply with the monitoring and reporting requirements specified under Monitoring and Reporting Program.

## V. SPECIAL PROVISIONS

All documents submitted as per requirements specified in this Order, including the PRDs, shall be posted on the website at least for a thirty-day comment period. If significant comments are received which cannot be resolved by Regional Board staff, a public hearing on that item shall be scheduled at a Regional Board meeting.

## VI. PERMIT MODIFICATION

A. Following appropriate public notice, and in accordance with 40 CFR § 122.41(f), this Order may be modified, revoked or reissued prior to its expiration date for the following reasons:

1. To address significant changes in conditions identified in the reports required by the Regional Board which were unknown at the time of the issuance of this Order;

2. To incorporate applicable requirements of statewide water quality control plans adopted by the State Board or any amendments to the Basin Plan approved by the Regional Board, the State Board and, if necessary, by the Office of Administrative Law and the USEPA;

3. To comply with any applicable requirements, guidelines, or regulations issued or approved under the Clean Water Act, if the requirements, guidelines, or regulations contain different conditions or additional requirements than those included in this Order; or,

4. To incorporate any requirements imposed upon the Permittees through the TMDL process or to amend NELs and NALs as a result of the treatment technology evaluation required under this Order.

B. The filing of a request by the Permittees for modification, revocation and re-issuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any conditions of this Order.

## VII. PERMIT EXPIRATION AND RENEWAL

A. This Order shall serve as an NPDES Permit pursuant to section 402(p) of the Clean Water Act, or amendments thereto, and shall become effective ten days after the date of its adoption provided the Regional Administrator of the USEPA has no objections. If the Regional Administrator objects to its issuance, the Permit shall not become effective until such objection is withdrawn.

B. This Order expires on October 18, 2023. If this Permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with California Code of Regulations, title 23, section 2235.4 and 40 CFR §122.6, and will remain in force and effect.

## VIII. STANDARD PROVISIONS

A. Duty to Comply

1. The Permittee shall comply with all conditions of this Permit. Any Permit noncompliance constitutes a violation of the CWA and the CWC and is grounds for enforcement action and/or removal from Permit coverage.

2. Any non-compliance with any of the requirements of this Order constitutes a violation of the CWA and the CWC. Any failure to take appropriate corrective actions as specified in this Order is also a violation of this Order.

3. The Permittee shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Permit has not yet been modified to incorporate the requirement.

B. Duty to Reapply

Dischargers that wish to continue an activity regulated under this Sector-Specific Scrap Metal Permit after the expiration date of this Sector-Specific Scrap Metal Permit shall apply for and

obtain authorization from the Santa Ana Regional Water Quality Control Board as required by the new permit once it is issued.

C. General Permit Actions

1. This General Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not annul any General Permit condition.

2. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this Permit, this Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the Permittees so notified.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

E. Duty to Mitigate

The Permittee shall take all responsible steps to minimize or prevent any discharge, which has a reasonable likelihood of adversely affecting human health or the environment.

F. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain any facilities and systems of treatment and control (and related equipment and apparatuses) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a Permittee when necessary to achieve compliance with the conditions of this Permit.

G. Property Rights

This Permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor does it authorize any infringement of Federal, State, or local laws or regulations.

H. Duty to Provide Information

The Permittee shall provide to the Regional Board, State Board, or USEPA, within a reasonable time, any requested information to determine compliance with this Permit. The Permittee shall also furnish, upon request, copies of records that are required to be kept by this Permit.

I. Inspection and Entry

The Permittee shall allow Regional Board staff, State Board staff or USEPA staff, and/or, in the case of facilities which discharge through a municipal separate storm sewer, an authorized representative of the municipal operator of the separate storm sewer system receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the Permittee's premises at reasonable times where a regulated industrial activity is being conducted or where records must be kept under the conditions of this Permit;

2. Access and copy at reasonable times any records that must be kept under the conditions of this Permit;

3. Inspect at reasonable times the facility; and,

4. Take pictures, collect samples, collect other evidence, or monitor at reasonable times for the purpose of ensuring Permit compliance.

J. Monitoring and Record Keeping

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

2. Records of monitoring information shall include:

   a) The date, exact place, and time of sampling or measurements;
   b) The date(s) analyses were performed;
   c) The individual(s) who performed the analyses;
   d) The analytical techniques or methods used; and,
   e) The results of such analyses.

3. The Permittee shall maintain a paper or electronic copy of all storm water monitoring information, copies of all reports (including Annual Reports), SWPPPs, and all other required records, including a copy of this Permit, for a period of at least five years from the date generated or date submitted, whichever is later. These records shall be available at the industrial facility.

4. Upon written request by USEPA or the municipal agency within whose jurisdiction the facility lies, Permittees shall provide written or electronic copies of their Annual Reports to the USEPA or the municipal agency within 10 working days from receipt of the request.

K. Electronic Signature and Certification Requirements

1. All Permit Registration Documents (PRDs) for NOIs or NECs shall be electronically signed, certified, and submitted via SMARTS by the Discharger's LRP. All other reports or documents may be certified and submitted via SMARTS by the LRP or by their designated DAR.

2. Each LRP or DAR must sign and submit the SMARTS Electronic Authorization Form with an original signature to the State Board. The SMARTS Electronic Authorization form includes the following statement:

"My signature on this form also certifies that I agree my user ID, password, and response to security challenge questions constitute my electronic signature and any information I indicate I am electronically certifying contains my signature. I understand that I am legally bound, obligated, or responsible by use of my electronic signature as much as by a handwritten signature.

I also certify that my electronic signature is for my own use that I will keep confidential and protect it from any other person's use, including subordinates and consultants. If I suspect my electronic signature has been lost, stolen, or otherwise compromised, including discrepancies in data and reports, I will contact the Water Boards within 24-hours of discovery."

3. When a new LRP or DAR is designated, the Discharger shall ensure that the appropriate revisions are made via SMARTS.

4. Documents certified and submitted via SMARTS by an unauthorized or ineligible LRP or DAR are invalid.

L. Certification

Any person signing documents under Section VIII.K, above, shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

M. Anticipated Noncompliance

The Permittee shall give advanced notice to the Regional Board and local storm water management agency of any planned changes in the industrial activity, which may result in noncompliance with Permit requirements.

N. Penalties for Falsification of Reports

Section 309(4) of the CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this Permit, including reports of compliance or noncompliance shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years or by both.

O. Oil and Hazardous Substance Liability

Nothing in this Permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject to under section 311 of the CWA.

P. Severability

The provisions of this Permit are severable; and, if any provision of this Permit or the application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby.

Q. Penalties for Violations of Permit Conditions

1. Section 309 of the CWA provides significant penalties for any person who violates a permit condition implementing sections 301, 302, 306, 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any such section in a permit issued under section 402. Any person who violates any permit condition of this Permit is subject to a civil penalty not to exceed $37,500 per calendar day of such violation, as well as any other appropriate sanction provided by Section 309 of the CWA.

2. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties, which in some cases are greater than those under the CWA.

R. Transfers

When a transfer of operator occurs, or a facility is relocated, new PRDs must be electronically submitted and approved prior to the operator transfer, or prior to the first operation day for a relocated facility.

S. Continuation of Expired Permit

This Permit continues in full force and effect until a new Permit is issued or the Regional Board rescinds this Permit. Only those Permittees authorized to discharge under the expiring Permit are covered by the continued Permit.

T. Other Federal Requirements

All other requirements of 40 CFR §§ 122.41 and 122.42 are incorporated into this Permit by reference.

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**MONITORING AND REPORTING PROGRAM**
**NPDES NO. CAG618001**
**for**
**SCRAP METAL FACILITIES WITHIN THE SANTA ANA REGION**

## I. GENERAL

A. Each facility regulated under this Order shall develop and implement a Monitoring and Reporting Program (MRP) as specified in this section. The Permittee shall develop a MRP in accordance with the requirements of this MRP prior to uploading PRDs via SMARTS.

B. The MRP shall be in compliance with the SWAMP Quality Assurance Program Plan (QAPP[31]) guidelines. Data collection, field and laboratory protocol, measurements, sampling, analysis, and quality assurance/quality control shall be compatible with the SWAMP QAPP.

C. The MRP shall be implemented within 30 days of uploading the PRDs.

D. The MRP shall be incorporated into the SWPPP.

E. The MRP shall consist of:

1. Preparation for Sampling: Identify individuals involved in sample collection, sampling frequency, sampling locations, sample collection bottles, and equipment.

2. Conduct Sampling: Procedures for sample collection, chain-of-custody, sample preservation and handling, delivery to the laboratory. Field measurements for pH, conductivity and turbidity and laboratory analysis for the other constituents listed in Table 2, below.

3. Evaluation of Sample Results: Assessment of data.

4. Record Keeping and Reporting: Compare the results with the numeric action levels or numeric effluent limits (Table 1a or 1b of the Permit), and report the results.

F. Identify the individual(s) responsible for MRP development and implementation. The individual(s) responsible for MRP development may include the:

1. Project Manager: The Project Manager is responsible for all aspects of the monitoring program, including organizing sampling and coordinating with the contract laboratory.

2. Certified Person: The Certified Person will be responsible for sample collection, handling, and chain-of-custody through delivery to the laboratory. They must receive at least one hour of classroom training by a certified laboratory or equivalent training provided by the Regional Board. The certification program is an exam based training. For this certification program, the Certified Person is required to retake the exam every permit term.

G. The MRP shall identify any additional constituents for analyses (in addition to Table 2 included in this MRP).

[31] The State Water Resources Control Board's SWAMP QAPP is available here: https://www.waterboards.ca.gov/water_issues/programs/swamp/qapp/swamp_QAPrP_2017_Final.pdf

H. A facility's LRP must ensure the portions of the MRP requiring site-specific information are complete and correct, and the Plan is fully implemented.

I. Revisions of the MRP are appropriate to ensure that the Permittees are in compliance with requirements and provisions contained in this Order. Revisions may be made under the direction of the Executive Officer at any time during the term of this Order, and may include redistribution of monitoring resources to address TMDL needs, a reduction or increase in the number of parameters to be monitored, the frequency of monitoring, or the number and size of samples collected.

J. All sample collection, handling, storage, and analysis shall be in accordance with 40 CFR Part 136 (latest edition) "*Guidelines Establishing Test Procedures for the Analysis of Pollutants*," promulgated by the USEPA, the guidance being developed by the State Board pursuant to Water Code section 13383.5, or other methods which are more sensitive than those specified in 40 CFR § 136 and approved by the Executive Officer, or methods documented in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP).

K. The Executive Officer is authorized to allow the Permittees to participate in statewide, national, or other monitoring programs in lieu of or in addition to this monitoring program.

L. Permittees are required to participate in Individual Monitoring Programs which will be referenced and described in this MRP.

M. All monitoring efforts shall conform to the same quality assurance, data management, validation, and verification standards for Individual Monitoring Programs.

N. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both [40 CFR § 122.41(j)(5)].

O. All chemical and bacteriological analyses shall be conducted at a laboratory certified for such analyses by an appropriate governmental regulatory agency. In addition, field measurement is required for pH, turbidity, and specific conductance.

P. For priority toxic pollutants that are identified in the California Toxics Rule (CTR) (65 Fed. Reg. 31682), the Minimum Levels (MLs) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) shall be used for all analyses, unless otherwise specified.

Q. This MRP specifies the minimum parameters to be monitored. The Permittees are encouraged to include additional parameters based on site-specific conditions.

R. The detection limits for the metals analyses shall be low enough to allow for a direct comparison to the metal's criteria in the California Toxics Rule.

S. All monitoring data and monitoring locations shall be entered into SMARTS.

T. The monitoring and reporting period is from July 1 to June 30.

U. For priority toxic pollutants, if the Permittees can demonstrate that a particular Minimum Level (ML) is not attainable, in accordance with procedures set forth in 40 CFR § 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure (assuming that all the method specified sample weights, volumes, and processing steps have been followed) may be used instead of the ML listed in Appendix 4 of the State Implementation Plan or SIP. The Permittee must submit documentation from the laboratory to the QA Officer for approval prior to utilizing a ML that is not consistent with the MLs in the SIP or as specified in Table 3, below.

V. The surrogate parameters or indicators of water quality selected for monitoring shall be representative of the discharges being analyzed.

## II. OBJECTIVES

A. The overall goal of this monitoring program is to develop reliable data to support the development of an effective storm water pollution control program that focuses resources on the priority list of pollutants of concern for scrap metal facilities. The following are the major objectives:

1. To provide data to support the development of an effective control mechanism for scrap metal facilities.

2. To determine water quality status, trends, and pollutants of concern associated with storm water runoff from scrap metal facilities and their impact on the beneficial uses of the receiving waters. This includes determining current conditions in the receiving waters including the extent and magnitude of any impairments, and relative contribution from scrap metal facilities to this impairment.

3. To assist in identifying potential pollutants from scrap metal facilities and external sources (e.g., any atmospheric deposition, contaminated sediments, etc).

4. To characterize pollutants in storm water runoff from scrap metal facilities and to assess the influence of these pollutants on receiving water quality.

5. To evaluate the effectiveness of existing control measures, including an estimate of pollutant reductions achieved by the treatment and source control BMPs implemented by the Permittees.

6. To determine a cost-effective treatment control technology for treating storm water runoff from scrap metal facilities.

B. The Regional Board recognizes that program modifications may be necessary to attain these objectives. The Executive Officer is hereby authorized to evaluate and to determine adequate progress toward meeting each objective and to make any modifications to the monitoring and reporting program.

## III. INDIVIDUAL MONITORING PROGRAM

### A. GENERAL

All new Permittees shall develop and implement a monitoring program as specified in this MRP prior to start of industrial activities at the site.

B. **COMPONENTS OF AN INDIVIDUAL MONITORING AND REPORTING PROGRAM**

1. Each Permittee shall develop a site-specific monitoring plan.

2. Each Permittee shall identify a sufficient number of individuals who are properly trained and certified in sample collection, preservation and handling protocol. The individual(s) certified to sample must have received at least one hour of classroom training provided by a certified laboratory in sample collection, sample preservation, sample handling, quality assurance and quality control protocols. Each laboratory providing such training shall provide a certificate of completion only after testing the participants understanding of the protocols for sample collection, sample preservation, sample handling, quality assurance and quality control. Proof of such training, such as a certificate of completion from the certified laboratory, shall be included in the SWPPP. The Regional Board also provides a certification program for Certified Person's training. This certification program is an exam based training in which the individual must retake the exam every permit term. A SM-QSD or a SM-QSP or other persons with appropriate training and approved by the Executive Officer could also be considered as a person certified to sample.

3. Sample collection, preservation, and handling shall be the responsibility of the person certified to sample.

4. The MRP shall identify each discharge location, sampling frequency, sample collection equipment and special requirements, sample preservation methods, chain-of-custody forms and procedures, all handling protocols and methods for delivery of samples to the certified laboratory.

5. The MRP shall identify the certified laboratory that will conduct the analysis. The list of parameters to be analyzed shall include the parameters listed in Table 2 and any other potential pollutants present at the site.

## IV. MONITORING REQUIREMENTS

A. <u>Visual Inspections</u>

1. Each month a SM-QSP shall conduct visual inspections of the industrial areas of the permitted facility and record the findings in a permanent log.

2. The monthly visual inspections shall be conducted at least 15 days apart.

3. The SM-QSP shall inspect the facility for the following (but not limited to):

   a) The presence of prior, current, or potential authorized or unauthorized non-storm water discharges, their sources, and associated BMPs; and,

   b) Outdoor industrial equipment, industrial activities, storage areas, and all other potential sources of pollutants.

4. The recorded information of the visual inspection shall include the name of the individual conducting the inspection, date and time, weather conditions, locations observed, and findings regarding any discharges from the facility. Findings regarding discharges may include authorized or unauthorized non-storm water discharges, oil stains, tracking from the site, spills or leaks, debris or trash, illegal discharges, and with respect to any discharge from the site (including storm water) oil sheen, discoloration, turbidity, foam, trash, debris or any other floating or suspended

materials in any runoff from the site and any other activity that could be a source of pollutants in runoff from the site.

5. If no significant violations are noted during four consecutive inspections (e.g., no unauthorized storm water discharges, has implemented good housekeeping practices, no oil sheens on storm water runoff, etc.), the inspection frequency may be reduced, with approval from the Executive Officer, to quarterly based on a certification from the SM-QSP that the minimum BMPs are fully implemented at the site and the site conditions do not warrant monthly inspections (at least one of these inspections shall be conducted during a storm event that produces a runoff).

6. Prior to any predicted storm event and as part of REAP*, inspect all BMPs, housekeeping practices, and treatment controls to ensure that they are properly maintained and in good working condition.

B. Runoff Sampling and Analysis

1. Each permitted facility shall collect at least four samples of runoff per year from qualifying storm events[32] from each discharge point. If storm water associated with industrial activities is discharged into an onsite system (percolation basins, infiltration gallery, etc.) samples must also be collected from each of those discharge points. Turbidity analysis is not required for discharges to onsite retention or percolation systems.

2. The Discharger shall collect and analyze storm water samples from two qualifying storm events within the first half of each reporting year from July 1 to December 31, and two qualifying storm events within the second half of each reporting year from January 1 to June 30.\

3. Samples shall be collected as close as possible to the onset of discharge from a qualifying storm event.

4. Permittees need not sample outside of regular business hours or during unsafe conditions.

5. All samples collected shall be representative of storm water associated with industrial activities*. Samples shall be collected at the end of the storm water conveyance system (conveyance for storm water associated with industrial activities*) before it comingles with any other flows. For direct discharges to waters of the U.S., samples may be collected within 10 feet of the discharge point directly downstream from the discharge.

6. The samples shall be analyzed for the constituents in Table 2, at a State-certified laboratory (with the exception of pH, turbidity, and specific conductance which shall be analyzed in the field).

7. Unless otherwise approved by the Executive Officer, the test methods in Table 3 must be used and the minimum levels specified below (Table 3) shall be achieved for the laboratory analysis for each of the constituents.

C. Sampling and Analysis Reduction

If a Permittee is in full compliance with the sampling and analysis requirements specified above (collected the required number of samples within the specified time period and has analyzed for all the listed parameters), the visual inspections have not identified any violations, and the analytical

[32] A qualifying storm event is defined as a precipitation even that produces a discharge for at least one drainage area and is preceded by 48 hours with no discharge from any drainage area.

results have not exceeded any of the triggers specified in this Permit for NELs and NALs for at least two consecutive years, the Permittee may request for a reduction in the sampling and analysis frequencies. Only once the reduction request is approved by the Executive Officer, can it be implemented by the discharger. Approved reductions can be revoked by the Executive Officer based on future NEL or NAL exceedances, permit violations, or inadequate BMP implementation as identified by Regional Board staff.

**Table 2: Constituents, Sample Type, Frequency, and Analyzing Location**

| Constituents | Units | Type of Sample | Frequency | Analyzing Location |
|---|---|---|---|---|
| pH | pH Units | Grab | 4 times/year | Field |
| Turbidity[33] | NTUs | Grab | 4 times/year | Field |
| Specific Conductance | µmhos/cm | Grab | 4 times/year | Field |
| Oil and Grease | mg/L | Grab | 4 times/year | Laboratory |
| Total Petroleum Hydrocarbons | mg/L | Grab | 4 times/year | Laboratory |
| Zinc (total recoverable) | ug/L | Grab | 4 times/year | Laboratory |
| Lead (total recoverable) | ug/L | Grab | 4 times/year | Laboratory |
| Aluminum (total recoverable) | ug/L | Grab | 4 times/year | Laboratory |
| Copper (total recoverable) | ug/L | Grab | 4 times/year | Laboratory |
| Iron (total recoverable) | ug/L | Grab | 4 times/year | Laboratory |
| Cadmium (total recoverable) | ug/L | Grab | 4 times/year | Laboratory |
| Nickel (total recoverable) | ug/L | Grab | 4 times/year | Laboratory |
| Chemical Oxygen Demand | mg/L | Grab | 4 times/year | Laboratory |
| PCBs | ug/L | Grab | 1st year after permit adoption (first storm sample) | Laboratory |

Note – pH, turbidity, and specific conductance shall be measured in the field using a calibrated portable instrument as soon as a sample is collected.

Note – If the discharger fails to sample for PCBs in the first year after adoption of this permit, then they must sample for PCBs during the next qualifying storm event.

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[33] Turbidity analysis is not required for discharges to onsite retention or percolation systems.

**Table 3: Test Methods and Minimum Levels**

| Constituent | Units | Test Method | Minimum Level |
|---|---|---|---|
| pH | pH Units | EPA 9040/SM[34] 4500H or field test with a calibrated portable instrument | ±0.1 |
| Turbidity | NTUs | EPA 180.1/SM 2130B or field test with a calibrated portable instrument | 0.5 |
| Specific Conductance | µmhos/cm | EPA 120.1/SM 2510-B or field test with calibrated portable instrument | 1.0 |
| Oil and Grease | mg/L | EPA 1664-HEM | 5.0 |
| Total Petroleum Hydrocarbons | mg/L | EPA 1664-SGT-HEM or 8015B | 5.0 |
| Zinc (total recoverable) | ug/L | EPA 200.8 | 5.0 |
| Lead (total recoverable) | ug/L | EPA 200.8 | 1.0 |
| Aluminum (total recoverable) | ug/L | EPA 200.8 | 1.0 |
| Copper (total recoverable) | ug/L | EPA 200.8 | 1.0 |
| Iron (total recoverable) | ug/L | EPA 200.8 | 1.0 |
| Cadmium (total recoverable) | ug/L | EPA 200.8 | 1.0 |
| Nickel (total recoverable) | ug/L | EPA 200.8 | 1.0 |
| Chemical Oxygen Demand | mg/L | SM 5220C or SM 5220D | 10.0 |
| PCBs | ug/L | EPA 608 | 0.5 |

Note - If the minimum levels specified in the table above are higher than the effluent limits, the permittee will be deemed to be in compliance with the effluent limits if that constituent is not detected (ND) above the minimum level. If the data set includes a number of "NDs" and numerical values above ND, then the median value for the data set shall be considered. If the data set includes an even number of values and the median includes a "ND" and a numeric value, then the median shall be considered as ND.

## V. RECORD KEEPING REQUIREMENTS

A. All monitoring activities shall meet the following requirements:

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [40 CFR § 122.41(j)(1)]. Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored discharge, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality. Representative sampling also includes development of a testable hypothesis, appropriate site selection, applicable and accepted sampling methodologies, laboratory methods, and frequency of sampling.

2. The Permittees shall retain records of all monitoring information, including all calibration and maintenance of monitoring instruments, copies of all reports prepared as per this MRP and annual reports for a period of at least five years from the date of the sample, measurement, report, or application. This period may be extended by request of the Regional Board or USEPA at any time and shall be extended during the course of any unresolved litigation regarding this discharge [40 CFR § 122.41(j)(2), CWC § 13383(a)].

[34] SM = Standard Methods for the Examination of Water and Wastewater, 18th Edition

3. Records of monitoring information shall include [40 CFR § 122.41(j)(3)]:

   a) The date, exact place, and time of sampling or measurements;
   b) The date(s) analyses were performed;
   c) The individual(s) who performed the analyses;
   d) The analytical techniques or methods used; and,
   e) The results of such analyses.

4. Calculations for all effluent limitations which require averaging of measurements shall utilize geometric mean unless otherwise specified in this MRP [40 CFR § 122.41(l)(4)(iii)].

5. The Clean Water Act provides that any individual who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both [40 CFR § 122.41(k)(2)].

## VI. BMP/TREATMENT SYSTEM EVALUATION

A. All monitoring data shall be evaluated to determine compliance with the water quality standards in the receiving waters as per the procedure specified under Phases I, II, and III of the Permit. If water quality standards are not met, the source control BMPs, the housekeeping practices, and the treatment controls at the facility shall be evaluated to determine the need for additional controls.

B. The Permittees shall be responsible for the timely submittal of all reports including non-compliance reporting. All such submittals shall be certified by the LRP or DAR under penalty of perjury.

## VII. REPORTING REQUIREMENTS

A. Non-compliance Reporting

Within 24 hours of discovery, the Permittees shall provide oral or email notification to Regional Board staff (and to California Emergency Management Agency at 1-800-852-7550) of noncompliant discharges that are determined to pose an immediate threat to human health or the environment (e.g., an oil spill that could impact wild life, a hazardous substance spill where residents are evacuated, reportable quantities of hazardous substance spills defined in 40 CFR §§ 117 & 302, etc.). Following oral notification, a written report must be submitted to the Executive Officer within 10 days, detailing the nature of the non-compliance, any corrective action taken by the Permittee, other relevant information (e.g., past history of non-compliance, environmental damage resulting from the non-compliance). Further, incidences of noncompliance shall be recorded along with the information noted in the written report in the annual report.

B. Sampling Results

All sampling results, including any samples collected more frequently than the frequency specified in the Permit, shall be uploaded into SMARTS within 30 days of receipt of laboratory results.

C. Annual Reports

Each Permittee shall submit and certify an annual report in SMARTS. The Permittees shall be responsible for the timely submittal of the annual report. All such submittals shall be certified and submitted by the LRP or DAR under penalty of perjury. The annual report shall be submitted via SMARTS by August 1 of each year. At a minimum, the annual report shall include the following:

1. A summary and evaluation of all sampling and analysis results including any visual observations;

2. All additional BMPs or other corrective action methods implemented at the facility;

3. A summary of all compliance activities, including any new or proposed treatment controls; and,

4. Any major changes to any of the previously submitted SWPPP or MRP or other plans or programs.

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## ACRONYMS

**BAT** Best Available Technology Economically Achievable
**BCT** Best Conventional Pollutant Control Technology
**BMPs** Best Management Practices
**BOD** Biochemical Oxygen Demand
**BPJ** Best Professional Judgment
**CAFO** Confined Animal Feeding Operation
**Caltrans** California Department of Transportation
**CCR** California Code of Regulations (State Water Board regulations are in Title 23)
**CEQA** California Environmental Quality Act
**CFR** Code of Federal Regulations
**CTR** California Toxics Rule
**CWA** Clean Water Act
**CWC** California Water Code
**DAR** Duly Authorized Representative
**DEP** Data Entry Person
**ESA** Endangered Species Act
**LID** Low Impact Development
**LRP** Legally Responsible Person
**MRP** Monitoring and Reporting Program
**MS4** Municipal Separate Storm Sewer System
**NAL** Numeric Action Level
**NEC** No Exposure Certification
**NEL** Numeric Effluent Limit
**NOI** Notice of Intent
**NOT** Notice of Termination
**NPDES** National Pollutant Discharge Elimination System
**NPS** Nonpoint Source
**NTR** National Toxics Rule
**NURP** Nationwide Urban Runoff Program
**O & G** Oil and Grease
**POTW** Publicly Owned Treatment Works
**PRDs** Permit Registration Documents
**QA/QC** Quality Assurance/Quality Control
**QSE** Qualifying Storm Event
**RCRA** Federal Resource Conservation and Recovery Act
**REAP** Rain Event Action Plan
**RWQCB** Regional Water Quality Control Board
**SC** Specific Conductance
**SIC** Standard Industrial Classification
**SMARTS** Storm Water Multiple Application and Report Tracking System
**SM-QSD** Qualified SWPPP Developer
**SM-QSP** Qualified SWPPP Practitioner
**SWAMP** Surface Water Ambient Monitoring Program
**SWPPP** Storm Water Pollution Prevention Plan
**SWRCB** State Water Resources Control Board
**TDS** Total Dissolved Solids
**TMDL** Total Maximum Daily Load
**TSS** Total Suspended Solids
**USEPA** United States Environmental Protection Agency
**WDID** Waste Discharge Identification Number

**WDR** Waste Discharge Requirements
**WLA** Waste Load Allocation
**WQBEL** Water Quality Based Effluent Limitation
**WQO** Water Quality Objective
**WQS** Water Quality Standard

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## GLOSSARY

**All terms defined in the Clean Water Act, USEPA regulations and the California Water Code are incorporated into this Permit by reference.**

**95th Percentile Storm Event** – The 95th percentile storm event represents a precipitation amount which 95 percent of all storm events for the period of record do not exceed. In more technical terms, the 95th percentile storm event is defined as the measured precipitation depth accumulated over a 24-hour period for the period of record that ranks as the 95th percentile rainfall depth based on the range of all daily event occurrences during this period. (Also see Design Storm)

**Authorized Non-Storm Water Discharges** – Authorized non-storm water discharges include: uncontaminated condensate from air conditioners, coolers, and compressors and from the outside storage of refrigerated gases or liquids; uncontaminated groundwater or spring water; landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling; discharges from emergency firefighting activities (BMPs must be implemented to the extent practicable); irrigation drainage.

**Basin Plan** – Water Quality Control Plan developed by the Regional Board for the Santa Ana River Watershed.

**Beneficial Uses** – The uses of water necessary for the survival or well-being of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals. "Beneficial Uses" that may be protected against include, but are not limited to: domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Existing beneficial uses are uses that were attained in the surface or groundwater on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. "Beneficial Uses" are equivalent to "Designated Uses" under federal law. [California Water Code § 13050(f)]. Beneficial Uses for the Receiving Waters are identified in the Basin Plan.

**Best Available Technology (BAT)** – BAT is the acronym for best available technology economically achievable. BAT for toxic (generally materials contaminating the environment that cause death, disease, or birth defects in organisms that ingest or absorb them) and non-conventional pollutants; BAT is a term applied with regulations on limiting pollutant discharges with regard to the abatement strategy. BAT is the technology-based standard established by congress in CWA § 402(p)(3)(A) for industrial Permittees of storm water. Technology-based standards establish the level of pollutant reductions that Permittees must achieve, typically by treatment or by a combination of treatment and best management practices, or BMPs. For example, secondary treatment (or the removal of 85% suspended solids and BOD) is the BAT for suspended solids and BOD removal from a sewage treatment plant. BAT generally emphasizes treatment methods first and pollution prevention and source control BMPs secondarily. The best economically achievable technology that will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants is determined in accordance with regulations issued by the Environmental Protection Agency Administrator. Factors relating to the assessment of best available technology shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, non-water quality environmental impact (including energy requirements), and such other factors as the permitting authority deems appropriate.

**Best Conventional Technology (BCT)** – BCT is an acronym for Best Conventional Technology for conventional pollutants (generally conventional pollutants include: BOD, pH, suspended solids, coliform

bacteria, and oil and grease); BCT is the treatment techniques, processes and procedures, innovations, and operating methods that eliminate or reduce chemical, physical, and biological pollutant constituents.

**Best Management Practices (BMPs)** – BMPs are defined in 40 CFR § 122.2 as schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. In the case of municipal storm water permits, BMPs are typically used in place of numeric effluent limits.

**Best Professional Judgment (BPJ)** – The method used by permit writers to develop technology-based NPDES permit conditions on a case-by-case basis using all reasonably available and relevant data.

**Bioaccumulate** – The progressive accumulation of contaminants in the tissues of organisms through any route including respiration, ingestion, or direct contact with contaminated water, sediment, pore water, or dredged material to a higher concentration than in the surrounding environment. Bioaccumulation occurs with exposure and is independent of the tropic level.

**Bioassessment** – The use of biological community information to evaluate the biological integrity of a water body and its watershed. With respect to aquatic ecosystems, bioassessment is the collection and analysis of samples of the benthic macroinvertebrate community together with physical/habitat quality measurements associated with the sampling site and the watershed to evaluate the biological condition (i.e. biological integrity) of a water body.

**Biological Integrity** – Defined in Karr J.R. and D.R. Dudley. 1981. Ecological perspective on water quality goals. Environmental Management 5:55-68 as: "A balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of natural habitat of the region." Also referred to as ecosystem health.

**Caltrans** – California Department of Transportation.

**CEQA** – California Environmental Quality Act (Section 21000 et seq. of the California Public Resources Code).

**Chain of Custody (COC)** – Form used to track sample handling as samples progress from sample collection to the analytical laboratory. The COC is then used to track the resulting analytical data from the laboratory to the client. COC forms can be obtained from an analytical laboratory upon request.

**Clean Water Act Section (CWA) 402(p)** – [33 USC 1342(p)] is the federal statute requiring municipal and industrial Permittees to obtain NPDES permits for their discharges of storm water.

**Clean Water Act Section 303(d) Listed Water Body** – is an impaired water body in which water quality does not meet applicable water quality standards and/or is not expected to meet water quality standards, even after the application of technology-based pollution controls required by the CWA. The discharge of storm water to these water bodies by the scrap metal facilities can cause or contribute to violations of applicable water quality standards.

**Construction Site** – Any project, including projects requiring coverage under the Construction General Permit, that involves soil disturbing activities including, but not limited to, clearing, grading, disturbances to ground such as stockpiling, and excavation.

**Contamination** – As defined in the Porter-Cologne Water Quality Control Act, contamination is "an impairment of the quality of waters of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease." 'Contamination' includes any equivalent effect resulting from the disposal of waste whether or not Waters of the U.S. are affected.

**Criteria** – The numeric values and the narrative standards that represent contaminant concentrations that are not to be exceeded in the receiving environmental media (surface water, groundwater, sediment) to protect beneficial uses.

**CWA** – Federal Clean Water Act.

**CWC** – California Water Code.

**Debris** – Debris is defined as the remains of anything destroyed or broken, or accumulated loose fragments of rock.

**Deleterious Materials** – Substances that could produce a harmful or injurious effect.

**Design Storm** – This is the rainfall depth or intensity to which the treatment systems shall be designed. The Permit defines it as the 95$^{th}$ percentile storm event* for the area.

**Discharger** – The Legally Responsible Person (see definition) or entity subject to this General Permit.

**Duly Authorized Representative (DAR)** – A person who has responsibility for the overall operation of the regulated facility or activity, such as a person that is a manager, operator, superintendent, or another position of equivalent responsibility, or is an individual who has overall responsibility for environmental matters for the company. The authorization must be current (it has been updated to reflect a different individual or position) prior to any report submittals, certifications, or records certified by the Duly Authorized Representative.

**Effluent** – Any discharge of water either to the receiving water or beyond the property boundary controlled by the discharger.

**Effluent Limitations** – Means any restriction on quantities, discharge rates, and concentrations of pollutants which are discharged from point sources into Waters of the United States, waters of the "contiguous zone," or the ocean. (40 CFR §122.2)

**Environmentally Sensitive Areas (ESAs)** – Areas that include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Resources Control Board; water bodies designated with the RARE beneficial use in the Basin Plan (Water Quality Control Plan for the Santa Ana River Basin [1995] and amendments); areas designated as preserves or their equivalent under the Natural Communities Conservation Program (Multiple Species Habitat Conservation Plan, MSHCP) within the Cities and Counties of Orange, Riverside and San Bernardino; and any other equivalent environmentally sensitive areas which have been identified by a governmental organization.

**Erosion** – The process whereby material (such as sediment) is detached and entrained in water or air and can be transported to a different location. Chemical erosion involves materials that are dissolved and removed and transported.

**Facility** – A collection of industrial processes discharging storm water associated with industrial activity to locations outside the property boundary.

**Field Measurements** – Testing procedures performed in the field with portable field-testing kits or meters.

**GIS** – Geographical Information Systems

**Good Housekeeping BMPs** – BMPs designed to reduce or eliminate the addition of pollutants to industrial site runoff through control of pollutant sources with the implementation of proper handling/disposal practices, employee education, training and other actions.

**Grading** – The cutting and/or filling of the land surface to a desired slope or elevation.

**Hazardous Material** – Any substance that poses a threat to human health or the environment due to its toxicity, corrosiveness, ignitability, explosive nature or chemical reactivity. These also include materials named by the U.S. EPA to be reported if a designated quantity of the material is spilled into the waters of the United States or emitted into the environment.

**Illicit Discharge** – Any discharge to a municipal separate storm sewer that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term illicit discharge includes all non-storm water discharges except discharges pursuant to an NPDES permit, discharges that are identified in Section III, Authorized Non-Storm Water Discharges, of this Order, and discharges authorized by the Regional Board.

**Impaired Waterbody** – Section 303(b) of the CWA requires each of California's Regional Water Quality Control Boards to routinely monitor and assess the quality of waters of their respective regions. If this assessment indicates that Beneficial Uses are not being supported, then that waterbody must be listed under Section 303(d) of the CWA as an Impaired Waterbody.

**Industrial Area** – An area where industrial processes associated with the scrap metal industry are conducted on a regular or infrequent basis (these processes include, but are not limited to, material handling, disassembly, shearing, shredding, grinding, cleaning, melting, sorting, torching, cutting, baling and storage of equipment, refuse, and unprocessed and processed scrap metal).

**Isopluvial** – A line on a map drawn through geographical points having the same pluvial (rain, precipitation) index.

**Land Disturbance** – The clearing, grading, excavation, stockpiling, or other construction activity that results in the possible mobilization of soils or other pollutants into the MS4. This specifically does not include routine maintenance activity to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. This also does not include emergency construction activities required to protect public health and safety.

**Legally Responsible Person (LRP)** – A person, company, agency, or other entity that is the operator of the industrial facility covered by this General Permit. LRP eligibility is as follows:

a. For a corporation: by a responsible corporate officer. A responsible corporate officer means:

   i. A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function; or

   ii. The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated

facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively;

c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. This includes the chief executive officer of the agency or the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).

**Listed Pollutant** – A pollutant that is causing impairment of beneficial uses in waterbodies that are listed under section 303(d) of the CWA.

**Load Allocations (LA)** – Distribution or assignment of TMDL pollutant loads to entities or sources for existing and future nonpoint sources, including background loads.

**Low Impact Development (LID)** – A storm water management and land development strategy that combines a hydrologically functional site design with pollution prevention measures to compensate for land development impacts on hydrology and water quality. LID techniques mimic the site predevelopment site hydrology by using site design techniques that store, infiltrate, evapotranspire, bio-filter or detain runoff close to its source.

**Municipal Storm Water Conveyance System** – (See Municipal Separate Storm Sewer System or MS4).

**Municipal Separate Storm Sewer System (MS4)** – MS4 is an acronym for Municipal Separate Storm Sewer System. A Municipal Separate Storm Sewer System is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, natural drainage features or channels, modified natural channels, man-made channels, or storm drains): (i) Owned or operated by a State, city town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes; (ii) Designated or used for collecting of conveying storm water; (iii) Which is not a combined sewer; (iv) Which is not part of the Publicly Owned Treatment Works (POTW) as defined at 40 CFR § 122.2.

**National Pollutant Discharge Elimination System (NPDES) Permit** – A national program under section 402 of the Clean Water Act for regulation of discharges of pollutants from point sources to waters of the United States. Discharges of pollutants are illegal unless authorized by an NPDES permit.

**Non-Phased Approach** – The Metal Recyclers Water Quality Standards Committee recommended strict compliance with numeric effluent limits for those dischargers not opting for a phased compliance* strategy based upon an incremental increase in BMP implementation process designed to meet water quality standards.

**Non-Point Source Pollution (NPS)** – Non-point source refers to diffuse, widespread sources of pollution. These sources may be large or small, but are generally numerous throughout a watershed. Non-Point Sources include, but are not limited to sheet or surface flow from urban, agricultural, or industrial areas, roads, highways, construction sites, communities served by septic systems, recreational boating activities, timber harvesting, mining and livestock grazing areas. NPS pollution can occur year round any time rainfall, snowmelt, irrigation, or any other source of water runs over land or through the ground, picks up pollutants

from these numerous, diffuse sources and deposits them into rivers, lakes, and coastal waters or introduces them into groundwater.

**Non-Storm Water** – Non-storm water consists of all discharges to and from a storm water conveyance system that do not originate from precipitation events (i.e., all discharges from a conveyance system other than storm water). Non-storm water includes illicit discharges, prohibited discharges, and NPDES permitted discharges.

**Notice of Intent (NOI)** – A NOI is an application for coverage under the State or Regional Board issued Permits.

**Notice of Termination (NOT)** – Formal notice to the Regional Board or State Board of intent to terminate coverage under a Permit.

**Nuisance** – As defined in the Porter-Cologne Water Quality Control Act a nuisance is "anything which meets all of the following requirements: 1) Is injurious to health, or is indecent, or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. 2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. 3) Occurs during, or as a result of, the treatment or disposal of wastes."

**Numeric Action Level (NAL)** – A concentration limit for certain constituents used as a warning to evaluate if best management practices are effective. These levels are not considered as effluent limits.

**Numeric Effluent Limitations (NEL)** – A quantitative limitation on pollutant concentrations or levels to protect beneficial uses and water quality objectives of a water body.

**Order or Permit** – Order No. R8-2018-0069 (NPDES No. CAG618001)

**Permit Area** – Areas that are under the jurisdiction of the Santa Ana Regional Water Quality Control Board. These include north and northwestern portions of Orange County, north and western portions of Riverside County and western portions of San Bernardino County. See the Basin Plan for a detailed description of the Regional Board boundaries[35].

**Permit Registration Documents (PRDs)** – Include the Notice of Intent, Storm Water Pollution Prevention Plan, Site Map and the appropriate filing fee.

**Permittees** – Entities regulated under Order No. R8-2018-0069.

**Person** – A person is defined as an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof. [40 CFR § 122.2].

**pH** – An indicator of the acidity or alkalinity of water.

**Phased Approach** – The Metal Recyclers Water Quality Standards Committee recommended phased compliance strategy based upon an incremental increase in BMP implementation process designed to meet water quality standards.

**Point Source** – Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, runoff from concentrated animal

[35] http://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/index.shtml

feeding operations, landfill leachate collection systems, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

**Pollutant** – Any agent that may cause or contribute to the degradation of water quality such that a condition of pollution or contamination is created or aggravated. It includes any type of industrial, municipal, and agricultural waste discharged into water. The term "pollutant" is defined in section 502(6) of the Clean Water Act as follows: "The term 'pollutant' means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water." It has also been interpreted to include water characteristics such as toxicity or acidity.

**Pollution** – As defined in the Porter-Cologne Water Quality Control Act, pollution is "the alteration of the quality of the Waters of the U.S. by waste, to a degree that unreasonably affects either of the following: 1) The waters for beneficial uses; or 2) Facilities that serve these beneficial uses." Pollution may include contamination.

**Pollution Prevention** – Pollution prevention is defined as practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control, treatment, or disposal.

**Polycyclic Aromatic Hydrocarbon (PAH)** – are hydrocarbons that consist of fused aromatic rings. PAHs occur in oil, coal, and tar deposits, and are produced as byproducts of fuel burning (whether fossil fuel or biomass). PAHs are persistent, bioaccumulative, and toxic (PBT) pollutants. Though exposure usually occurs by breathing contaminated air, other sources include industrial processes, transportation, energy production and use, and disposal activities.

**Polychlorinated biphenyls (PCBs)** – are organic chlorine compounds consisting of chlorine atoms that attaches to the two benzene rings (biphenyl). Due to PCB's toxicity and classification as persistent organic pollutants, PCB production was banned by the United States Congress in 1976 and by the Stockholm Convention on Persistent Organic Pollutants in 2001.

**Publicly Owned Treatment Works (POTW)** – Wastewater treatment facilities owned by a public agency.

**Qualifying Storm Event (QSE)** – An event that meets the following criteria:

1. Occurs during facility operating hours;
2. Is a storm event that has produced runoff (0.1 inches or more of rainfall); and
3. Is a storm event that was preceded by two consecutive days of dry weather. Dry weather shall be defined as two consecutive days of combined rainfall of less than 0.1 inches as measured by an on-site rainfall measurement device.

**Receiving Waters** – Waters of the United States within the Permit area.

**Receiving Water Limitations** – Waste discharge requirements issued by the Regional Board typically include both: (1) "Effluent Limitations" (or "Discharge Limitations") that specify the technology-based or water-quality-based effluent limitations; and (2) "Receiving Water Limitations" that specify the water quality objectives in the Basin Plan as well as any other limitations necessary to attain those objectives. In summary, the "Receiving Water Limitations" provision is the provision used to implement the requirement of CWA section 301(b)(1)(C) that NPDES permits must include any more stringent limitations necessary to meet water quality standards.

**Reporting Period** – From July 1 through June 30; annual report covering this period is due on August 1 of each year.

**Runoff Control BMPs** – Measures used to divert run-on from offsite and minimize runoff from the site.

**Run-on** – Discharges that originate offsite and flow onto the property.

**Scrap Metal - Qualified SWPPP Developer (SM-QSD)** – Individual who is authorized to develop and revise SWPPPs.

**Scrap Metal - Qualified SWPPP Practitioner (SM-QSP)** – Individual assigned responsibility for non-storm water and storm water visual observations, sampling and analysis, and responsibility to ensure full compliance with the permit and implementation of all elements of the SWPPP, including the preparation of the annual compliance evaluation and the elimination of all unauthorized discharges.

**Sediment** – Soil, sand, and minerals washed from land into water. Sediment resulting from anthropogenic sources (i.e. human induced land disturbance activities) is considered a pollutant. This Order regulates only the discharges of sediment from anthropogenic sources and does not regulate naturally occurring sources of sediment. Sediment can destroy fish-nesting areas, clog animal habitats, and cloud waters so that sunlight does not reach aquatic plants.

**Significant Materials** – Includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERLCA); any chemical the facility is required to report pursuant to section 313 of Title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

**Source Control BMPs** – In general, activities or programs to educate the public or provide low cost non-physical solutions, as well as facility design or practices aimed to limit the contact between pollutant sources and storm water or authorized non-storm water. Examples include: activity schedules, prohibitions of practices, industrial area sweeping, facility maintenance, detection and elimination of illegal and unauthorized discharges, and other non-structural measures. Facility design (structural) examples include providing attached lids to trash containers, canopies for fueling islands, secondary containment, or roof or awning over material and trash storage areas to prevent direct contact between storm water and pollutants.

**Southern California Stormwater Monitoring Coalition (SMC)** – A coalition of Southern California storm water agencies and POTWs formed to investigate the impact of discharges to the ocean and other surface waters.

**Standard Industrial Classification (SIC) Code** – Four digit industry code, as defined by the US Department of Labor, Occupational Safety and Health Administration. The SIC Code is used to identify if a facility requires coverage under the Industrial Activities Storm Water Permits.

**State Board** – California State Water Resources Control Board

**Storm Water** – Per 40 CFR § 122.26(b)(13), means storm water runoff, snowmelt runoff and surface runoff and drainage.

**Storm Water Associated with Industrial Activities** – Storm water that has come in contact with or has the potential to carry pollutants from manufacturing areas; processing or raw material storage areas; industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling

sites, refuse sites; sites used for the application or disposal of process waste waters; sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas for raw materials, and intermediate and finished products and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water.

**Storm Water General Permits** – General Permit-Industrial (State Board Order No. 2014-0057DWQ, NPDES No. CAS000001), and General Permit-Construction (State Board Order No. 2009-0009-DWQ, as amended by Order No. 2010-0014-DWQ as amended by Order No. 2012-0006-DWQ NPDES No. CAS000002).

**Storm Water Pollution Prevention Plan (SWPPP)** – A plan developed to minimize and control the discharge of pollutants from the industrial site to storm water conveyance systems. The plan shall identify pollutant sources, control measures for each pollutant source, good housekeeping practices and employee training programs.

**Structural BMPs** – Physical facilities or controls that may include secondary containment, treatment measures, (e.g. first flush diversion, detention/retention basins, and oil/grease separators), run-off controls (e.g., grass swales, infiltration trenches/basins, etc.), and engineering and design modification of existing structures.

**Surface Water Ambient Monitoring Program (SWAMP)** – A unifying program that coordinates all water monitoring conducted by the State and Regional Boards. SWAMP monitoring helps achieve beneficial uses and examines the biological, physical, and chemical components in all waterbody types.

**Total Dissolved Solids (TDS)** – a measure of the total dissolved minerals in the water.

**Total Maximum Daily Load (TMDL)** – The TMDL is the maximum amount of a pollutant that can be discharged into a water body from all sources (point and non-point, with an added margin of safety) and still maintain water quality standards. Under Clean Water Act § 303(d), TMDLs must be developed for all water bodies that do not meet water quality standards after application of technology-based controls.

**TMDL Implementation Plan** – Component of a TMDL that describes actions, including monitoring, needed to reduce pollutant loadings and a timeline for implementation. TMDL implementation plans can include a monitoring or modeling plan and milestones for measuring progress, plans for revising the TMDL if progress toward cleaning up the waters is not made, and the date by which water quality standards will be met (USEPA Final TMDL Rule: Fulfilling the Goals of the CWA, EPA 841-F-00-008, July 2000).

**Total Suspended Solids (TSS)** – The measure of the suspended solids in a water sample includes inorganic substances, such as soil particles and organic substances, such as algae, aquatic plant/animal waste, particles related to industrial/sewage waste, etc. The TSS test measures the concentration of suspended solids in water by measuring the dry weight of a solid material contained in a known volume of a sub-sample of a collected water sample. Results are reported in mg/L.

**Toxicity** – Adverse responses of organisms to chemicals or physical agents ranging from mortality to physiological responses such as impaired reproduction or growth anomalies.

**Treatment Control BMPs** – Any engineered system designed and constructed to remove pollutants from urban runoff. Pollutant removal is achieved by simple gravity settling of particulate pollutants, filtration, biological uptake, media adsorption or any other physical, biological, or chemical process.

**Turbidity** – The cloudiness of water quantified by the degree to which light traveling through a water column is scattered by the suspended organic and inorganic particles it contains. The turbidity test is reported in Nephelometric Turbidity Units (NTU) or Jackson Turbidity Units (JTU).

**Uncontaminated Groundwater** – Groundwater that is not impaired by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease.

**Urban Runoff** – Urban runoff is defined as all flows in a storm water conveyance system and consists of the following components: (1) storm water (wet weather flows) and (2) authorized non-storm water discharges (dry weather flows).

**USEPA** – United States Environmental Protection Agency.

**Waste** – As defined in California Water Code § 13050(d), "waste includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal." Article 2 of CCR Title 23, Chapter 15 (Chapter 15) contains a waste classification system which applies to solid and semi-solid waste which cannot be discharged directly or indirectly to water of the state and which therefore must be discharged to land for treatment, storage, or disposal in accordance with Chapter 15. There are four classifications of waste (listed in order of highest to lowest threat to water quality): hazardous waste, designated waste, nonhazardous solid waste, and inert waste.

**Waste Discharge Identification (WDID)** – Identification number provided by the State when a Notice of Intent is filed.

**Waste Discharge Requirements (WDR)** – As defined in section 13374 of the California Water Code, the term "Waste Discharge Requirements" is the equivalent of the term "permits" as used in the Federal Water Pollution Control Act, as amended. The Regional Board usually reserves reference to the term "permit" to Waste Discharge Requirements for discharges to surface Waters of the U.S.

**Waste Load Allocations (WLA)** – WLA is the distribution or assignment of TMDL pollutant loads to entities or sources for existing and future point sources. Maximum quantity pollutants a Permittee of waste is allowed to release into a particular waterway, as set by a regulatory authority. Discharge limits usually are required for each specific water quality criterion being, or expected to be, violated.

**Water Quality Assessment** – Assessment conducted to evaluate the condition of water bodies which receive process wastewater, storm water and non-storm water discharges.

**Water Quality Based-Effluent Limits (WQBEL)** – A value determined by selecting the most stringent of the effluent limits calculated using all applicable water quality criteria (e.g., aquatic life, human health, and wildlife) for a specific point source to a specific receiving water for a given pollutant.

**Water Quality Criteria** – Comprised of numeric and narrative criteria. Numeric criteria are scientifically derived ambient concentrations developed by EPA or states for various pollutants of concern to protect human health and aquatic life. Narrative criteria are statements that describe the desired water quality goal.

**Water Quality Objective** – The limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area. [California Water Code § 13050(h)].

**Water Quality Standards** – Consist of beneficial uses, water quality objectives to protect those uses, an antidegradation policy, and policies for implementation. Water quality standards are found in Regional Water Quality Control Plans and statewide water quality control plans. The USEPA has also adopted water quality criteria (the same as objectives) for California in the National Toxics Rule and California Toxics Rule.

**Waters of the United States**[36] – Waters of the United States can be broadly defined as navigable surface waters and all tributary surface waters to navigable surface waters. Groundwater is not considered to be a Waters of the United States. As defined in 40 CFR § 122.2, the Waters of the U.S. are defined as: (a) All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide**;** (b) All interstate waters, including interstate "wetlands;" (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purposes by industries in interstate commerce; (d) All impoundments of waters otherwise defined as waters of the United States under this definition**:** (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial seas; and (g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.

**Watershed** – That geographical area which drains to a specified point on a water course, usually a confluence of streams or rivers (also known as drainage area, catchment, or river basin).

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[36] The application of the definition of "waters of the United States" may be difficult to determine; there are currently several judicial decisions that create some confusion. If a facility operator is unsure whether the discharge must be covered by this Permit, the operator may wish to seek legal advice or contact the Regional Board office.

## ATTACHMENT A

## ALTERNATIVE NUMERIC ACTION LEVELS FOR COPPER, LEAD, AND ZINC

The U.S. EPA Multi-Sector Industrial Permit sets benchmark values for certain metals based on the water hardness of the receiving water. Three of those metals are included in this permit (copper, lead and zinc). This permit has used a hardness range of 125-150 milligrams/liter as a representative average of the hardness value for the Region's receiving waters during storm events. This hardness range may not be appropriate for certain receiving water segments. This permit therefore provides the opportunity for dischargers to provide specific receiving water hardness data that can be used to justify alternate numeric action levels for these three metals. There are three methods to determine hardness, including the use of third-party data, grab sampling by a group of dischargers that discharge to the same segment[37] of a receiving water, or grab sampling of a receiving water by an individual discharger. Regardless of the method used, the discharger is responsible for documenting the procedures used for determining hardness values. Once a proposed hardness value is established by a discharger, that value and the supporting data must be submitted in the next annual report for approval by regional board staff.

Collection of Third-Party Hardness Data

You can submit receiving stream hardness data collected by a third-party provided the results are collected consistent with the approved 40 CFR Part 136 methods. These data may come from a local water utility, previously conducted stream reports, TMDLs, peer reviewed literature, other government publications, or data previously collected by the permittee. Data shall be less than 10 years old and have been collected for the appropriate stream reach if the Region's Basin Plan denotes different reach segments for a stream or river.

Permittee Samples for Receiving Water Hardness

This method involves collecting samples in the receiving water and submitting these to a laboratory for analysis. If you elect to sample the receiving water(s) for your specific discharge and submit samples for analysis, hardness must be determined from the closest perennial stream downstream of your point of discharge. The sample must be collected during a storm event. Note that collection of in-stream samples during wet weather events may be impracticable or present safety issues. Appropriate caution shall be used and permission shall be obtained from any landowners or appropriate municipalities or agencies, prior to entry. Hardness must be sampled and analyzed using approved methods as described in 40 CFR Part 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants).

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[37] Receiving water reach delineations are defined in a Region's Basin Plan.

**NUMERIC ACTION LEVELS FOR COPPER, LEAD, AND ZINC BASED ON RECEIVING WATER SPECIFIC HARDNESS DATA**

| Receiving Water Hardness | Total Recoverable Action Level (Annual Average) in mg/L[38] | | |
|---|---|---|---|
| | Copper | Lead | Zinc |
| 0-25 mg/L | 0.0038 | 0.014 | 0.04 |
| 25-50 mg/L | 0.0056 | 0.023 | 0.05 |
| 50-75 mg/L | 0.0090 | 0.045 | 0.08 |
| 75-100 mg/L | 0.0123 | 0.069 | 0.11 |
| 100-125 mg/L | 0.0156 | 0.095 | 0.13 |
| 125-150 mg/L[39] | 0.0189 | 0.122 | 0.16 |
| 150-175 mg/L | 0.0221 | 0.151 | 0.18 |
| 175-200 mg/L | 0.0253 | 0.182 | 0.20 |
| 200-225 mg/L | 0.0285 | 0.213 | 0.23 |
| 225-250 mg/L | 0.0316 | 0.246 | 0.25 |
| 250 + mg/L | 0.0332 | 0.262 | 0.26 |

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[38] Annual average: Arithmetic average of all analytical results obtained during the reporting period (July 1 to June 30).
[39] Default receiving water hardness range.

## ATTACHMENT B

## LIST OF EXISTING TOTAL MAXIMUM DAILY LOADS (TMDLs) AND 303(d) LISTED WATERBODIES APPLICABLE TO SCRAP METAL RECYCLING DISCHARGERS WITHIN THE SANTA ANA REGION

The following contains a list of Total Maximum Daily Loads (TMDLs) and 303(d) listed impaired water bodies that are applicable to scrap metal recycling dischargers within the Santa Ana Region.

The San Diego Creek and Newport Bay TMDL for Toxic Pollutants was established and implemented on June 14, 2002. The 303(d) list was compiled from the 2014 and 2016 California Integrated Report. This Sector-Specific General Permit may be reopened to amend TMDL and 303(d) list specific permit requirements in this Attachment B, or to incorporate new TMDLs and 303(d) listed impaired waterbodies during the term of this Sector-Specific General Permit that include requirements applicable to Dischargers regulated by this Permit.

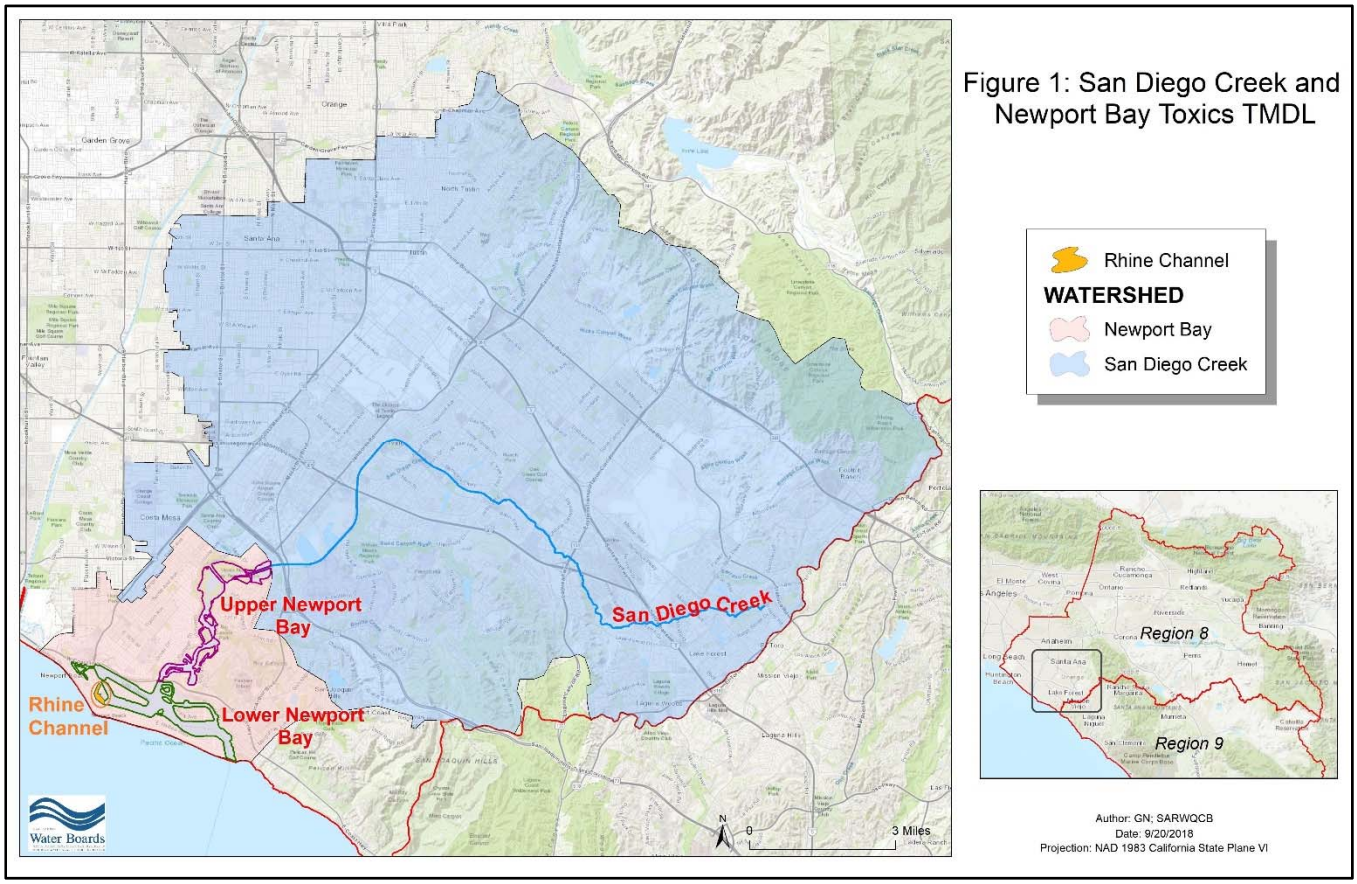
**Total Maximum Daily Loads (TMDLs) Required Actions and Compliance Due Dates:**

In addition to complying with this Sector-Specific General Permit, Permittees discharging from facilities to a watershed or subwatershed with an assigned wasteload allocation shall document in the facility specific SWPPP specific control measures for the listed pollutant (specified in Table 1, below), implement schedules for the control measures and design and other technical details in accordance to ensure that the proposed measures effectively meet the wasteload allocations. The monitoring program in the SWPPP shall document specific monitoring requirements for the listed pollutant to ensure the control measures effectively meet the wasteload allocations in accordance with Section III.F.1. Dischargers shall be in compliance with the wasteload allocations as per the approved TMDL by the effective date of Order R8-2018-0069.

**Table 1: San Diego Creek and Newport Bay Toxics TMDL**

| TMDL | Impaired Water Body/Watershed | Pollutants |
|---|---|---|
| San Diego Creek and Newport Bay Toxics TMDL | San Diego Creek (freshwater) | Cadmium<br>Copper<br>Lead<br>Zinc |
| | Upper Newport Bay (saltwater) | Cadmium<br>Copper<br>Lead<br>Zinc |
| | Lower Newport Bay (saltwater) | Copper<br>Lead<br>Zinc |
| | Rhine Channel area of Lower Newport Bay (saltwater) | Chromium<br>Mercury<br>Copper<br>Lead<br>Zinc |

**Figure 1: San Diego Creek, Upper and Lower Newport Bay, and Rhine Channel Impaired Waterbodies:**




**303(d) Impaired Water Bodies:**

There are currently no 303(d) listed impairments with “industry” being identified as the source. Therefore, scrap metal dischargers, subject to this Sector-Specific General Permit, are not currently required to implement additional BMPs to address impaired waterbodies unless directed by the Regional Board.

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**SANTA ANA REGIONAL BOARD SCRAP METAL NPDES PERMIT FACT SHEET**
**ORDER NO. R8-2018-0069, NPDES NO. CAG618001**

## I. BACKGROUND

In early 2010, a Metal Recyclers Water Quality Committee (the Committee) was established to address pollutants in storm water runoff from metal recycling facilities (hereinafter collectively referred to as scrap metal facilities) located within the Santa Ana Regional Water Quality Control Board's (Regional Board) jurisdiction. The Committee consisted of a number of representatives from the industry, environmental groups, regulatory agency representatives and other interested parties and/or persons. The Committee met a number of times during 2010 and made a series of recommendations[40] that included: (1) Develop a sector-specific national pollutant discharge elimination system (NPDES) permit for storm water discharges from the scrap metal facilities; (2) Monitor efficacy and effectiveness of a number of proven treatment controls; (3) Develop effluent limitations based on a treatment systems study; and (4) Develop a credit system to encourage low impact type of treatment controls. The Committee requested that Regional Board staff develop a region-wide general permit to regulate storm water discharges associated with the scrap metal facilities. This NPDES Permit implements most of the recommendations from the Committee consistent with the federal Clean Water Act (CWA) and its implementing regulations, the California Water Code (CWC), and the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan).

## II. REGULATORY BASIS

This fact sheet is a companion document to the sector-specific NPDES Permit (the Permit or the Order) and provides the regulatory basis for the requirements specified in the Permit.

The discharge of pollutants to waters of the United States (also referred to as waters of the Nation, generally surface waters) is prohibited, except as authorized under an NPDES permit. (Section 301(a) of the CWA). Section 402(p)(3)(A) of the CWA requires that storm water runoff from specified types of industrial facilities (categorized by standard industrial classification [SIC] codes) be regulated under the NPDES permit program. In 1997, the North American Industrial Classification System (NAICS) replaced the SIC system. The United States Environmental Protection Agency (USEPA) has indicated that it intends to incorporate the NAICS codes into the storm water regulations however until the USEPA Multi-Sector Permit incorporates the NAICS codes, this General Order will continue to use SIC codes. The SIC code for this industrial sector is 5093, establishments primarily engaged in assembling, breaking up, sorting, and wholesale distribution of scrap metals. This industry category includes auto wreckers engaged in dismantling automobiles for scrap but does not include auto dismantling solely for the purpose of selling secondhand parts (SIC 5015).

Section 402(p)(3)(A) of the CWA requires that NPDES permits for discharges associated with industrial activity implement CWA § 301, which requires that dischargers comply with technology-based effluent limitations, as well as any more stringent limitations necessary to meet water quality standards (CWA § 402(p)(3)(A)). Technology-based effluent limitations applicable to industrial activities are best practicable control technology currently achievable (BCT) for conventional pollutants, and best available technology economically achievable (BAT) for toxic and non-conventional pollutants (CWA § 301(b)(1)(A) and (2)(A)). To ensure strict compliance with water quality standards, NPDES permits can require a discharger to implement best management practices (BMPs), narrative effluent limitations, and/or numeric effluent limitations* (CWA §§ 301(b), 402; Title 40 Code of Federal Regulations, 40 CFR §§ 122.26, 122.28, 125.3).

[40] Metal Recyclers Water Quality Committee, Preamble; http://www.waterboards.ca.gov/santaana/water_issues/programs/stormwater/docs/scrap_metal/committee/preamble.pdf

In California, the State Board and the nine regional boards implement the requirements of the CWA, including the federal NPDES permit program under authorization from the USEPA. The CWC and the CWA require the regional boards to develop regional water quality control plans (CWC, Chapter 4, Article 3) including water quality objectives and beneficial uses. together and along with the antidegradation policy referred to as the water quality standards in the CWA). The most recent Basin Plan* for the Santa Ana River Basin was adopted in 1995. Since then, the Basin Plan has been amended a number of times and the latest version of the Basin Plan is available at:
http://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/index.shtml
The Basin Plan identifies beneficial uses of waters of the region and contains water quality objectives to protect those beneficial uses. The Basin Plan also incorporates the statewide water quality control plans and policies.

On November 16, 1990, the USEPA promulgated Phase I storm water regulations that established application requirements for storm water permits (40 CFR Parts 122, 123 and 124). These regulations require that storm water runoff associated with industrial activities*[45] discharging either directly to surface waters or indirectly through municipal separate storm sewer systems (MS4)* must be regulated under the NPDES permit program. In 1992, the USEPA revised the monitoring requirements for industrial storm water discharges [40 CFR § 122.44(i)(2), (4), and (5)]. In 1999, USEPA promulgated Phase II storm water regulations (64 Fed Reg 68722-52). The Phase II regulations, among other things, provide "no exposure" exclusions from NPDES permit requirements for industrial activities and materials that are not exposed to storm water.

In accordance with the CWA and the CWC, on November 19, 1991, the State Board* issued the first Statewide General Permit for Storm Water Discharges Associated with Industrial Activity. That Permit was renewed on April 17, 1997 by Order No. 97-03-DWQ and again on April 1, 2014 by Order No. 2014-0057-DWQ. All industrial facilities within the State are currently regulated under the General Permit for Storm Water Discharges Associated with Industrial Activity, Order No. 2014-0057-DWQ (Industrial General Permit), issued by the State Board, with the exception of those scrap metal recycling facilities currently regulated under the Scrap Metal Permit, Order No. R8-2012-0012.

The Basin Plan, CWC, CWA and related federal and state regulations are the basis for the requirements contained in this NPDES permit. Section VI, below, describes in detail the basis for the requirements specified in this Order

## III. POLLUTANTS AND THEIR SOURCES IN STORM WATER RUNOFF

In 1983, the USEPA conducted a comprehensive study of urban storm water pollution across the U.S. The project was titled, "The Nationwide Urban Runoff Program or NURP" and the NURP report was published in 1987[46]. The NURP study indicated that urban and industrial storm water runoff is major sources of pollutants to waters of the U.S. Storm water runoff from industrial facilities may become contaminated by contact with materials, intermediaries, product and wastes that are stored outside, spills and leaks from equipment used or stored onsite, contact with materials during loading, unloading or transfer from one location to another, and from airborne contaminants.

As part of the Statewide Industrial General Permit, regulated facilities submit annual reports which include discharge sample analyses. For scrap metal facilities, the potential sources of pollutants include: (1) outdoor storage of engines, transmissions, radiators, batteries, brakes, power steering units, and differential gears which may contain fluids; (2) dismantling, processing, and storage operations; (3)

[45] An * indicates that the term is defined in the Glossary.
[46] The NURP report is available at: https://www3.epa.gov/npdes/pubs/sw_nurp_vol_1_finalreport.pdf

loading/unloading operations; and (4) galvanized metals used on buildings, fences, etc. Galvanized metal is a source of zinc in the runoff.

## IV. SECTOR-SPECIFIC PERMIT

The State Board issued the Industrial General Storm Water Permit for California and the USEPA issued a Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity[47] (MSGP) for Indian Tribal lands and for states where the USEPA is the NPDES permitting authority. The latest version of the MSGP includes a list of potential pollutants and “benchmark” values for those pollutants. The "benchmarks" are the pollutant concentrations above which USEPA determined that the pollutant represents a level of concern. The level of concern is a concentration above which a storm water discharge could potentially impair, or contribute to impairing, water quality or affect human health from ingestion of water or fish. The "benchmarks" are also viewed by the USEPA as a level below which the discharge is an insignificant threat to water quality. Regional Board staff reviewed each phase status of scrap metal facilities from 2014 to 2018 within the Santa Ana Region. This evaluation indicates that 42% of scrap metal facilities within the Region exceeded the USEPA’s benchmark* levels for one or more metals. Additional control measures, including treatment systems, may be needed to reduce pollutant concentrations in storm water runoff from these facilities such that water quality standards are met in the receiving waters.

Each year, Santa Ana Regional Board staff conducts inspections of a number of industrial facilities. These inspections were analyzed and have indicated that: (1) approximately 10% of the facilities do not implement the minimum control measures (BMPs) specified in the State’s Industrial General Permit; (2) approximately 85% of the Storm Water Pollution Prevention Plans (SWPPPs) are not site-specific; (3) the employees are not properly trained in storm water pollution prevention methods; and (4) only about 20% of the facilities had any kind of storm water treatment systems installed. The Scrap Metal Committee was established with the goal of addressing these short comings in the current industrial storm water program and the Committee recommended a sector-specific permit to address these issues. Since the adoption of the Scrap Metal Permit in 2012, approximately 3% of scrap metal facilities failed to implement minimum control measures, 20% of the scrap metal facilities had incomplete/insufficient SWPPPs, about 14% of scrap metal facilities triggered the requirement to develop a Corrective Action Plan based on exceeded NALs, and about 13% of the scrap metal facilities had advanced treatment systems installed. The Committee also recommended that the Permit include quantifiable and enforceable permit terms and conditions.

USEPA envisioned a four-tier permitting strategy for regulating storm water from various sources: (1) Tier 1: General Permits; (2) Tier 2: Watershed Permitting; (3) Tier 3: Sector-Specific Permitting; and (4) Individual or facility-specific permitting. Consistent with the Tier 1 approach, the State Board issued general permits for regulating storm water runoff from industrial facilities (Industrial General Permit, Order No.2014-0057-DWQ), construction sites (Construction General Permit, Order No. 2009-0009-DWQ as amended by Order No. 2010-0014-DWQ as amended by Order No. 2012-0006-DWQ) and from state highways and freeways (Caltrans Permit, Order No. 2012-0011-DWQ as amended by Order No. 2014-0006-EXEC as amended by Order No. 2014-0077-DWQ as amended by Order No. 2015-0036-EXEC). The Regional Board has issued storm water permits that were consistent with Tier 2 (e.g., San Jacinto Watershed-Wide Construction Activities Storm Water Permit, Order No. R8-2001-0034), Tier 3 (e.g., General CAFO Permit, Order No. R8-2013-0001), and Tier 4 (e.g., Storm Water Permit for March Air Reserve Base, R8-2010-0005) approaches. This Permit is consistent with the Tier 3 approach.

[47] The Multi-Sector Permit is available at: https://www.epa.gov/sites/production/files/2015-10/documents/msgp2015_finalpermit.pdf

## V. TYPES OF DISCHARGES REGULAED BY THIS ORDER

This Order regulates storm water runoff associated industrial activities* and authorized non-storm water discharges* from industrial facilities "primarily engaged in assembling, breaking up, sorting and wholesale distribution of scrap metals" (SIC code 5093). The waste materials may include: iron and steel scrap and ferrous and non-ferrous metals scrap. This category also includes battery recycling facilities and auto wreckers engaged in dismantling automobiles for scrap but does not include those engaged in dismantling automobiles for the purpose of secondhand parts (SIC code 5015).

Coverage under this Order is required for the following types of industrial activities: (1) automotive wrecking for scrap-wholesale [this category does not include facilities engaged in automobile dismantling for the purpose of selling second hard parts]; (2) iron and steel scrap-wholesale; (3) junk and scrap metal-wholesale; (4) metal waste and scrap-wholesale; and (5) non-ferrous metals scrap-wholesale. Other types of facilities listed under SIC Code 5093 and engaged in wastes recycling are not required to get coverage under this Permit.

Storm water runoff associated with industrial activities is currently regulated under the State's Industrial General Storm Water Permit, with the exception of those scrap metal recycling facilities currently regulated under the Scrap Metal Permit.

All industrial facilities engaged in scrap metal recycling operations that are within this Regional Board's jurisdiction must obtain coverage under this Order. Coverage under this Permit is not needed for facilities that discharge all storm water associated with industrial activities to a municipal sanitary sewer or to retention basins, evaporation or percolation ponds that have a design capacity to hold the volume of runoff produced from a 100-year, 24-hour storm event. Discharge of industrial wastes to retention basins and evaporation and percolation ponds may have to be regulated under waste discharge requirements issued by the Regional Board. If the industrial activities are not exposed to storm water, the facility shall obtain a No Exposure Certification.

## VI. BASIS FOR DISCHARGE REQUIREMENTS SPECIFIED IN THIS ORDER

The CWA requires that NPDES permits specify both technology and water-quality based effluent limitations. This Permit includes both technology-based and water quality-based effluent limitations, including water quality-based numeric effluent limits (NEL), numeric action levels (NAL) and narrative effluent limitations. NALs are the same as those used by the USEPA in its MSGP. The Permit encourages the Permittees to implement preventative measures that include elimination of exposure (e.g., conducting industrial operations under a roof) and runoff volume reduction measures (e.g., 'non-industrial area' runoff isolation, percolation basins, onsite reuse, etc.) and provides an incentive for implementing such measures. The Permit also establishes a mechanism for evaluation of treatment systems that may lead to technology-based NELs for this industry category.

The goal of the control measures specified in this Order is to comply with water quality standards* in the affected receiving waters*. Each facility regulated under this Order is required to develop and implement a storm water pollution prevention plan (SWPPP)* designed to control the discharge of pollutants in storm water runoff from these facilities so as to meet applicable water quality standards in the receiving waters. Special provisions are included for discharges to impaired waterbodies* (listed under CWA Section 303(d)) with or without approved TMDLs. If the SWPPPs are designed to address TMDL implementation plans and meet the WLAs, the Permittees would not be required to take additional steps to meet the WLAs specified in the TMDLs.

This is an NPDES permit and there is no legal requirement to address the factors set forth in Water Code sections 13241 and 13263, unless the Permit is more stringent than what federal law requires. (See *City*

*of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 618, 627.) None of the requirements in this Permit are more stringent than the federal requirements, which include technology-based requirements for achieving BAT/BCT effluent limitations and strict compliance with water quality standards*. As indicated above, numeric effluent limitations* and narrative effluent limitations based on best management practices are simply two different methods of achieving the same federal requirement of compliance with state water quality standards*. The use of NELs to achieve compliance with water quality standards is not a more stringent requirement than the use of BMPs. (State Water Board Order No. WQ 2006-0012 (*Boeing*).) Therefore, the Regional Board does not need to take into account the factors in Water Code Sections 13241 and 13263.

The Permit includes prohibitions, effluent limitations*, receiving water limitations, SWPPP requirements, special provisions for discharges to impaired waters and monitoring and reporting requirements. The basis for each of these requirements is discussed below.

## A. PROHIBITIONS

This Order prohibits the discharge of any substance other than storm water associated with industrial activities* and authorized non-storm water discharges*, consistent with the definition of storm water associated with industrial activities* contained in 40 CFR § 122.26(b)(14). It also prohibits the discharge of storm water containing hazardous substances in excess of reportable quantities established at 40 CFR §§ 117.3 and 302.4. Most non-storm water discharges such as wash water from the cleaning of vehicles, equipment, buildings and pavement, are prohibited. However, some non-storm water discharges are not directly related to industrial activities (e.g., air conditioning condensate) and do not normally contain significant quantities of pollutants. These types of discharges are not prohibited provided they have been found not to contain pollutants in significant quantities. Pursuant to Water Code § 13377, the Regional Board is authorized to adopt waste discharge requirements as required or authorized by the Federal Clean Water Act that prohibit discharges from containing pollutants that cause or threaten to cause pollution, contamination, or nuisance together with any more stringent effluent standards or limitations necessary to implement the Basin Plan.

## B. EFFLUENT LIMITATIONS

This is an NPDES permit issued under authorization from the USEPA. Section 402(p)(3)(A) of the CWA states that NPDES permits for storm water discharges must meet all applicable provisions of sections 301 and 402 of the CWA. These provisions of the CWA require that the discharge of pollutants be controlled using best available technology economically achievable (BAT)* for toxic and non-conventional pollutants and best conventional pollutant control technology (BCT)* for conventional pollutants. (CWA sections 301 and 402.) These provisions of the CWA require technology-based controls of pollutant discharges and any more stringent controls necessary to meet water quality standards. The CWA and the federal regulations provide states with the discretion to formulate permit terms, including specifying best management practices (BMPs), to achieve strict compliance with federal technology-based and water quality-based standards. (*Natural Resources Defense Council v. USEPA* (9th Cir. 1992) 966 F.2d 1292, 1308.) The CWA requires that discharges from existing facilities, at a minimum, meet technology-based effluent limitations reflecting, among other things, the technological capability of Permittees to control pollutants in their discharges which are economically achievable.

The requirements specified in storm water permits have slowly transitioned from BMP-based permit requirements for permits issued in the early 1990s[48] to numeric effluent limits for permits

[48] For example, see State Board Order No. 97-03-DWQ.

issued recently[49]. On July 7, 2017, the USEPA promulgated water quality standards for priority toxic pollutants for the State of California, generally referred to as the California Toxics Rule (CTR)[50]. The 2009 statewide construction general storm water permit as amended in 2010 and in 2012[51] has incorporated limited numeric effluent limits for higher risk construction sites, where the risk is based on the sensitivity of the receiving water(s) and site's erosion potential. On December 5, 2011, the Sacramento Superior Court invalidated the numeric effluent limits for pH and turbidity in the Construction General Permit on procedural grounds (Case No. 34-2009-80000338). In 2009, there were two U.S. District Court, Central District of California, cases involving facilities in the Los Angeles region[52] that indicated that CTR may be applicable to storm water discharges. This Permit provides two options for the Permittees to meet water quality objectives: (1) Option 1: This is a 3-phased approach where compliance is achieved through implementation of best management practices; and (2) Option 2: This option requires compliance with the water quality-based NELs that are based on CTR.

In 2005 and 2006, the State Board convened an expert panel (Blue Ribbon Panel or Panel) to address the feasibility of numeric effluent limitations (NELs) in California's storm water permits. The Blue Ribbon Panel reviewed technical feasibility of establishing numeric effluent limitations, or some other quantifiable limit, for inclusion in storm water permits for industrial, construction and municipal storm water permits. The Panel reviewed technology-based limitations and water quality-based limitations, the feasibility of establishing any objective criteria, compliance determination methodology and the technical and financial ability of dischargers to comply with any criteria that is established. The Panel's final report can be downloaded from:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/numeric/swpanel_final_report.pdf

For industrial storm water permits, the Blue Ribbon Panel indicated that numeric effluent limits are feasible for some industrial categories. The Panel recognized that numeric effluent limits based on the current monitoring database might not be advisable due to inconsistencies in monitoring. For the construction category, the Panel stated, "Board should consider the phased implementation of Numeric Limits and Action Levels, commensurate with the capacity of the dischargers and support industry to respond." The Panel also noted that in cases where the industrial activity is similar to construction or municipal activity, a similar approach could be considered.

The Regional Board carefully considered the findings of the Blue Ribbon Panel and related public comments and the recent Superior Court ruling regarding technology-based NELs in the Construction General Permit. In developing effluent limitations for this Permit, the Regional Board also reviewed the Preamble prepared by the Committee, a 2011 draft for the renewal of the State's Industrial General Permit and permits recently issued/drafted for industrial storm water runoff by other states[53] and the USEPA[54].

After consideration of the Panel's and the Committee's recommendations, this Permit includes numeric action levels* (NALs) and an option for phased implementation of technology-based numeric effluent limitations. A number of pollutant control measures as well as NALs and water

[49] For example, see State Board Order No. 2009-0009-DWQ. Some of the NELs in this Order have been invalidated by a recent Superior Court decision (Sacramento Superior Court Case No. 34-2009-80000338).
[50] The California Toxics Rule is available at: https://www.gpo.gov/fdsys/pkg/CFR-2017-title40-vol24/pdf/CFR-2017-title40-vol24-sec131-38.pdf
[51] State Board Order No. 2009-0009-DWQ as amended by Order No. 2010-0014-DWQ as amended by Order No. 2012-0006-DWQ
[52] Santa Monica Baykeeper v. Kramer Metals, 619 F. Supp 2d 914 (C.D. Cal. 2009) and Santa Monica Baykeeper v. Int'l Metals Ecko, 619 F. Supp 2d 936 (C.D. Cal 2009)
[53] Draft/adopted permits posted on the websites of New Jersey and Washington states.
[54] USEPA, NPDES Permit, Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity

quality-based numeric effluent limitations* (NELs) are included in this Permit, consistent with the federal standards.

In Option 1, the benchmark values derived from the USEPA's MSGP are used as NALs to assess compliance with some of the provisions in this Permit. Discharges that do not exceed a NAL are typically not likely to cause a violation of water quality standards*. Discharges that exceed one or more NALs represent a higher risk of violating water quality standards*. An actual water quality standards violation can only be confirmed after site-specific conditions of the discharge and receiving water body are evaluated. In addition, the Permit requires the development and implementation of a storm water pollution prevention plan (SWPPP)*. This Order specifies the minimum BMPs* that must be incorporated into the site-specific SWPPP*. The SWPPP requires the dischargers to implement specific BMPs* during different phases (explained below). As dischargers are required to implement specific BMPs to meet NALs, this Permit ensures that the dischargers do not "write their own permits", and does not require each discharger's SWPPPs to be reviewed and approved by Regional Board staff.

The USEPA establishes technology-based effluent limitation guidelines for various industrial categories. It has not established effluent limitation guidelines for scrap metal facilities. In instances where there are no effluent limitation guidelines, permit writers use best professional judgment to establish requirements that the discharger must meet using BAT/BCT* technology. The CWA and the USEPA's regulations provide states with the discretion to formulate permit terms, including specifying best management practices (BMPs) to achieve strict compliance with water quality standards. (*Natural Resources Defense Council v. USEPA* (9th Cir. 1992) 966 F.2d 1292, 1308.) This Permit contains numeric action levels or NALs for facilities that opt for Option 1 (3-Phased Approach) and water quality-based numeric effluent limits or NELs for Option 2 (Non-Phased Approach). The NALs are from USEPA's MSGP and the water quality-based NELs are derived from the California Toxics Rule. A qualitative Reasonable Potential Analyses (RPA) was conducted for all toxic pollutants included as NELs for Option 2 during the initial scrap metal permit development process in 2012 and was based on data that was submitted by dischargers who were permitted under the 1997 Statewide Industrial Storm Water General Permit. The 2012 Scrap Metal Permit requires dischargers who select compliance Option 2 to determine their facility's receiving water hardness and based on this data, Regional Board staff would establish facility-specific NELs via a facility-specific RPA. These are consistent with CWA provisions which states, "Such conditions as the Administrator determines are necessary to carry out the provisions of this Chapter" (CWA § 402(a)(1), 33 U.S.C. § 1342(a)(1)).

There are proven and cost-effective technologies to control pH, turbidity, oil and grease and specific conductance. With the implementation of Phase I (see below) programs, all facilities should be able to meet the NALs. The Permittees are expected to meet the NALs upon full implementation of Phase I requirements (see Phase I below). If Phase I requirements do not result in compliance with the NALs, the Permittees are required to implement additional BMPs as specified under Phases II and III. Option 1 also includes a requirement for evaluation of treatment control technologies for the scrap metal sector.

The NALs are for pH, turbidity, specific conductance, oil and grease, chemical oxygen demand and specific metals. The pH indicates the alkaline or acidic nature of the runoff and is a measure of the hydrogen-ion concentration. The acceptable range is usually considered to be within 6.5 to 8.5. At values less than 7.0, the water is considered acidic; above 7.0 it is considered alkaline or basic. Pure rainfall tends to have a pH of slightly less than 7. Many industrial facilities handle materials that can affect pH. Storm water discharges with significantly higher or lower pH values are a good indicator of contamination. A pH meter can be used for on-site measurement of pH. The action level specified in this Permit for pH, 6.5 to 8.5 pH units, is consistent with the Basin

Plan objectives and the USEPA's benchmark values in its MSGP.

Turbidity is an indicator of the un-dissolved solids, both suspended (total suspended solids or TSS) and colloidal, present in the discharge. Sources of turbidity include sediment from erosion and dirt from impervious (i.e., paved) areas. Because many pollutants can adhere to sediment particles, reducing sediment can reduce the amount of these pollutants in storm water discharge. Turbidity is sometimes used as a surrogate for TSS. Suspended solids can settle and impact bottom dwelling benthic organisms. Fish gills could be clogged by suspended solids and colloidal particles. Turbidity is an indirect measure of TSS and can be measured on-site using turbidity meters. Turbidity sampling provides a direct basis for determining compliance with some of the narrative requirements of the Permit, such as sweeping requirements. An action level of 250 NTUs is used for turbidity in this Permit, based on USEPA's benchmark values in its MSGP.

Specific Conductance (SC) is a measure of the ability of the water to carry an electric current and therefore a measure of the water's ionic content. It provides an indication of the total dissolved solids present in the discharge. Rainwater has a SC of close to zero. Seawater has a very high SC. High SC could affect the freshwater habitat beneficial use of a receiving water and the usability of waters for drinking, irrigation, and other commercial or industrial purposes. This Permit has set the action level for specific conductance at 2,000 micro mhos (also referred to as micro-siemen) per centimeter (µmhos/cm) at $25^0$C based on a prohibition in the Basin Plan for discharges to ground. This level is much higher than the specific conductance for rainwater to provide credit for chemical treatment that reduces toxic pollutants but increases the ionic content of water.

Oil and Grease (O&G) is a measure of the amount of oil and grease present in storm water discharge. At very low concentrations, O&G can cause sheen on the surface of water and can adversely affect aquatic life. Sources of O&G include vehicle and equipment use, as well as dismantled auto parts. An O&G NAL of 15 mg/l is specified in this Permit based on USEPA's benchmark value.

Table 1a also includes NALs for chemical oxygen demand (COD) and for aluminum, copper, iron, lead, and zinc. These are also based on the USEPA's benchmark values.

The metal limitations for this Permit are from the pollutants list in the CTR. There is not a one-to-one ratio between the constituents of EPA's MSGP and the CTR. The constituents that are identical between the MSGP and CTR are copper, lead, and zinc, however these constituents share different numerical values. The combination of NALs and BMPs are protective of water quality standards due to the combination of benchmark standards specific to scrap recycling facilities as well as the implementation of preventative and mitigative measures. Those who exceed the NAL criteria are required to develop a corrective action plan to prevent future exceedances. The NELs metals which are based on the CTR and the Regional Board's Basin Plan are for priority toxic pollutants for the State of California and are not specific to scrap metal recycling.

Neither the NALs nor the NELs have been relaxed from those identified in Order No. R8-2012-0012, therefore the anti-degradation and anti-backsliding policies were not triggered.

This Permit provides two options to control the discharge of pollutants from scrap metal facilities: (1) Option 1: A Three-Phased Approach*; and (2) Option 2: A Non-Phased Approach*. The Permittees must choose either Option 1 or Option 2 at the time of applying for coverage under this Permit.

In the three-phased approach, the facilities are required to implement certain BMPs, including identification, training and certification of key facility staff, development of a Rain Event Action Plan (REAP), and good housekeeping practices. This approach provides the flexibility needed to select site-specific, technically and economically feasible BMPs, for each facility. In Phase I, all facilities shall implement a set of minimum control measures, including good housekeeping practices, and conduct monitoring to determine compliance with the NALs, specified in Table 1a. During each phase, the runoff will be monitored to determine the need for additional control measures including treatment controls.

Option 1: Three-Phased Approach

1. Phase I Requirements

Phase I requirements are generally operational source control BMPs, such as schedule of activities, prohibition of practices, maintenance procedures, employee training, good housekeeping and other practices to control pollutant sources. The Phase I requirements also include a few structural source control and treatment control measures, such as paving the industrial areas, constructing percolation basins and oil-water separators, etc. Volume control BMPs, such as percolation basins, evapotranspiration systems, and reuse should be a major component of pollution control techniques to protect aquatic habitats.

Permit Provision III.E.1 specifies the minimum requirements for Phases I, II and III. These minimum BMPs are based on recommendation of the Committee and are considered to be technically and economically feasible. These requirements are consistent with CWA provisions which states, “Such conditions as the Administrator determines are necessary to carry out the provisions of this Chapter” (CWA § 402(a)(1), 33 U.S.C. § 1342(a)(1)).

The Phase I BMPs include the following:

a) Identify individual(s) (names and title(s)) responsible for developing and implementing the SWPPP.

b) Maintain a current inventory of materials and chemicals used at the facility and identify proper storage locations and handling procedures.

c) Maintain a current facility map identifying potential pollutant sources throughout the facility and the control measures used for each source/area, including good housekeeping practices. Control measure documentation shall include procedures, specific equipment used, maintenance schedules, and a record of all maintenance performed with dates and signatures.

d) Identify spill prevention and response procedures, including management of any non-storm water runoff. All unauthorized non-storm water discharges must be eliminated.

e) Develop and implement an employee training program, including documentation of training materials and attendance. All new employees shall receive training within 30 days of employment and all employees shall have refresher training at least on an annual basis.

f) Develop a Rain Event Action Plan (REAP). This plan shall be implemented in the event of a predicted storm with a 40% or greater probability. The probability of a storm shall be determined no more than three days in advance and need only be documented once a day. The facility shall refer to the National Oceanic and Atmospheric Administration

((NOAA) website to determine the storm probability. This plan shall address the following additional measures in the event of a predicted storm: (a) temporarily covering exposed materials where feasible; (b) ensuring that all control measures are fully functional; (c) sweeping the site and clearing debris and trash; (d) making sure that the trash bins are covered; and (e) other measures to isolate industrial areas from contact with rainfall and runoff. A record of all activities related to REAP shall be part of the SWPPP and shall be dated and signed. REAP activities should be kept with records on site and available upon request.

g) To the extent practicable, minimize the runoff from the site through low impact development (LID) type of BMPs. Implementation of LID BMPs require monitoring to determine if the NALs have exceeded. The facility shall collect samples before runoff comes into contact with the LID BMPs and after runoff passes through the LID BMPs. Dischargers appropriately implementing percolation or infiltration LID type BMPs are required to collect samples prior to the discharge entering into the LID BMPs. The data collected by Dischargers prior to the runoff entering the LID BMP is not considered compliance data.

h) Develop and implement a program, to the maximum extent practicable, to percolate, evaportranspirate, or use on site, the design volume* of runoff from non-industrial areas and uncontaminated runoff from industrial areas. These onsite systems shall be designed such that they do not cause groundwater contamination.

i) All industrial areas must be paved or lined to minimize dust generation and erosion from the site.

j) The runoff from the non-industrial areas cannot be commingled with storm water associated with industrial activity. Consolidate all industrial area discharges to as few discharge points as possible, preferably to one discharge point, and where practicable divert all non-industrial area runoff away from industrial areas. Manage run-on to the facility by diversion or other means.

k) Minimize storm water contact with contaminating building materials by removal, painting or other measures.

l) Explore the possibility of diverting first flush or any contaminated storm water to the sanitary sewer system. This option shall only be considered if the sanitary sewage collection agency reclaims and distributes and/or uses reclaimed water.

m) Develop and implement control measures for any oil contaminated wastes from the site, such as canopies, covers, roofs, oil-water separator, etc.

n) Develop and implement a monitoring program (see MRP attached to this Permit).

o) Develop and implement a plan to properly operate all installed control measures. This plan shall identify the control measure, the individual responsible for regular operation and/or maintenance of the system, the schedule for any required maintenance, and a record of the maintenance activities including the name of the individual performing the maintenance, the date and a signature.

p) Develop and implement an advanced treatment or other treatment control measures, if warranted. If prior year monitoring indicates any NAL exceedances or site conditions

warrant, the Permittee shall consider advanced treatment or other treatment control measures early in the planning process. This step is not required for facilities without any identified water quality standards violations.

2. Phase II Requirements

Phase II may include treatment controls and is required only if Phase I BMPs are not capable of meeting water quality standards. During Phase II, the facilities are to evaluate their monitoring data generated after implementation of Phase I and determine the need for additional BMPs, including any further treatment control measures. The Phase II control measures may include treatment controls, designed to treat at least 95$^{th}$ percentile storm event* (design volume)$^{*}$ from exposed industrial areas and any comingled runoff volume from non-industrial areas. Phase II requirements are listed below:

a) Permittees in Phase I shall assess the effectiveness of Phase I BMPs by evaluating the monitoring results and by determining if any of the specified triggers have been exceeded (see criterion for triggering further action, above). If there are no exceedances of the triggers, Phase II and III may not be necessary. If any of the triggers have been exceeded, implement steps b and c, below.

b) Within one month of Phase I exceedance determination occurring, reassess Phase I BMPs and determine the need for any additional BMPs to minimize pollutant discharges. If the additional BMPs are designed to meet technology-based standards, the following steps and Phase III may not be necessary. However, the system design details, including the expected discharge quality, shall be submitted for Regional Board staff approval (in the Phase II Corrective Action Plan) prior to implementation.

c) If Phase I monitoring results indicate exceedances of the triggers, and if it is determined that additional BMPs as discussed in Item b, above, cannot be implemented, advanced treatment or other equivalent treatment systems shall be developed and implemented. All proposals for advanced treatment systems or other equivalent treatment systems shall be submitted to the Regional Board staff for approval within 45 days of exceedance determination and shall be implemented within 90 days of approval by Board staff.

3. Phase III Requirements

Phase III includes development and implementation of a Phase III Corrective Action Plan and is not needed if there were no exceedances of the triggers through implementation of either Phase I or II, above.

Permittees in Phase II shall assess their water quality monitoring data. If no standards are violated (based on triggers specified above), Phase III actions described below are not necessary.

After implementation of Phases I and II, if the triggers are being exceeded, the Permittee shall develop a Phase III Corrective Action Plan within one month for Phase II exceedance determinations. This Plan shall identify the potential causes of the exceedance, proposed solutions, and a time schedule for implementing the proposed corrective actions. The Corrective Action Plan, when fully implemented, shall meet the BAT/BCT effluent limitations and constitutes a water-quality based effluent limitation as per 40 CFR § 122.44(k). The Permittee will be considered to be in compliance with the effluent limitations once the Corrective Action Plan is fully implemented.

**Triggers for Further Action Applicable to Facilities Option for Option 1:**

In most cases, a a single exceedance of an NAL specified in Table 1a may not be a good indicator of sustained water quality impacts in the receiving waters. To account for the high variability in the storm water runoff quality from scrap metal facilities, this Permit establishes a trigger mechanism for exceedances of the NALs. If an exceedance has been triggered from a single parameter over twice the NAL or from the annual average exceeding the NAL, corrective action measures must be developed and implemented. For purposes of establishing a trigger for further actions and for the various steps in Phases I, II, and III of this Permit, the following procedures are to be followed:

1. If a facility has multiple discharge points for storm water that has come in contact with industrial areas, processes, materials, products or wastes, area-weighted averages shall be calculated using the relative tributary area for each discharge point.

2. If a single event (either a grab sample from a storm event) exceeds the NAL by a factor of two or more (except for pH), it is considered an exceedance that would require additional steps as outlined under Phases II and III. For pH, any values less than 6.5 or more than 8.5 pH units shall be considered as an exceedance requiring additional steps outlined under Phases II and III.

3. If the annual average (geometric mean of all the analytical results during the reporting period for all constituents except for pH; for pH, an arithmetic mean shall be used) of any of the constituents exceeds the NAL, then it is considered as an exceedance that would require additional steps as outlined under Phases II and III. For pH, any values less than 6.5 or more than 8.5 shall be considered as an exceedance requiring additional steps as outlined under Phases II and III.

4. If a facility has implemented volume reduction BMPs (e.g., percolation basins) or preventative measures (e.g., having industrial operations under a roof), a credit may be applied to the above calculations. For example, if a Permittee installs no-polluting roof over 25% of its operational area, the geometric mean for that facility will be reduced by 25% to arrive at an adjusted geometric mean. This credit cannot be applied to pH. These BMPs and credit must be clearly identified in the SWPPP. The credit will be applied based on areas addressed without regard to whether the BMP was implemented before the adoption of this Permit.

**Development of Sector-Specific Technology-Based NELs:**

Based on data generated from the treatment technology evaluations conducted under the auspices of the Metal Recyclers Water Quality Standards Committee, the Regional Board may consider establishing technology-based NELs. The Committee disbanded after the adoption of the Sector-Specific Scrap Metal Permit Order No. R8-2012-0012. This Permit may be reopened to incorporate technology-based NELs developed through this process or by the USEPA.

**Triggers for Further Action Applicable to Facilities Opting for Option 2:**

The Metal Recyclers Water Quality Standards Committee recommended strict compliance with numeric effluent limits for those dischargers not opting for a phased compliance strategy (Option 1). In Option 2, the Permittees are required to meet the water-quality based effluent limitations specified in Table 1.b, which are derived from CTR and/or the Basin Plan.

**Design Storm for Treatment Control Measures Applicable to Options 1 and 2:**

This Permit includes a criterion for designing treatment controls based on a specified design storm* event. All treatment systems shall be sized and designed to treat 95th percentile storm* event for the area where the facility is located.

## C. RECEIVING WATER LIMITATION

This Permit includes receiving water limitations to protect the beneficial uses* of the receiving waters. Water quality standards* must be met in the receiving water at the point of discharge. (CWA section 301 and CWC section 13377.) In the case of Defenders of Wildlife v. Browner ((9th Cir. 1999) 191 F.3d 1159.), the court determined that federal law requires that discharges of storm water associated with industrial activity must achieve strict compliance with water quality standards*. The SWPPP must be designed to meet water quality standards in the receiving waters. The three-phased approach included in this Permit for compliance with water quality standards provides an opportunity for the dischargers to meet the standards using a BMP approach that may or may not require treatment controls. This approach provides sufficient flexibility to the Permittee to select appropriate BMPs and/or treatment control measures, while including strict time schedules for the various phases to be implemented. The discharge shall not cause or contribute to an exceedance of water quality standards.

## D. STORM WATER POLLUTION PREVENTION PLANS (SWPPPs)

In accordance with 40 CFR § 122.44(k) and 40 CFR § 122.44 (s), all facilities regulated under this Order are required to develop and implement a facility-specific SWPPP. The SWPPPs are public documents and shall be maintained on site and shall be available for Regional Board staff review upon request. The SWPPP must be a "living" document that the Permittee continuously reviews and revises as necessary to assure that storm water discharges do not degrade water quality. The Permit specifies the minimum requirements for a SWPPP and it is the Permittees' responsibility to develop and implement the SWPPP. The most current facility SWPPP must be uploaded to SMARTS.

The SWPPP must document: (a) Individual(s) (by name and title) responsible for developing and implementing the SWPPP; (b) the boundaries of industrial operations in a facility map or site plan; (c) storm water flow patterns across the facility, all discharge points from the facility and the closest receiving water (as listed in the Basin Plan*); (d) potential pollutant sources and pollutants; (e) materials and chemicals used at the site; (f) employee training program and record keeping for the training program; (g) BMPs and/or treatment systems (description, location and maintenance & operating procedures); and (h) monitoring locations, sampling procedures, responsible persons; location of sampling equipment, sample preservation, and sample delivery to the laboratory.

## E. CERTIFICATION AND QUALIFICATIONS FOR THOSE PREPARING AND IMPLEMENTING SWPPPs

Since the previous general permits did not include any training or educational requirements for those preparing and implementing SWPPPs, the SWPPPs did not consistently include the minimum requirements and were not properly implemented. In the same manner, storm water sample collection, preservation and handling also did not meet the quality assurance and quality control needed to produce consistently reliable data. This Permit requires that the SWPPPs be developed and implemented by qualified professionals. The Regional Board developed a program to train and certify individuals as a Scrap Metal - Qualified SWPPP Developer (SM-QSD)

and Scrap Metal - Qualified SWPPP Practitioner (SM-QSP). If the SM-QSD/SM-QSP is not a responsible person from the facility, a responsible facility individual must countersign the SWPPP.

**Special Provisions for Impaired Waterbodies:**

There are a number of waterbodies within the region that are listed[55] for metals and other pollutants under section 303(d) of the CWA. Under the federal requirements for developing total maximum daily loads (TMDLs)* for these impaired waters, the Regional Board has developed TMDLs, including wasteload allocations (WLAs), for some of these waterbodies. No new industrial scrap metal sources shall be permitted to discharge storm water to a 303(d) listed waterbody if the discharge could cause or contribute to an exceedance of water quality standards. Furthermore, the SWPPPs and the treatment technologies shall be designed such that the discharges meet the WLAs and all other applicable requirements of this Permit. Dischargers may refer to Attachment B for more information regarding applicable TMDLs or 303(d) listed waterbodies.

## F. MONITORING AND REPORTING REQUIREMENTS

This Permit includes visual observations, storm water discharge sampling and analysis, treatment system influent and effluent monitoring, evaluate sampling results, and reporting requirements. The MRP must be in compliance with the SWAMP QAPP.

**Individual Monitoring Program**

1. Facilities shall implement the following quality control, quality assurance programs to ensure that the monitoring data is reliable and indicative of the quality of runoff from the site.

2. Qualifications for Sample Collection, Preservation and Handling: Each facility shall designate a qualified person(s) for sample collection, preservation, and handling. This Certified Person must have received at least one hour of classroom training provided by a certified laboratory in sample collection, sample preservation, sample handling, quality assurance and quality control protocols. Each laboratory providing such training shall provide a certificate of completion only after testing the participants understanding of the protocols for sample collection, sample preservation, sample handling, quality assurance and quality control. Proof of such training, such as a certificate of completion from the certified laboratory, shall be included in the SWPPP. The Regional Board also provides a certification program for Certified Person's training. This certification program is an exam based training in which the individual must retake the exam every permit term. A SM-QSD or a SM-QSP or other persons with appropriate training and approved by the Executive Officer could also be considered as a person certified to sample.

3. Sample collection, preservation, and handling shall be the responsibility of the person certified to sample.

**Visual Observations:**

Visual observations are necessary to identify and control pollutant sources and to ensure that all treatment control systems are operational. Visual observations are also critical to eliminate and/or to control pollutant sources prior to a predicted storm event.

[55] 2016 303(d) list is available at: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml

All facilities are required to inspect all discharge points from the facility during each month to determine the presence of any (or indications of any prior) authorized or unauthorized non-storm water discharges. All control measures, including any treatment systems, shall be inspected on a monthly basis. During storm events that produce a discharge from the site (a storm intensity of 0.1 inches or greater), all discharge points must be visually inspected for the presence of oil sheens, turbidity, sediment, debris, trash, foam, and/or other floatables. A permanent log of these inspection reports (date, time, location, name of inspector, findings, weather conditions, corrective actions implemented, revisions to SWPPP, if any, etc.) must be maintained and made available to Regional Board staff upon request.

All inspections must be performed by a scrap metal - qualified SWPPP practitioner.

**Effluent and/or Receiving Water Monitoring:**

Federal regulations, 40 CFR § 122.44, require that all NPDES permits must specify effluent monitoring and reporting at least on an annual basis. Effluent and/or receiving water monitoring is critical to determine: (1) the effectiveness of control measures to reduce the discharge of pollutants from the facility consistent with the BAT/BCT effluent limitations; and (2) the discharge is not causing or contributing to an exceedance of water quality standards.

This Permit requires all permittees to sample and analyze runoff from their facilities at least during four qualifying storm events per year. A qualifying storm event is defined as any storm event that produces a runoff from the site (a storm with an intensity of 0.1 inches or greater) preceded by two consecutive dry days[56]. For discharges to an MS4, samples shall be collected before the discharge mixes with any other flow (flows from other sources) and for direct discharges into waters of the U.S., samples must be collected either from the storm water conveyance from the facility or within 10 feet of the discharge point from the downstream side of the discharge.

To develop quality data from the sampling and analysis program, strict quality control and quality assurance requirements are included in the Permit.

The analytical parameters are taken from the USEPA's Multi-Sector Permit. The selected parameters are good indicators of the presence of pollutants in runoff from scrap metal facilities.

The pH is an indicator of any acidic (pH<7.0) or alkaline (pH>7.0) wastes in the runoff; turbidity is a measure of the undissolved solids in the runoff; specific conductance is an indicator of dissolved minerals; and oil and grease provides a measure of the oil and grease; and various metals are generally present in runoff from scrap metal facilities. The Permittees are required to add additional site-specific parameters based on potential pollutants present at the site or based on TMDL/303(d) requirements.

**Special Monitoring Provisions for Discharges to Impaired Waters:**

If a facility discharges directly (a discharge within 500 feet of a receiving water is considered as a direct discharge) to an impaired water (a waterbody that is listed on the 303(d) list or for which a TMDL has been developed), the Permittee must include the listed constituents in its list of parameters to be analyzed.

[56] Dry days are defined as those without any measurable storm event or with storm events with an intensity less than 0.1 inches.

**Record Keeping:**

Either electronic or paper copies of all records are to be retained for at least five years from the date generated or the date submitted to the Regional Board. 40 CFR §§ 122.21(p) and 122.41(j). All records are public documents. If requested by the Regional Board, the records may have to be retained beyond the five year period.

**Reporting Requirements:**

All dischargers must electronically submit an annual report by August 1 of each year for the previous reporting period (from July 1 to June 30). The annual report is to be submitted electronically via SMARTS. At a minimum, the report shall include all monitoring data; any new BMPs implemented, including any treatment controls; and any corrective actions implemented to address any exceedances of water quality standards.

**Reduction in Monitoring Requirements:**

If a facility has consistently met the numeric action levels (or NALs) for two consecutive years, the facility may request a reduction in the frequency of sampling and analysis requirements. A certification by SM-QSP regarding the reliability of treatment systems installed at a facility, supported by at least 8 sets of monitoring data (from 8 qualifying storm events over a period of at least two years), could be also used as supporting documentation for any request for reduction in the sampling and analysis frequency. The Permittees may also request for a removal of certain constituents not detected or detected below any significant levels after two years of monitoring.

## G. COMPLIANCE DETERMINATION

For purposes of compliance determination with the Option 1 requirements of the permit (see also triggers for the three-phased approach, above), all monitoring results collected during the reporting period shall be considered.

**Compliance Determination with Water Quality-Based NELs:**

The Permittees will be considered to be in violation of the NELs if the annual geometric mean (arithmetic mean for pH) of all the monitoring data collected during the reporting period exceeds the NELs (effluent limits specified in Table 1.b) specified in the Permit.

**Compliance Determination with NALs:**

Exceedances of NALs are not violations of the Permit and in most cases a single exceedance of an NAL is not a good indicator of sustained water quality impacts in the receiving waters. However, the following shall trigger further action to evaluate currently implemented BMPs and to determine the need for additional BMPs and/or other treatment controls so that water quality standards are not exceeded:

1. For facilities with multiple discharge points, if the area-weighted averages of the geometric means of all sampling results during a reporting period exceeds the NAL (use arithmetic mean for pH),

2. If a single grab sample from a single storm event exceeds the NAL by two times (or falls outside of the range of 6.5 to 8.5 pH units), or

3. For facilities with a single discharge point, if the geometric mean of all sampling results during a reporting period exceeds the NAL (use arithmetic mean for pH).

**Compliance Determination with other Requirements:**

Compliance with WLAs will be based on monitoring results of the discharge if the facility has a WLA. If there is no assigned WLA for the specific site, compliance will be based on receiving water monitoring that shows compliance with the water quality standards*.

## VII. HOW TO OBTAIN/TERMINATE COVERAGE UNDER THIS PERMIT

How to Obtain Coverage Under This Permit

All industrial facilities within this Regional Board's jurisdiction and who are engaged in scrap metal recycling activities with an SIC Code of 5093 are subject to either Notice of Intent (NOI) or No Exposure coverage under this Order.

Permittees that discharge storm water associated with industrial activity to waters of the United States are required to meet all applicable requirements of this Order. The Permittee shall register for coverage under this Order by certifying and submitting the Permit Registration Documents (PRDs) via SMARTS.

Permittees that certify their facility has no exposure of industrial activities or materials to storm shall certify and submit a No Exposure Certification via SMARTS. Initial submission of NECs shall include analytical results of runoff from each discharge point of the facility from two storm events. If initial samples could not be collected at the time of filing a NEC, the application may be kept pending for up to a year until analytical data is received. At a minimum, the analysis shall include pH, turbidity, specific conductance, oil and grease and the parameters listed in Table 1a, Numeric Action Levels. The NEC must be renewed by June 30 of each year. The renewal application submitted for every 5$^{th}$ year shall also include an analysis of storm water runoff from each discharge point of the facility for one storm for the constituents listed in Table 1a.

Existing Dischargers Under the Previous Permit

All scrap metal facilities currently regulated under Order No. R8-2012-0012 shall re-certify under this Order within 90 days of adoption of this Order. The recertification shall be done electronically via SMARTS by the LRP of the facility seeking coverage. The LRP shall submit and certify all PRDs including the NOI, facility-specific SWPPP, and a site map. Existing Dischargers that do not register for NOI or NEC coverage within 90 days of adoption of this Order may have their permit coverage administratively terminated. Existing Permittees shall continue to comply with the SWPPP requirements in Order R8-2012-0012 up to but no later than 90 days after the adoption of this Order.

New Dischargers

All new facilities shall upload the PRDs via SMARTS at least 30 days prior to start of operations at the facility. If the new facility elects to comply with Option 2, compliance with the water quality-based NELs specified in Table 1.b is required upon start of facility operations. If the facility elects to comply with Option 1, compliance with Phase I requirements (except REAP) is required within 30 days of start of facility operations.

Industrial Activities Not Covered Under this Order

Permit coverage is not required for facilities that do not discharge storm water associated with industrial activities. If the discharge is to a retention facility, it shall have the capacity to hold at least the volume of runoff from a 100-year, 24-hour storm event. The design details of the retention facility shall be certified by a professional engineer and shall be submitted to the Regional Board. The Regional Board may issue individual waste discharge requirements for such facilities.

How to Terminate Coverage Under this Permit

The Permittees must file a Notice of Termination via SMARTS when: (1) the operations at the site are discontinued; (2) cessation of discharges to MS4 and surface waters; (3) operation of the facility has been transferred to another entity and the new entity has taken responsibility for the facility (new entity has uploaded PRDs); (4) change in location of the facility; or (5) obtaining coverage under an individual permit. When terminating NOI coverage, Dischargers may only submit an NOT once all exposure of industrial materials and equipment have been eliminated. Dischargers may not submit NOTs for temporary or seasonal facility closures.

## VIII. SIGNIFICANT MODIFICATIONS BETWEEN 1st AND 2nd TERM PERMITS

The following significant modifications were made to the second term permit:

1. Revision of LID BMP sampling criteria to require Dischargers who are implementing LID BMPs to collect samples before and after runoff comes in contact with the LID BMPs.

2. Visual inspection clarification to identify that only SM-QSPs may conduct inspections. Removal of the 'designee' terminology.

3. Removal of the Group Monitoring Program Permit element as it was not utilized in the first term permit.

4. Further specification for runoff sampling and analysis to identify that Dischargers shall collect and analyze storm water samples from two qualifying storm events from July 1 to December 31 and two qualifying storm events from January 1 to June 30.

5. Removal of constituents (Flow, Silver, Arsenic, and Toxicity) from Table 2.

6. Merging the Quality Assurance Program Plan elements into the Monitoring and Reporting Plan.

7. Terminology changes of certain permit elements:
   a) Advanced Media Filtration changed to Advanced Treatment
   b) Qualified SWPPP Developer changed to Scrap Metal – Qualified SWPPP Developer
   c) Qualified SWPPP Practitioner changed to Scrap Metal – Qualified SWPPP Practitioner

## IX. PUBLIC NOTIFICATION/PUBLIC HEARING

Regional Board staff prepared a second term permit draft for renewal with the proposed changes stated in Section VIII of this Fact Sheet. The Regional Board hosted two public workshops to discuss the proposed changes on May 29 and May 30, 2018 in the cities of San Bernardino and Cypress, respectively.

The second term draft Permit and the Fact Sheet were publicly noticed on June 25, 2018 with the written comment period ending on August 6, 2018. Written formal comments were received from various stakeholders. The comments were generally supportive of the draft second term permit.
A common comment was the recommendation to reconsider the removal of the volume reduction BMP credit program. Regional Board staff considered this recommendation from stakeholders and decided to keep the volume reduction BMP credit system in the Permit.

Regional Board staff conducted a formal public workshop at the Board meeting on September 7, 2018 to discuss the proposed changes and stakeholder comments.

Regional Board staff provided written responses to all comments received within the written comment period. The comments received and written responses are posted on the Regional Board's website at: https://www.waterboards.ca.gov/santaana/water_issues/programs/stormwater/scrap_metal_permit.html

The Tentative Order and the Fact Sheet were released on September 24, 2018. The Regional Board will hold a public hearing on this item at the Board meeting on October 19, 2018 to discuss and to consider adoption of the Tentative Order.

## X. REFERENCE MATERIALS:

The following reference materials have been either referenced in this Permit or were relied upon in preparing this Permit.

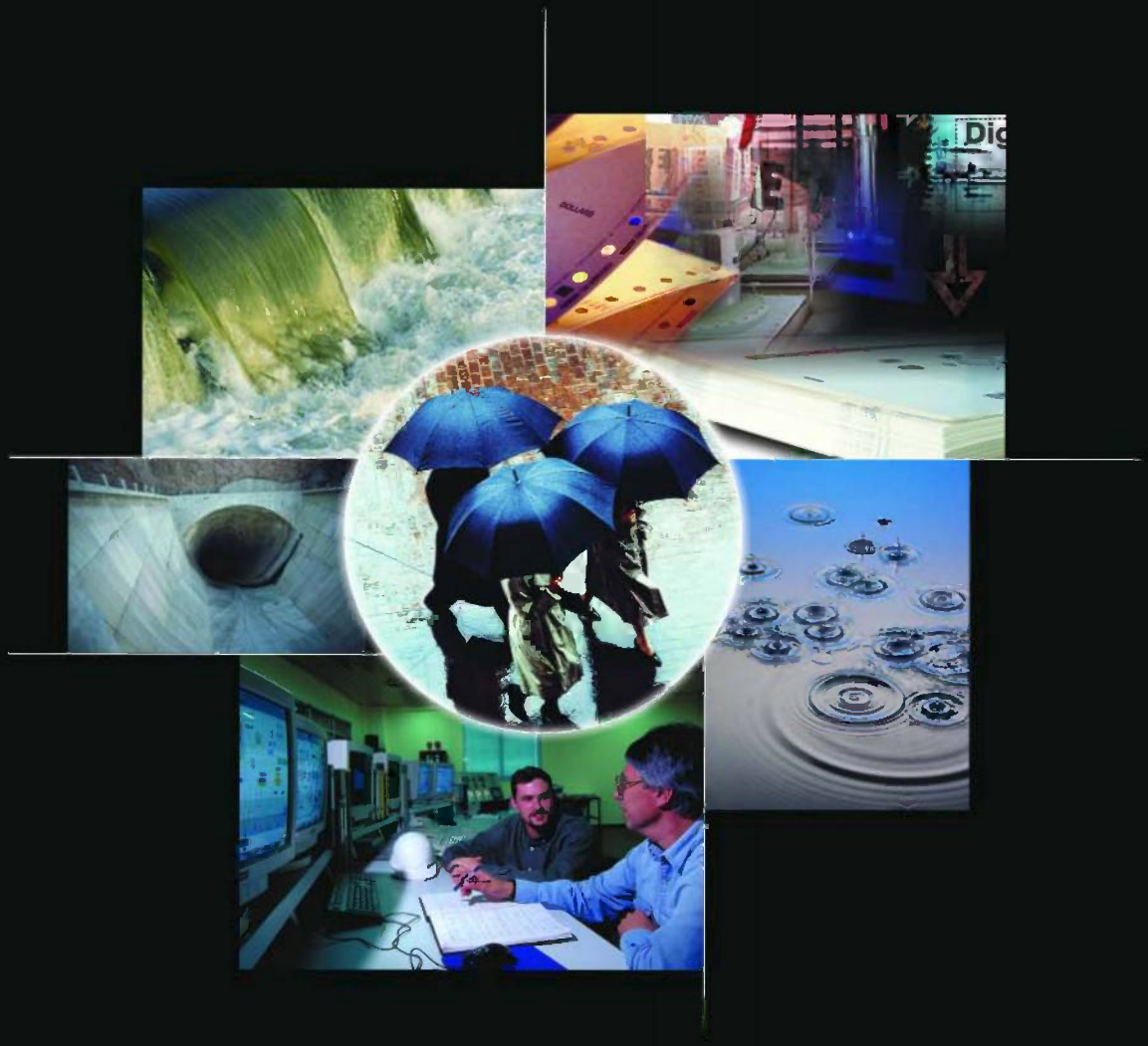
| |
|---|
| Water Quality Control Plan for the Santa Ana River Basin – Region 8 (Basin Plan) http://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/index.shtml |
| Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (2015) State Water Resources Control Board https://www.waterboards.ca.gov/water_issues/programs/ocean/docs/cop2015.pdf |
| Storm Water Panel Recommendations to the California State Water Resources Control Board, "The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 19, 2006) http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/numeric/swpanel_final_report.pdf |
| USEPA, NPDES, Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP) https://www.epa.gov/sites/production/files/2015-10/documents/msgp2015_finalpermit.pdf |
| Metal Recyclers WQ Standards Committee, Technical Subcommittee, Compliance and Monitoring System, Preamble (December 2010) |
| Federal Clean Water Act § 301 (33 U.S.C. § 1311) |
| Federal Clean Water Act § 402(a) (33 U.S.C. § 1342(a)(1)) |
| Federal Clean Water Act § 402(p) (33 U.S.C. § 1342(p)) |
| Title 40 Code of Federal Regulations Part 122.2, or 40 CFR § 122.2 |
| 40 CFR § 122.22 |
| 40 CFR § 122.26 |
| 40 CFR § 122.44 |
| 40 CFR § 122.48 |
| 40 CFR § 131.36 (National Toxics Rule) |
| 40 CFR § 131.38 (California Toxics Rule) |
| USEPA – Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Final Rule (65 Fed. Reg. 31682 et seq., May 18, 2000; 40 CFR § 131.38) |
| USEPA's Final National Pollutant Discharge Elimination System (NPDES) Permit Application Regulations (55 Fed. Reg. 47990 et seq., Nov. 16, 1990; 40 C.F.R. §§ 122, 123, 124) |

| |
|---|
| USEPA - NPDES Application Deadlines, General Permit Requirements and Reporting Requirements for Storm Water Discharges Associated with Industrial Activity (57 Fed. Reg. 11394 et seq., Apr. 2, 1992; 40 C.F.R. § 122) |
| USEPA NPDES – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule, Report to Congress on the Phase II Storm Water Regulations; Notice (64 Fed. Reg. 68722 et seq., Dec. 8, 1999; 40 C.F.R. §§ 9, 122, 123, and 124) |
| USEPA - National Pollutant Discharge Elimination System, General Permit for Discharges from Large and Small Construction Activities (68 Fed. Reg.39087 et seq., July 1, 2003) |
| USEPA, Final Reissuance of National Pollutant Discharge Elimination System (NPDES) Storm Water Multi-Sector General Permit for Industrial Activities (65 Fed. Reg. 64746 et seq., Oct. 30, 2000) |
| To: USEPA Water Division Directors<br>From: Robert Wayland, USEPA, Office of Oceans, Wetlands and Watersheds and<br>James A. Hanlon, USEPA, Director, Office of Water Management<br>Re: Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs (Date: 11/22/02) |
| USEPA, Office of Wastewater Management, Document No. EPA 833-K-10-001 entitled, "U.S. EPA NPDES Permit Writers' Manual" (September 2010) |
| USEPA - Questions and Answers Regarding Implementation of an Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits (61 Fed. Reg. 57425, Nov. 6, 1996) |
| USEPA - Final Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits – (69 Fed. Reg. 43761, Aug. 26, 1996) |
| USEPA - NPDES Storm Water Program Question and Answer Document Volume II – September 1993 |
| USEPA, Office of Water, Document No. EPA 832-R-92-006 entitled "Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices" - September 1992 |
| USEPA - NPDES Storm Water Sampling Guidance Document – July 1992 |
| USEPA - NPDES Storm Water Program Question and Answer Document Volume 1 – March 1992 |
| Santa Ana RWQCB Basin Plan, Chapter 4, Water Quality Objectives (1995) |
| SWRCB Water Quality Control Plan, Ocean Waters of California, California Ocean Plan (2015) |
| State Water Resources Control Board, Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (2005) |
| National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (General Permit) Water Quality Order 99-08-DWQ |
| National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (General Permit) Water Quality Order 2009-0009-DWQ as amended by Order No. 2010-0014-DWQ as amended by Order No. 2012-0006-DWQ |
| National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Industrial Activities (General Permit) Water Quality Order No. 97-03-DWQ |
| National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Industrial Activities (General Permit) Water Quality Order 2014-0057-DWQ |
| Orange County Municipal Separate Storm Sewer System Permit (Order No. R8-2009-0030 NPDES No. CAS618030, as amended by Order No. R8-2010-0062) |
| SWRCB 2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments |
| *In the Matter of the Petitions of Building Industry Association of San Diego County and Western States Petroleum Association,* SWRCB Order No. WQ 2001-15 |
| *Own Motion Review of the Petition of Environmental Health Coalition,* SWRCB Order No. WQ 99-05 |
| *In the Matter of the Petitions of National Steel and Shipbuilding Company and Continental Maritime of San Diego, Inc.,* SWRCB Order No. WQ 98-07 |
| *In the Matter of the Petition of Natural Resources Defense Council, Inc.,* SWRCB Order No. WQ 91-04 |
| *In the Matter of the Petition of Citizens for a Better Environment, Save San Francisco Bay Association, and Santa Clara Valley Audubon Society,* SWRCB Order No. WQ 91-03 |
| *Communities for a Better Environnent, et al. v. SWRCB, et al.* (2003) 109 Cal.App.4th 1089 |

| |
|---|
| *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159 |
| *Committee to Save Mokelumne River v. East Bay Municipal Utility District* (9th Cir. 1993) 13 F.3d 305 |
| *Natural Resources Defense Council, Inc. v. Costle et al.,* (D.C. Cir. 1977) 568 F.2d 1369 |
| *Environmental Protection Agency, et al. v. California ex rel. State Water Resources Control Board,* 426 U.S. 200 (1976) |
| Engrossed Substitute Senate Bill 6415; Chapter 225, Laws of 2004, State of Washington, Storm Water Permits |
| State of Washington, Department of Ecology, *A National Pollutant Discharge Elimination System and State Waste Discharge General Permit for Stormwater Discharges Associated with Industrial Activities* (August 21, 2002). |
| State of New Jersey, Bureau of Nonpoint Pollution Control, Scrap Metal Draft Permit, http://www.state.nj.us/dep/dwq/pdf/draft_scrap_recyclers_gp.pdf |
| California Building Industry Association et. al Vs. State Water Resources Control Board, Sacramento Superior Court Case No. 34-2009-80000338 |

# ATTACHMENT F
# FUNDING/FEES

# 2005 STORMWATER UTILITY SURVEY



BLACK & VEATCH
building a world of difference™

ENERGY WATER INFORMATION GOVERNMENT

Black & Veatch is pleased to provide the results of its sixth national Stormwater Utility Survey, to help those involved in the stormwater industry stay well-informed across a range of issues. The survey results offer insight into the following topics:

- Organization/Administration
- Planning
- Operations
- Finance/Accounting
- Stormwater User Fees and Billing
- Quality Issues – Best Management Practices
- Public Information/Education
- Major Challenges Recently Faced
- Significant Events Affecting Utilities

These results can be used for numerous purposes, from performance management to financial planning to organization strengthening. At Black & Veatch, we understand the value of knowing what others are doing in the industry. For 90 years, meeting the needs of the utility industry has been at the core of our business. We are happy to discuss any questions you might have regarding this survey.

# Profile of Respondents

- Responses were received from 99 utilities in 21 states and one Canadian province. All of these utilities are funded in whole or in part through user fees.
- Approximately 86 percent of the respondents serve a city, rather than a county or region.
- The population served by the respondents ranges from 1,400 (Atlantic Beach, FL) to 3.9 million people (Los Angeles, CA) and the area served varies from 3 to 1,500 square miles. Eighty-one percent indicate they are responsible for stormwater facilities only, while the balance report they are responsible for combined sanitary/stormwater facilities. Approximately 88 percent indicate that they use their own staff to provide a majority of operation and maintenance services.
- For those utilities that base charges on gross property area, equivalent residential units ranged from 1,600 square feet total area to 11,000 square feet, with a mean of 6,964 square feet. For those utilities that base charges on impervious area, impervious areas per equivalent residential unit ranged from 1,500 square feet to 10,000 square feet, with a mean of 2,647 square feet.

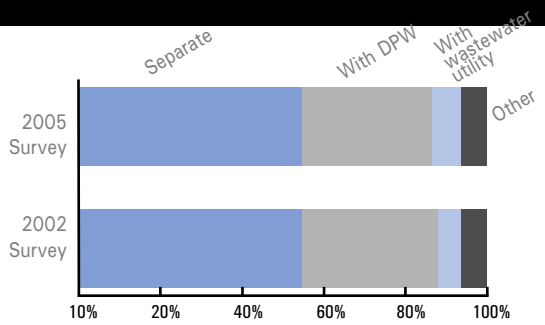
# What's New

Feedback from participants prompted us to add a new question to the 2004-2005 version of the Stormwater Utility Survey. In recent years, a number of stormwater treatment systems have become commercially available. Fifty-six percent of respondents have installed at least one of these devices with the most popular being Stormceptor, StormFilter, and CDS Separator. Thirty-six percent have had a favorable experience with these devices in terms of treatment efficiency and ease of maintenance, while 41 percent are still in the evaluation process.

# Organization / Administration

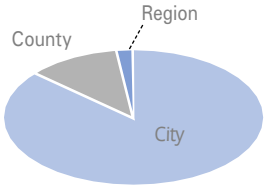
## How is your operation organized?

55% Separate utility
32% Combined with Department of Public Works
7% Combined with wastewater utility
6% Other



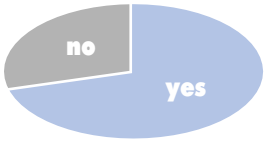

## What area does your utility serve?

86% Within city limits
12% County
2% Region



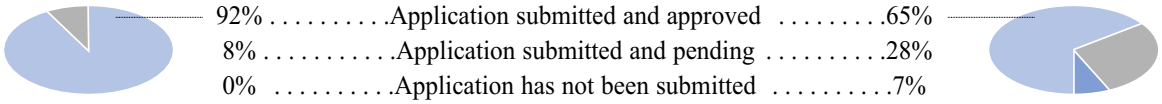

## Does your state have specific statutes that govern the formation of stormwater utility and user fee financing?

71% Yes
29% No



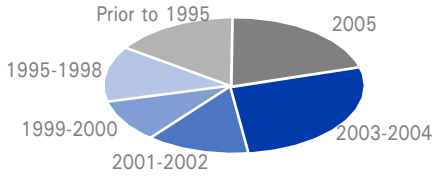

# Planning

## What is the status of your NPDES permit?



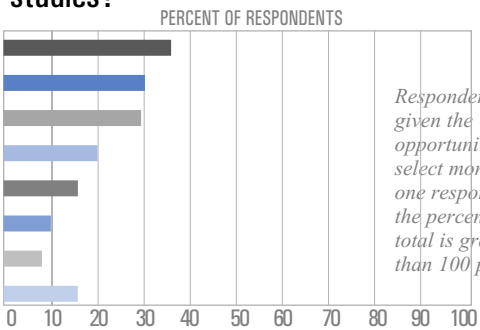

## When was your most recent stormwater plan or stormwater facilities plan?

21% 2005
27% 2003–2004
13% 2001–2002
10% 1999–2000
13% 1995–1998
16% Prior to 1995




## What stormwater computer models do you use for planning studies?

36% HEC-2
30% XP-SWMM
29% HEC-1
20% TR-55
16% EPA SWMM
10% HEC-RAS
7% HEC-HMS
15% Other

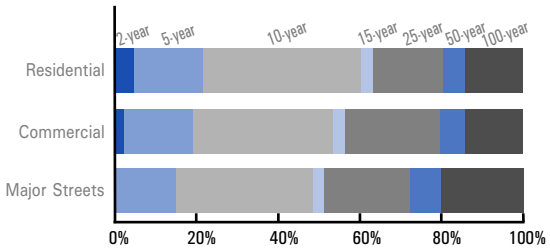



*Respondents were given the opportunity to select more than one response, so the percentage total is greater than 100 percent.*

# Planning (continued)

## What return periods do you use to design your major stormwater structures?

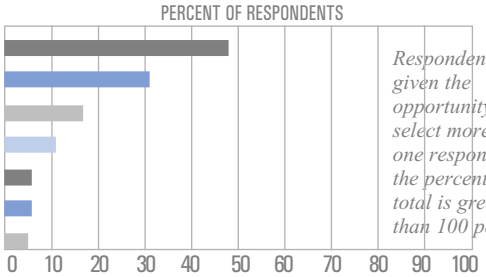
| | Residential | Commercial | Major Streets |
|---|---|---|---|
| 2-year | 3% | 1% | 0% |
| 5-year | 18% | 17% | 14% |
| 10-year | 39% | 35% | 34% |
| 15-year | 3% | 3% | 3% |
| 25-year | 17% | 23% | 21% |
| 50-year | 6% | 7% | 8% |
| 100-year | 14% | 14% | 20% |




*Several respondents provided a range of return period.*
*The percentages above represent the smallest return period provided.*

## Which performance indicators do you consider most important in measuring improvement in stormwater management success?

| | |
|---|---|
| 47% | Flood control |
| 31% | Monitoring pollutants |
| 17% | Customer complaints/satisfaction |
| 11% | Cost control measures |
| 6% | Erosion control |
| 6% | Maintenance |
| 5% | Habitat |

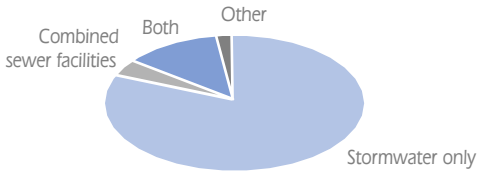



*Respondents were given the opportunity to select more than one response, so the percentage total is greater than 100 percent.*

# Operations

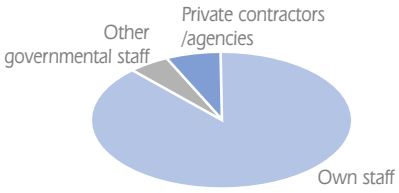
## What is your utility responsible for?

| | |
|---|---|
| 81% | Stormwater facilities only |
| 4% | Combined sewer (sanitary/stormwater) facilities |
| 13% | Both |
| 2% | Other |




## Who provides the majority of your O&M services?

| | |
|---|---|
| 88% | Own Staff |
| 5% | Other Governmental Staff |
| 7% | Private contractors/agencies |

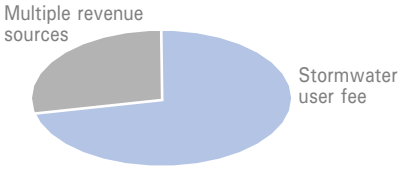


# Finance/Accounting

## What are your major (at least 90 percent of total income) revenue sources?

*(Excludes 7 utilities that reported no single major source)*

72% Stormwater user fee
28% Multiple revenue sources



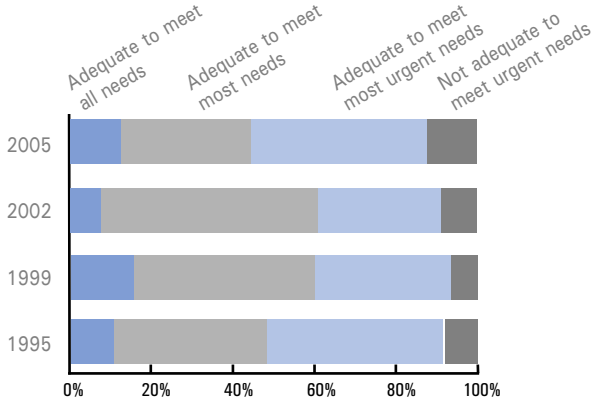

## How adequate is available funding?

13% Adequate to meet all needs
*2002 = 8% • 1999 = 16% • 1995 = 11%*

32% Adequate to meet all needs
*2002 =53% • 1999 = 44% • 1995 = 38%*

43% Adequate to meet most urgent needs
*2002 = 30% • 1999 = 34% • 1995 = 44%*

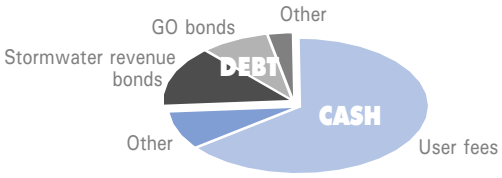
12% Not adequate to meet urgent needs
*2002 = 9% • 1999 = 6% • 1995 = 7%*




## How is the majority of capital improvement needs financed?

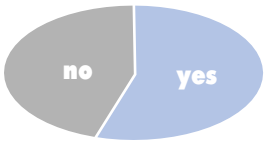
74% Cash financed
- 65% From user fees
- 0% From ad valorem taxes
- 9% Other

26% Debt financed
- 14% Stormwater revenue bonds
- 9% General obligation bonds
- 0% Combined bonds
- 3% Other



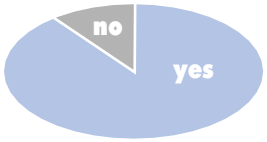

## Does your accounting system permit cost tracking by operating activity (e.g., inlet cleaning)?

55% Yes
45% No




## Does your accounting system identify user fee revenues by customer class (e.g., residential)?

89% Yes
11% No

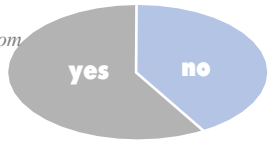


# Stormwater User Fees and Billing

## Q Were your rates revised in the last 12 months?

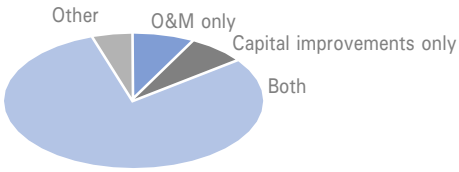
41% No
59% Yes

*Increases ranged from 1% minimum to 117% maximum*



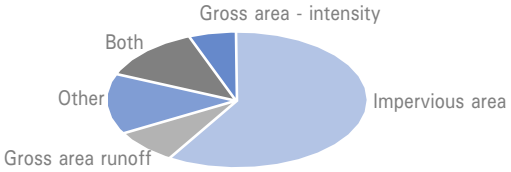

## Q What are your user fees designed to pay for?

8% Operation and maintenance (O&M) expenses only
7% Capital improvements only
80% Both O&M expenses and capital improvements
5% Other



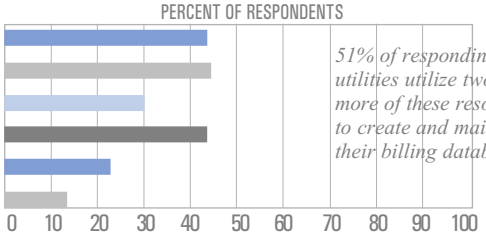

## Q What is the basis for your user fees?

59% Impervious area
8% Gross area with intensity of development factor
14% Both impervious and gross areas
13% Other (e.g., number of rooms, water use, flat fee)
6% Gross area with runoff factor

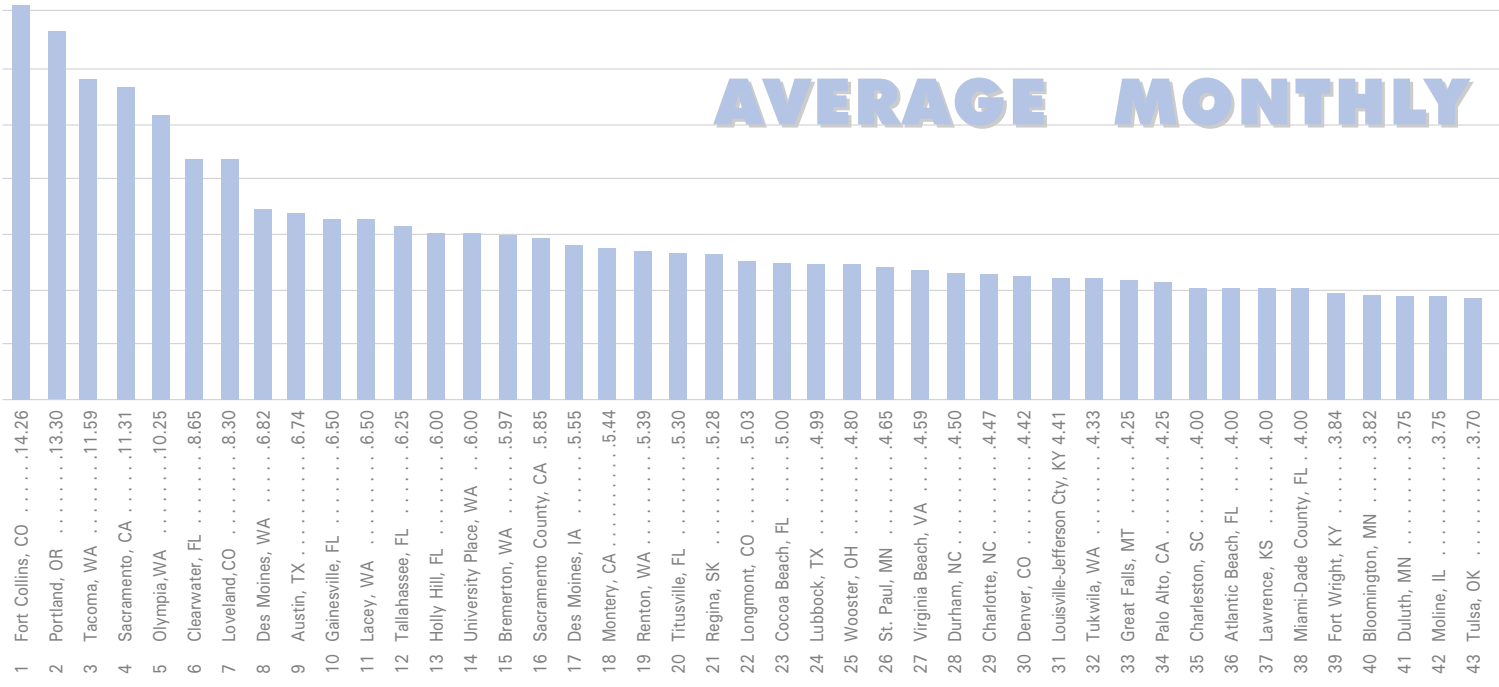



## Q If user fees are area-based, what principal resources were employed to create and maintain the customer database used to compute charges?

42% Property tax assessor records
43% Aerial photographs
29% On-site property measurement
42% Geographic Information System (GIS)
22% Planimetric map take-offs
13% Other (e.g., building permits, site plans)




*51% of responding utilities utilize two or more of these resources to create and maintain their billing database*



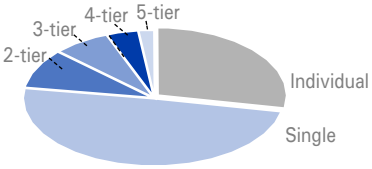
## Q Are your stormwater charges based on individual or class average characteristics?

**Residential**

27% Individual parcel

73% Class average as:

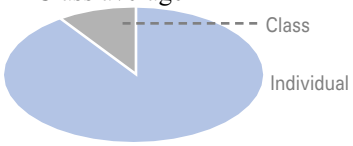
- 48% Single tier
- 9% 2-Tier rate
- 7% 3-Tier rate
- 4% 4-Tier rate
- 2% 5-Tier rate




**Non-Residential**

90% Individual parcel

10% Class average



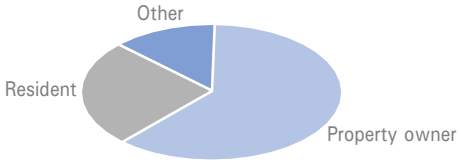

*3% of respondents who answered class average did not provide the number of rate tiers.*

## Q Who is responsible for the payment of user fees?

62% Property owner

25% Resident

13% Other (e.g., water or other utility bill recipient)




## Q How frequently do you bill?

56% Monthly

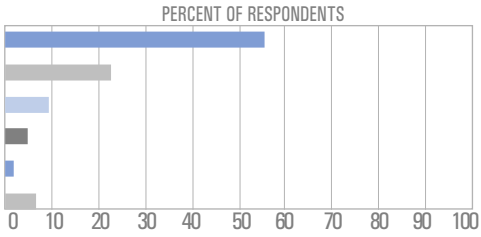
22% Annually

9% Bi-monthly

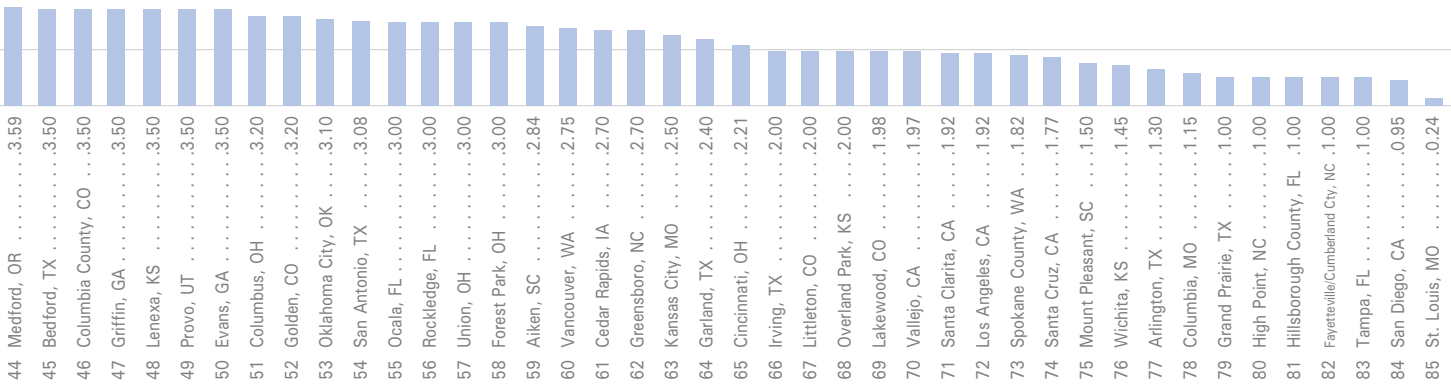
5% Quarterly

2% Semi-annually

6% Other

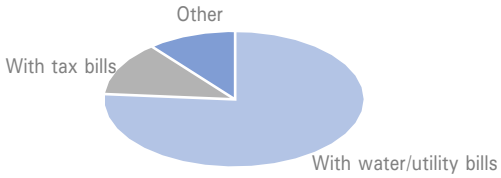



## RESIDENTIAL CHARGE



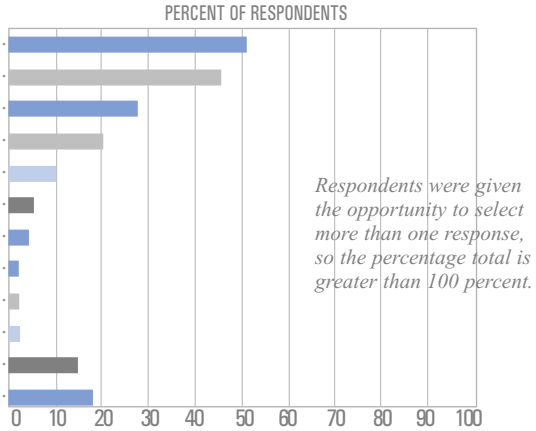
# Stormwater User Fees and Billing (continued)

## How are your user fees billed?




76% With water or other utility bills
13% With tax bills
11% Other

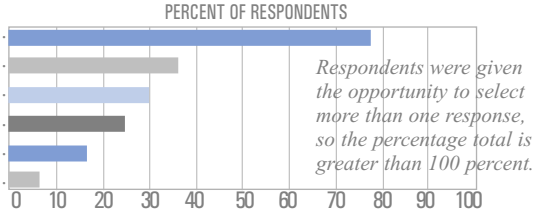
## What types of properties are exempt from user fees?




51% Streets/highways
46% Undeveloped land
27% Rail rights-of-way
20% Public parks
10% Government
5% School districts
4% Churches
2% Airports
2% Colleges/universities
2% Water front
14% None
17% Other

*Respondents were given the opportunity to select more than one response, so the percentage total is greater than 100 percent.*

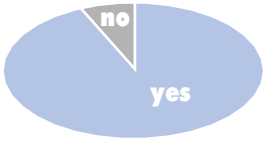
## What customer classifications are recognized in your stormwater fee structure?




77% Residential
36% Commercial
30% Combined commercial/industrial
25% Other
17% Industrial
7% No designation

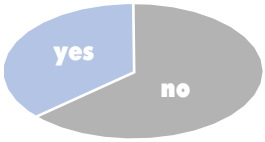
*Respondents were given the opportunity to select more than one response, so the percentage total is greater than 100 percent.*

## Are rates the same for all service areas or watersheds?



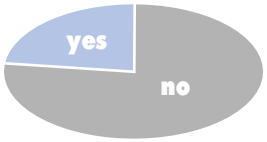

93% Yes
7% No

## Are your user fees for single family dwellings the same as for individual multiple residential units, such as apartments and condominiums?




64% No
36% Yes

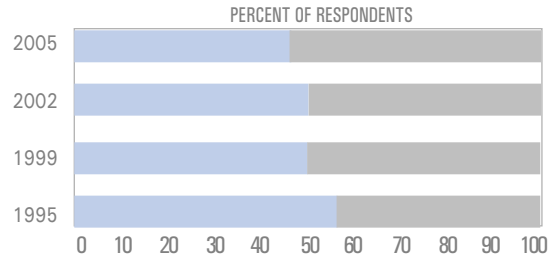
## Are one-time impact/capital recovery fees applied to new stormwater utility customers or new development?




77% No
23% Yes

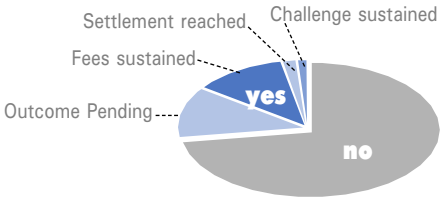
## Are credits provided for private detention/retention facilities?

46% Yes
*2002 = 53% • 1999 = 50% • 1995 = 57%*
54% No



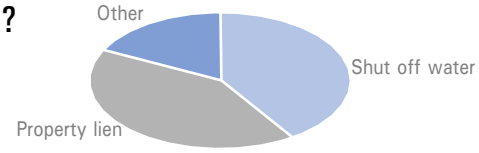

## Have your user fees faced a legal challenge?

72% No
28% Yes
*12% Outcome pending*
*12% Fees sustained*
*2% Settlement reached*
*1% Challenge sustained (2 later remedied by legislation)*



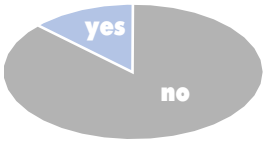

## On what basis is payment of your user fees enforced?

41% Lien on property
42% Shut off water
18% Other




## Is a significant share of your utility costs attributable to stormwater from outside your service area?

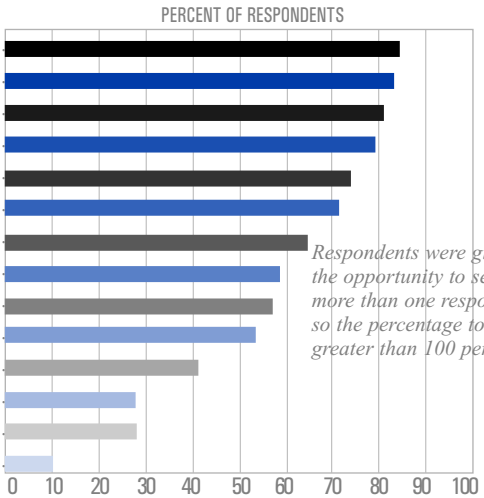
87% No
13% Yes




# Quality Issues – Best Management Practices

## Which programs and practices are being used to protect or improve water quality?

84% Public education
83% Erosion/sediment controls
81% Street sweeping
79% Detention/retention basins
73% Inlet stenciling
71% Illegal discharge detection
64% Stormwater quality monitoring
59% Public volunteer involvement
58% Residential toxins collection
53% Commercial/industrial regulation
41% Constructed wetlands
28% Lawn herbicide/pesticide control
28% Treatment
10% Other

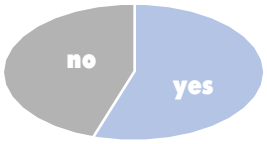



*Respondents were given the opportunity to select more than one response, so the percentage total is greater than 100 percent.*

# Quality Issues Best Management Practice (continued)

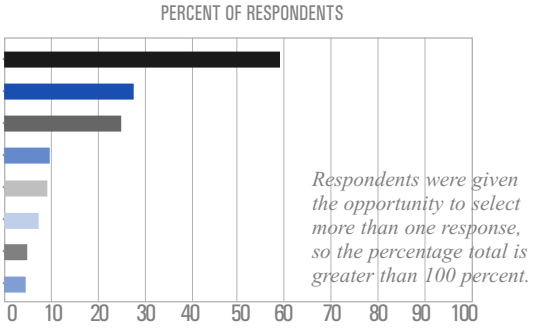
## Q Have you installed any stormwater treatment systems in your stormwater conveyance system?

55% Yes
45% No



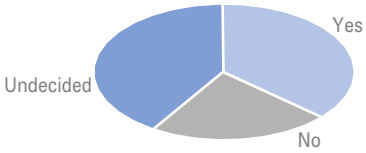

### Devices installed:

59% Stormceptor
28% CDS Separator
24% StormFilter
9% Downstream Defend
9% Vortechnics
7% Bay Saver
4% Abtech
4% SunTree Technologies



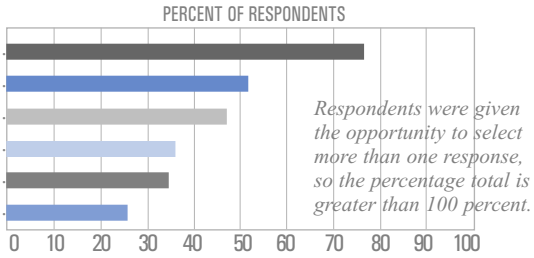

### Have these devices met your expectations?

36% Yes
23% No
41% Undecided



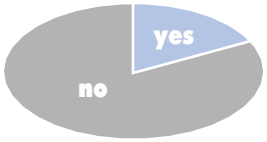

## Q What contaminants are your greatest concern?

76% Sediments
51% Nutrients
47% Oil and grease
35% Heavy metals
34% Pesticides
25% Other



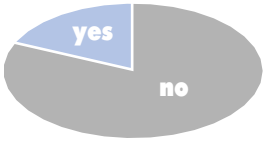

## Q Are quality-based user fee credits or other incentives provided to encourage customers to control or reduce stormwater pollution?

18% Yes
82% No




## Q Are your user fees specifically designed to provide for the separate recognition and equitable recovery of costs associated with stormwater quality management and quantity(runoff) management, respectively?

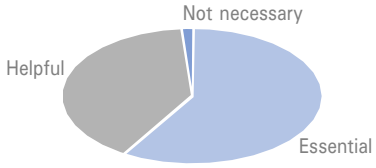
81% No
19% Yes



# Public Information/Education

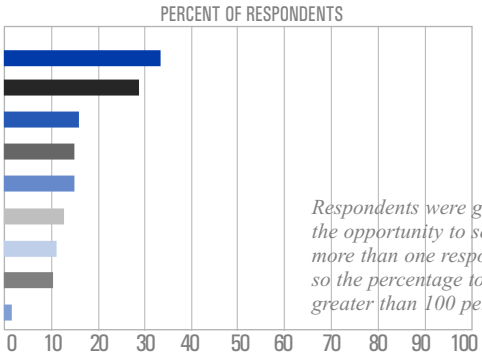
## How important is an organized public information/education effort to the continuing success of a user fee funded stormwater utility?

59% Essential
40% Helpful
1% Not necessary




## What means have you found to be the most effective in educating the public about utility services, program needs and financing, and citizen responsibilities?

33% Bill inserts
29% Public hearings/presentations
16% Internet
15% Brochures/flyers/newsletters
15% Newspaper
12% Television
11% Public schools
10% Speakers bureau
1% Direct mail




*Respondents were given the opportunity to select more than one response, so the percentage total is greater than 100 percent.*

## Major Challenges Recently Faced

Financial, rate, and billing related issues ..... 19 utilities
(e.g., financing growth, capital replacements, NPDES and other environmental mandates; rate increases, rate equitability, rate challenges; and billing database updating or conversion to GIS)

Weather and flooding issues ..... 10 utilities
(e.g., high amounts of rainfall, standing water, West Nile concerns, localized flooding)

Erosion control ..... 8 utilities
(e.g., run-off, erosion problems)

Regulatory and quality control compliance ..... 8 utilities
(e.g., illicit discharges, quality monitoring, and difficulties of complying with more stringent state and federal quality mandates related to Endangered Species Act, TMDLs, et al.)

Infrastructure planning issues ..... 7 utilities
(e.g., need for integrated flood, quality and environmental planning; remedy of specific infiltration/inflow or local flooding problems; and system-wide flood control master planning)

Jurisdictional issues ..... 3 utilities
(e.g., incorporation of added cities into service area and co-permittee coordination)

Public education ..... 2 utilities
(e.g., need for increased education regarding new programs or rate increases)

## Significant Events Affecting Utilities in Past Two Years

NPDES compliance ..... 21 utilities

CIP related (funding, projects started/completed) ..... 14 utilities

User fee related (increases, lack of increases) ..... 14 utilities

Weather related (heavy rains, storms, drought) ..... 8 utilities

Organization/administration/staffing changes ..... 7 utilities

Public education/awareness ..... 4 utilities

Urban growth/decline in service area ..... 4 utilities

Legal challenges ..... 2 utilities

*Some respondents listed the same events as positive, negative, or both (e.g., heavy rains or flooding brought both damage and increased public awareness of needs).*

# Stormwater Management

From run-off to potential revenue stream, stormwater management is uniquely challenging. It is often not source-specific, not metered or monitored closely within the community, and not tied to customers' daily decisions. Black & Veatch's Enterprise Management Solutions team assists utilities nationwide in stormwater management issues to help provide stable funding for operations as well as capital projects.

## ABOUT ENTERPRISE MANAGEMENT SOLUTIONS

Black & Veatch is pleased to provide this survey as an industry service. For 90 years, meeting the needs of utilities nationwide has been at the core of our business. We understand the value of knowing how others are addressing the industry's complex issues. From organization effectiveness to financial structuring to risk management, it helps to know the industry's trusted business partner. Black & Veatch brings it all together.

**BLACK & VEATCH**
building a **world** of difference™

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Black & Veatch • 11401 Lamar Avenue • Overland Park, KS 66211 USA
Tel: 913-458-4322
Stormwater@bv.com

*City of San Clemente Clean Ocean Program & Fee*
**Frequently Asked Questions**

**What is the Clean Ocean Program?**
It is the City's effort to prevent stormwater and urban runoff pollution from entering the storm drain system and being discharged at the beach.

**Why does the City need a Clean Ocean Program?**
- To protect the environment (water quality in local channels and coastal waters);
- To protect public health and safety (from bacteria and other pollution that could reach the beach);
- To protect local quality of life (local business/tourism, "beach town" reputation, etc.); and
- To meet State Water Code and Federal Clean Water Act permit requirements issued to South Orange County cities by the State.

**Who developed the Clean Ocean Program?**
The City prepared an Urban Runoff Management Plan (URMP), which included participation and feedback from the community as well as the City's Coastal Advisory Committee (local citizens appointed by the City Council to consider and provide advice on coastal and water quality issues). The URMP guides the Clean Ocean Program, and outlines activities and projects to meet the State and Federal water quality requirements and protect local water quality.

**What does the Clean Ocean Program include?**
- *Runoff treatment projects*
  - Poche Beach: A treatment system was constructed and is maintained to filter and kill bacteria in the runoff before it reaches the beach. Construction was completed in March of 2009. The system treats up to 1.1 million gallons per day. Weekly water quality tests indicate that the UV treatment removes between 95% - 99% of the bacteria in the storm drain runoff before it discharges to the beach. The current water quality grade at Poche Beach is an A+.
  - North Beach: A system was constructed to divert dry weather runoff away from North Beach and send it to the City's Water Reclamation Plant for treatment. The system started operating on June 1, 2009. It diverts and filters about 350,000 gallons per day. The current water quality grade at North Beach is an A+.
  - Underground storm drain units were installed to remove trash, oil & grease and sediment from runoff before it gets to the beach. Six units have been installed. They are located near Calafia Beach, in the Pier Bowl area, at the west ends of El Portal, at the end of Linda Lane and at Mariposa. In 2013, 35 cubic yards of material was captured and removed by these units. This is material that would have otherwise have ended up in the ocean.
- *Pollution prevention activities*
  - Street Sweeping: the City sweeps public residential streets twice per month and major streets and business areas about 3 times per week. Over 22,000 tons of material has been collected over the last ten several years, enough to fill 550 large (40 cubic yard) trash bins.
  - Catch Basin Inspection and Cleaning: the City inspects at least 2,205 catch basins annually, cleaning them as needed. In 2013, 2,432 catch basins were cleaned and a total of 914 cubic feet of material was removed.
  - Water Quality Testing: water samples from over 20 locations throughout town are sampled each year to help identify potential problem areas and monitor quality progress over time. Flow measurements are also taken to help measure progress in reducing urban runoff flows.
  - Special Studies: the City consulted with scientists to conduct an in depth investigation to find sources of bacteria in the Poche Beach watershed. A year long study which included molecular

marker testing culminated in focused recommendations and a strategic plan for reducing bacteria at Poche Beach. The final report of the study is located on the Clean Ocean Program website at www.sccleanocean.org.

- Commercial, Industrial and Construction Site Inspections: Inspections of businesses, industrial facilities and construction sites are conducted to make sure these sites are using proper Best Management Practices (BMPs) to prevent pollution from entering the storm drain system and reaching the beach. Over 9,000 inspections have been completed in the last 10 years.
- Spill Cleanups and Storm Drain Maintenance: A 24/7 hotline number (**366-1553**) is in place to respond to and cleanup spills or investigate reported illegal discharges. In addition, the City performs ongoing maintenance to ensure proper function of the storm drain system and inspects all public catch basins annually and removes materials that might be discharge into the system.
- Enforcement of Anti-pollution Ordinances: Dedicated officials enforce water quality laws to identify and correct violations. Depending on the severity of the violation, enforcement may include verbal warnings, written correction orders, and/or fines of $100, $200, or $500 per violation.
- Public Outreach and Education: Efforts promote awareness of stormwater and urban runoff pollution impacts, and ways the public can help prevent this pollution from happening in the first place.

**What is the cost of implementing the Clean Ocean Program?**
The cost to implement the program is about $2.2 million per year.

**What is the cost of not implementing the Clean Ocean Program?**
The City could be liable for large fines if the State finds that the City is not meeting the requirements of the stormwater permit regulations. Also, there are potential economic impacts (tourism, real estate values, etc.) if the City does not work to protect its healthy beach town reputation.

**How is the Clean Ocean Program funded?**
By a Clean Ocean utility fee charged to property owners. The fee is collected as a line item on the monthly utility bill for owners that get water service from the City. The fee is charged monthly but collected via a separate twice-yearly bill to San Clemente property owners that get water service from other providers (e.g. South Coast Water District or Santa Margarita Water District).

**Why do property owners get charged the Clean Ocean Fee?**
Developed and graded properties contribute runoff to the storm drain system (which includes pipes, channels, drain inlets and street gutters). This runoff contains or picks up pollution before it enters the storm drain, which the City must then address. Since providing storm drain and water quality services is like other utility services provided by the City (e.g. drinking water and sewer service), it is appropriate that property owners pay for the cost of this service.

**How long will the continued fee be in effect? When will it end?**
If approved by San Clemente property owners, the existing Clean Ocean Fee would be continued for an additional six and one-half (6.5) years, and would expire on June 30, 2020.

**How much will the fee increase over the next 6.5 years?**
The continued Clean Ocean Fee would be fixed and would not increase over the entire period.

**Why are property owners voting on this fee?**

Under the provisions of California Proposition 218, property owners must approve new property fees adopted by cities.

**What is the change from the existing to the proposed Clean Ocean Fee?**

| Single Family Residential Monthly Fee | | |
|---|---|---|
| | **Current Fee** | **Proposed New Fee** |
| Private street | $ 4.39 | **$ 5.10** |
| Public street | $ 5.02 | **$ 6.23** |

| Multi-Family Residential Monthly Fee | | |
|---|---|---|
| | **Current Fee (per residential unit)** | **Proposed New Fee (per residential unit)** |
| Private street | $3.51 | **$4.08** |
| Public street | $4.01 | **$4.98** |

| Non-Residential (Commercial, Industrial, Business Park) Monthly Fee | | |
|---|---|---|
| | **Current Fee (per acre or fraction thereof)** | **Proposed New Fee (per acre or fraction thereof)** |
| Private street | $43.90 | **$51.00** |
| Public street | $50.20 | **$62.30** |
| Note: Almost all non-residential streets within the City are public streets. | | |

| Undeveloped, Graded Property Monthly Fee | | | | |
|---|---|---|---|---|
| | **Current Fee** | | **Proposed New Fee** | |
| | *2 acres or less* | *Each acre over 2 add:* | *2 acres or less* | *Each acre over 2 add:* |
| Private street | $2.20 | $0.44 | **$2.55** | **$0.51** |
| Public street | $2.51 | $0.50 | **$3.12** | **$0.62** |
| Note: There is no clean ocean fee charge for undeveloped, ungraded parcels. | | | | |

**Note**: Properties on private streets are charged a lower rate since the City doesn't provide street sweeping service on private streets.

**How is the fee calculated?**
The fee is based on a parcel's expected contribution of runoff, which is determined by an estimate of the impervious area on that parcel. Impervious areas include such things as buildings and pavement, which prevent or restrict storm water from getting into the soil and increase runoff from a parcel.

**Why is the existing Clean Ocean Fee being proposed to be continued?**
The fee funds a stormwater quality program that the State requires the City to implement. Since the fee was last approved, the State revised and adopted a new stormwater permit for the south Orange County area that contains more rigorous requirements. Also, the State recently adopted new requirements for bacteria pollution for which the City must comply.

**What happens if continuation of the existing Clean Ocean Fee is not approved?**
If the Clean Ocean Fee is not continued, the City will need to support the Clean Ocean Program with some other funding source. The most likely source would be the General Fund, which would result in about $2 million each year that would not be available for other needed projects and programs within the City.

**How and when will the vote occur?**
All record owners of property within the City that are directly subject to the proposed fee will receive an official mail-in ballot with a postage paid addressed return envelope. The ballots will be mailed to property owners on October 25, 2013. Return ballots are due on December 10, 2013.

**How do I cast my vote?**
Simply fill out the ballot and mail or deliver it to the San Clemente City Clerk by the due date noted on the ballot.

**How do I get more information?**
More information about the proposed fee continuation is available on the City's website at www.sccleanocean.org. You may also call the Environmental Programs Section at (949) 361-8204 or send an email to cleanwater@san-clemente.org.

**What's the difference between storm drains and sewers – doesn't it all get treated?**
Like most other cities, the City of San Clemente owns and operates a storm drain system, which is the network of channels and pipes that collect stormwater and urban runoff and discharges it into the ocean. Unlike sewer systems that send sewage to a treatment plant before being discharged, most storm drain systems, including the City's, were built to collect and convey runoff to prevent flooding but not to treat urban water runoff. Therefore, any pollutants that runoff carries into the storm drain system are discharged untreated along the City's shoreline.

**Do other cities have a Clean Ocean Program?**
They may call it something else, but all cities in the urbanized areas of Southern California are required by the State to implement stormwater and urban runoff programs to prevent discharges of pollution to creeks, rivers and the ocean.

**How do we know that the Clean Ocean Program is working?**
- The City records amounts of trash picked up by street sweepers and removed from underground treatment devices.
- Larger treatment projects include monitoring to compare water quality before and after treatment.
- The City tracks the number of enforcement actions and inspections to document these efforts.

**Why should San Clemente property owners pay to clean up pollution from upstream cities?**
Unlike most cities in Southern California, San Clemente's city boundary is very similar to the local watershed boundary. This means that San Clemente is a self-contained watershed, and that there are no upstream cities that contribute pollution through our local watershed. So the pollution in our storm drains comes from San Clemente properties, and not from out-of-town areas.

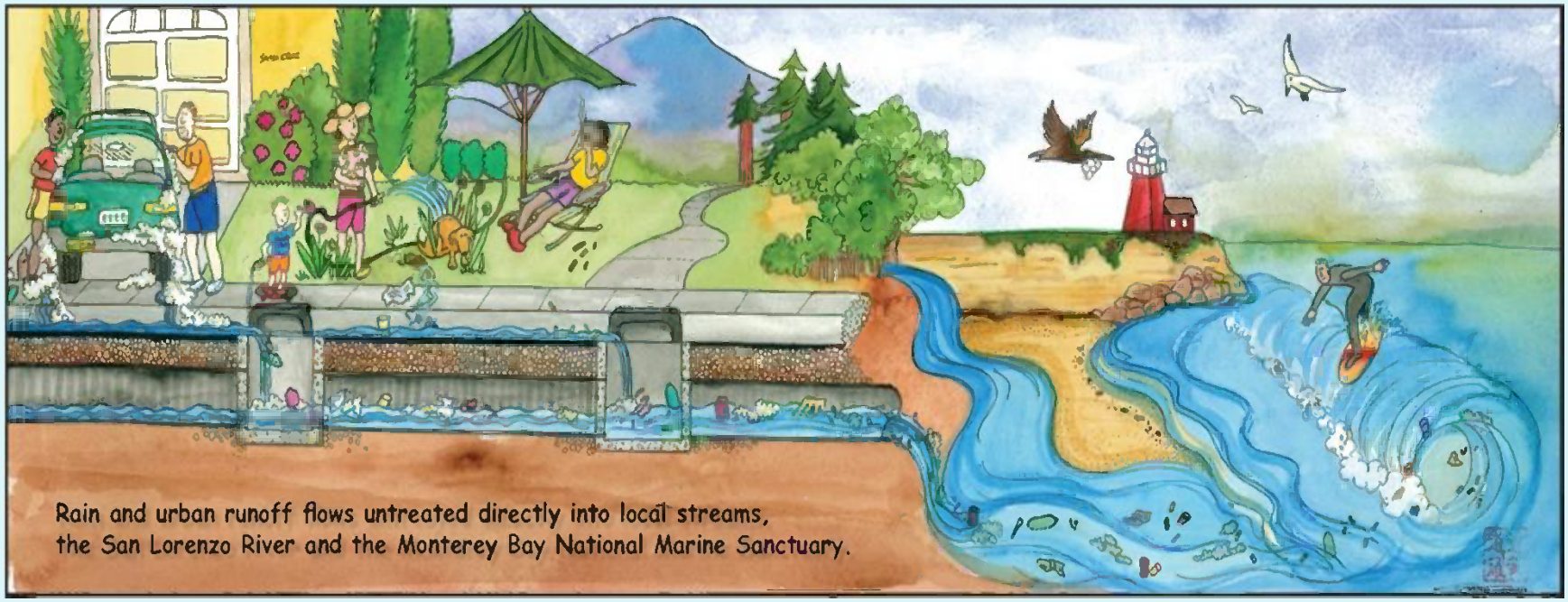
**How can I help?**
To learn about simple tips to help prevent urban runoff pollution, please visit www.sccleanocean.org or www.ocwatersheds.com.
To learn about potential volunteer opportunities (e.g. beach cleanups), please visit www.scwatersheds.com.

# City Storm Water Program and Measure E: Clean River, Beaches and Ocean Fund

## FY 2015 Highlights

Dedicated funding for programs
to prevent pollution from reaching our waterways and beaches

# Urban Runoff




Rain and urban runoff flows untreated directly into local streams, the San Lorenzo River and Monterey Bay

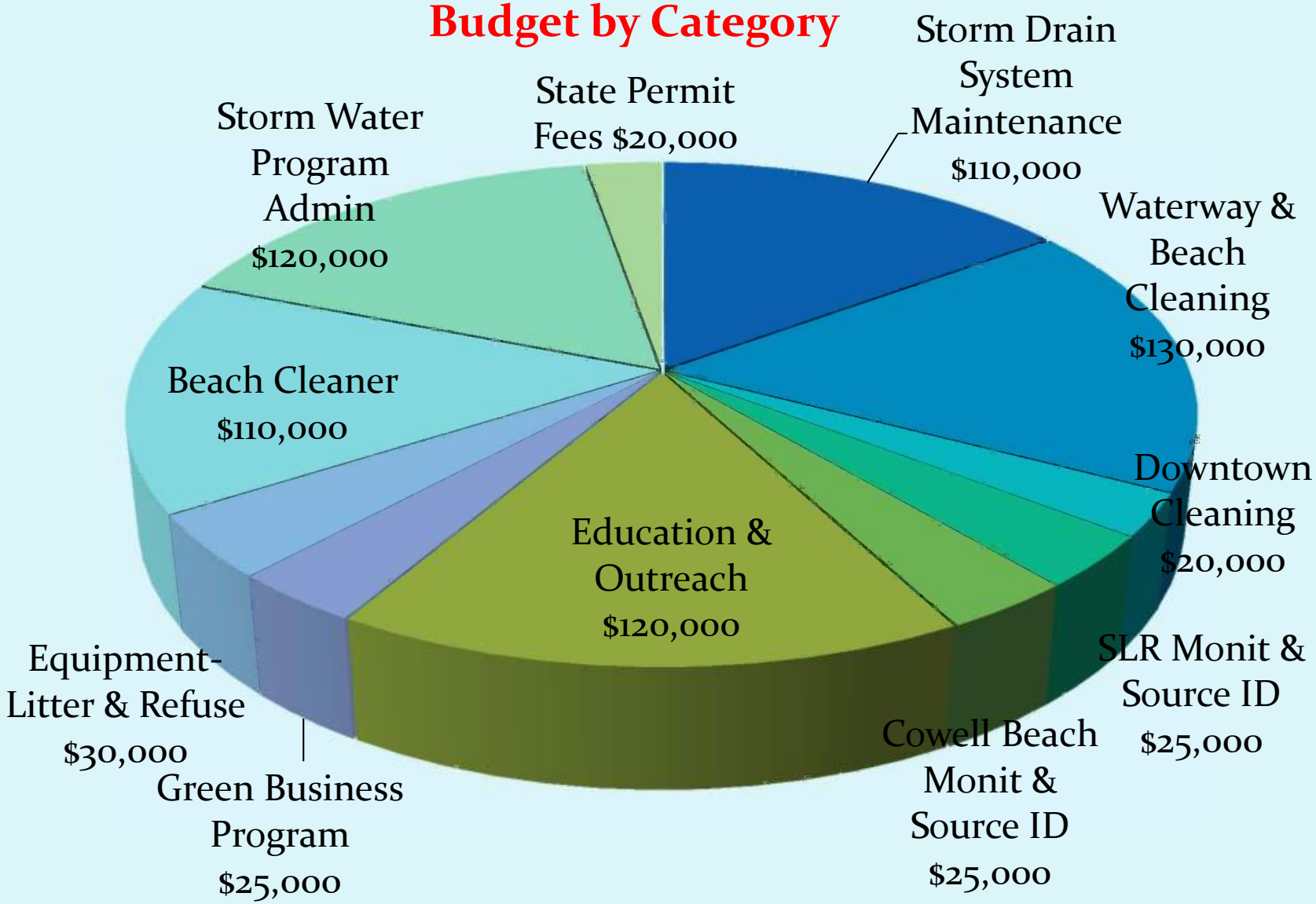
# FY 2015 Expenses

- Storm Drain System Maintenance: $110,000
- Waterway & Beach Cleaning: $130,000
- Downtown Cleaning: $20,000
- San Lorenzo River Monitoring & Source ID: $25,000
- Cowell Beach Monitoring & Source ID: $25,000
- Education & Outreach: $120,000
- Green Business Program: $25,000
- Equipment: Litter & Refuse: $30,000
- Beach Cleaner: $110,000*
- Storm Water Program Staff: $120,000
- State Permit Fees=$20,000

Revenue: $630,000  Expenses: $740,000

# FY 2015 Expenses

## Budget by Category



# Municipal Operations

## Focus on cleaning:

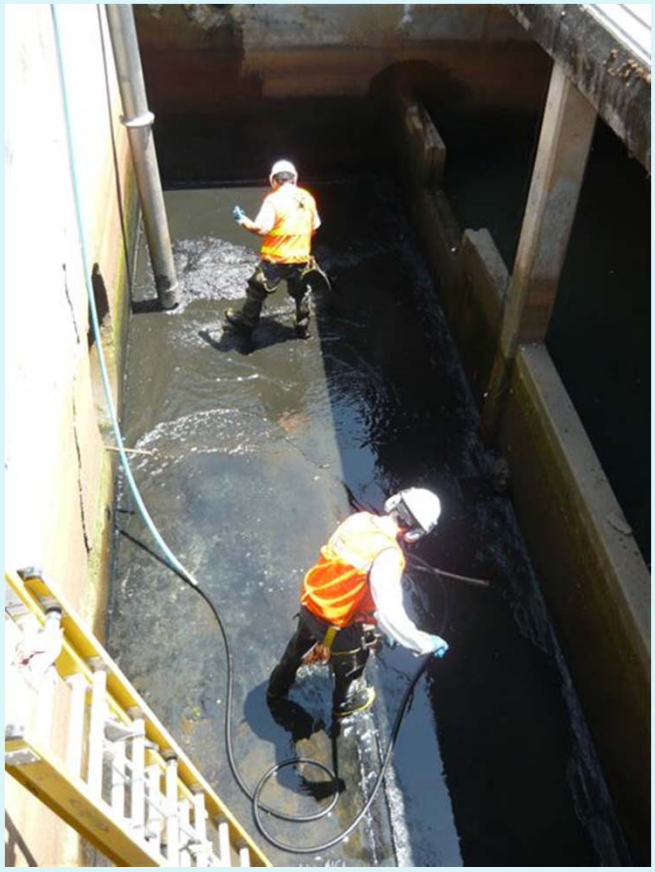
To keep debris & pollutants from flowing into the San Lorenzo River and Monterey Bay

- Storm drain pipelines
- Pump Stations
- River Toe Ditches
- Street Catch basins

# Municipal Operations

## City Crews clean:

- Storm drain pipelines-9 miles
- River pump stations-5 vaults



# Municipal Operations

## Storm Drain System Inspection & Cleaning:

- Extensive catch basin inspection & cleaning program. All downtown catch basins plus outlying areas inspected & cleaned.
  - Labor costs
  - Vactor Operation
  - Debris Disposal
  - Televising storm drain lines


**Cost: $110,000**

# Waterway, River Levee & Beach Cleaning

## Ongoing Maintenance Efforts:

- San Lorenzo River
  - Parks Temp Staff-$70,000
  - Contracted cleanups-$25,000

  Subtotal: $95,000

- Cowell & Main Beaches
  - Wharf Temp Staff $35,000

**Cost: $130,000**

# Beach Cleaning

## Beach Cleaning Machine for Cowell & Main Beaches

**Cherrington Beach Cleaner**
**Cost: $110,000**

# Waterway, River Levee & Beach Cleaning

## Parks Rangers Temp Staff-cleanups & restoration efforts

**Cost=$70,000**

# Municipal Operations

## Downtown Cleaning:

### Hand Sweeping-Hope Services


**Cost=$20,000**

# Municipal Operations

## Downtown Cleaning: Alleyways

**Cleaned by contractors**

# River Levee & Beach Volunteer Cleanups


## Save Our Shores:

- San Lorenzo River-Adopt a Levee cleanups
- San Lorenzo River-4 seasonal cleanups
- Annual Coastal Cleanup Day-beach & river cleanups
- July 4th & 5-beach outreach & cleanups
- Disposal of debris

**Cost=$25,000**

# Education & Outreach Program

## School Programs:

- O'Neil Sea Odyssey-Field trip & class 4-5th grades
- Save The Whales-K-12th Grade class presentations
- Save Our Shores-Middle & High School assemblies and classes
- ZunZun-Musical Assemblies K-6th grades

**Cost=$35,000**

# Education & Outreach Program

## Volunteer Monitoring & Stewardship:

- CWC Snapshot Day
- CWC San Lorenzo River Alliance


**Cost=$15,000**

# Education & Outreach Program

## Residential Outreach:

- Arana Gulch Watershed Coordinator
- EA-Our Water Our World: pesticides & herbicides
- EA-Green Gardner Program
- RCD-Low Impact Development
- SW agencies-Region-wide TV ads

**Cost=$15,000**

# Education & Outreach Program

## Business Outreach & Recognition:

- City Clean Ocean Business Program

- Monterey Bay Green Business Program

- Green Gardner/ Landscaping Program

**Cost=$30,000**



# Education & Outreach Program

## Litter & Illegal Dumping:

Catch Basin Labeling (SOS)


**Cost=$10,000**


Cigarette Butt "Bait Tank" containers

# San Lorenzo River Pollution Prevention

## Litter & Illegal Dumping

- Trash/Recycling and Cigarette Butt containers on SLR levee & other areas



**Cost=$15,000**

# SLR Watershed Monitoring

## State Total Maximum Daily Load Limits: San Lorenzo River

- **TMDL: Bacteria and Sediment**
- State requires monitoring, remedial measures & reports
- Monitoring of SLR, Branciforte & Carbonera Creeks by City Lab & Env Compliance Program
- Results indicate birds and sediment are primary sources of elevated bacteria levels in SLR
- City is an active partner in the SLRA led by Coastal Watershed Council (staff time, funding, specialized lab work, data sharing)

**Cost= $25,000 (Lab)**

# Cowell Beach

- City participates in Cowell Beach Working Group
- City & County both monitor Cowell Beach
- Results show low bacteria levels during winter months
- Sewer source unlikely since levels not high year round

In 2014, City added caffeine test as indicator of sewage (none found so far)
In 2015, City conducted a preliminary bacteria gradient study

# New State Requirements
# Outfall Inventory and Sampling

- Staff checked 236 storm drain outfalls
- 26 outfalls had flows during summer and were sampled
- Results showed 1 suspect outfall which led staff to identify a cracked storm drain

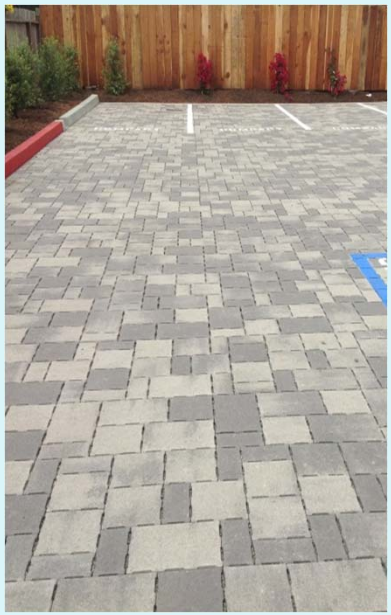
# New State Requirements
# Construction: Erosion Control

- Grading ordinance revised June 2014: Projects need to submit erosion & sediment control plans
- Increased PW and Building staff oversight of construction projects

# New State Requirements Development: Low-Impact Design

- New (2014) requirements to collect & infiltrate (sink) storm runoff on property
- Applies to private developments, retrofits, and City projects
- *Examples of LID techniques:*

**Pervious Pavement**



**Bio-retention**

**Drainage Swale**

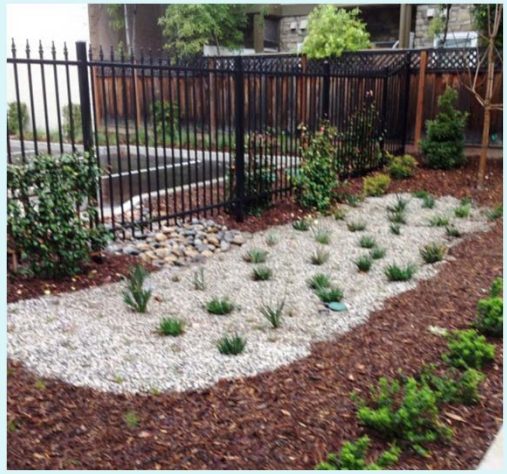
**Rain Barrel**

# Low-Impact Development on Recent Private Projects

Madrone Street (Sports Authority)


Frederick Street (Multi-family)

West Cliff Drive (Multi-family



# Low-Impact Development on Recent City Projects

Kaiser Permanente Arena

Wharf Roundabout (not vegetated yet)

Arana Gulch Multi-Use Trail

Tannery Arts New Parking Lot

# Grants & Projects

## State Prop 84 Grant: Low Impact Development Design & Build Parking Lot #9

- Goal to reduce runoff & pollutant loads to River
- LID to sink rain runoff and divert pollutants into soil


Construction completed August 2015

# Grants & Projects

## State Prop 84 Grant: Low Impact Development Parking Lot #9

- Sloping & curb cuts to bio-swales redirect 75% of lot runoff

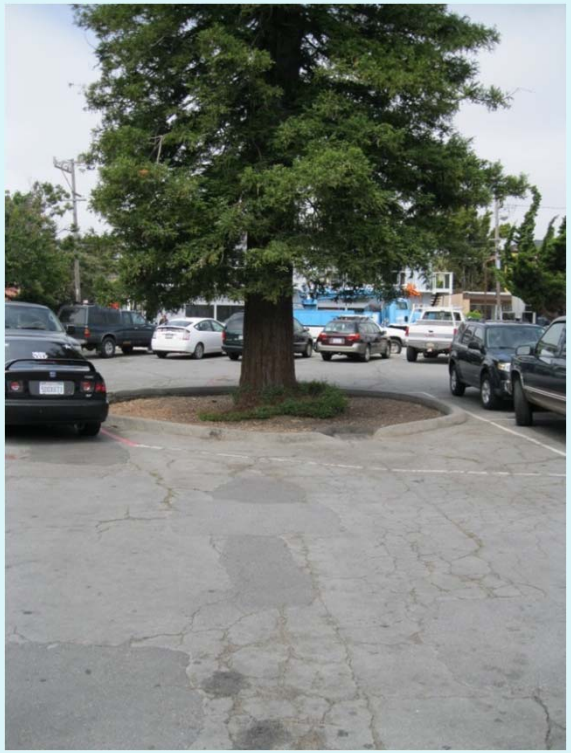
# Grants & Projects

## Bio-swales installed to sink rain runoff & filter pollutants

*Vegetated bio-swale with curb cuts*

# Grants & Projects

## Bio-swales installed to sink rain runoff & filter pollutants



*Vegetated bio-swale with curb cuts*

# Grants & Projects

## State Prop 84 Grant: Low Impact Development Design & Build Parking Lot #9

- Lot repaved as part of project
- Match $40,000 from FY14 budget

# Grants & Projects

## State Clean Beaches Initiative Grant & CIP Project

- Neary Lagoon Storm Drain Improvement Project
- Goal: Reduce bacteria levels at Cowell Beach
- Storm drain pipes exit at Cowell Beach-buried under sand in summer


Neary Lagoon Beach Outlet Vault

# Grants & Projects

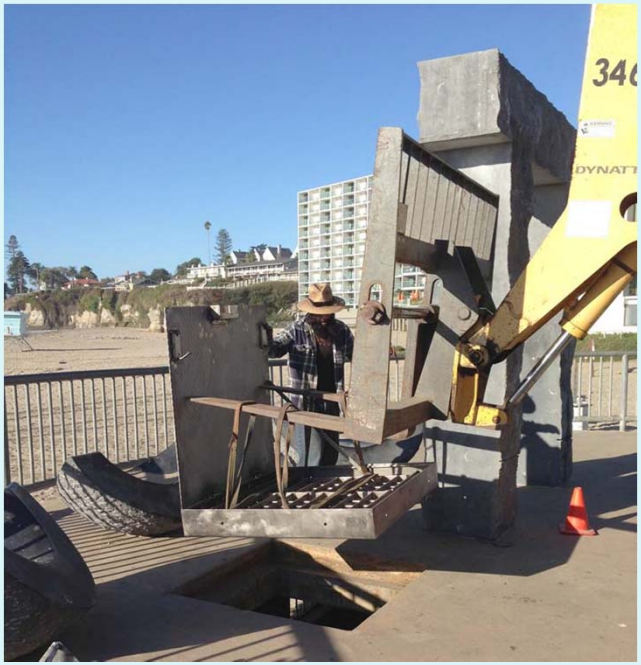
Neary Lagoon

## Gates closed in Summer & opened in Winter

Installed Spring 2014

# Grants & Projects

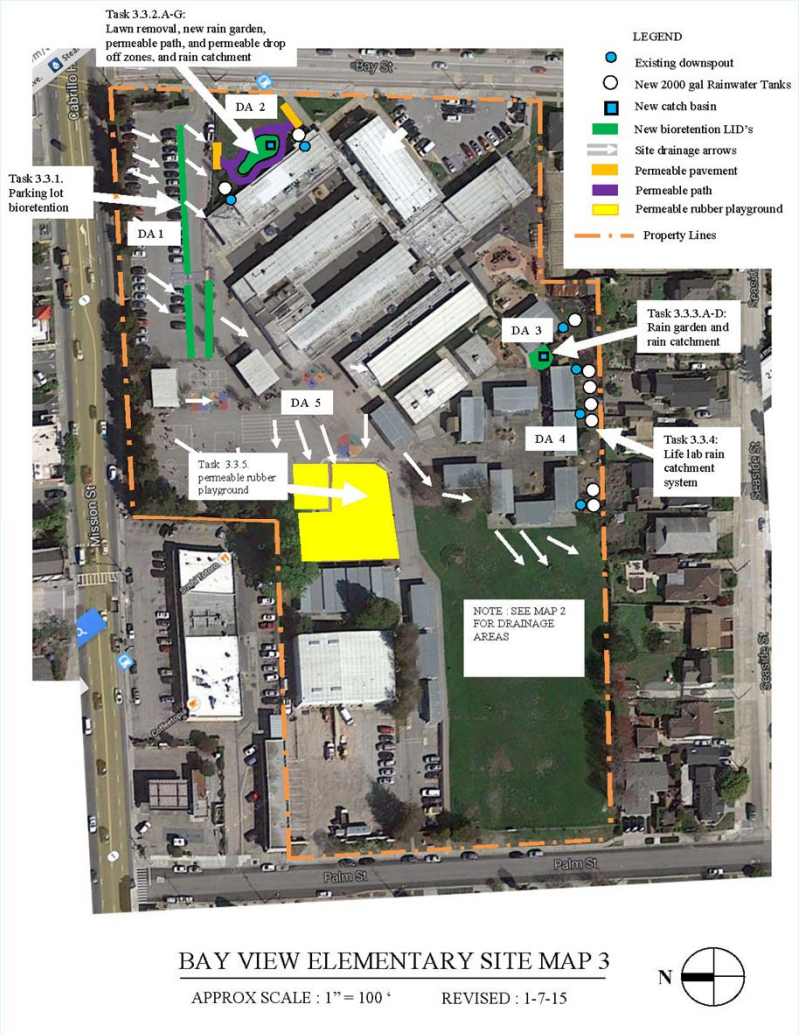
- New hatch at beach outlet vault
- Temp steel plate on gravity pipe opening at beach during summer
- Neary pump station & storm drain lines now cleaned late Spring & Fall



# Grants & Projects

## State DROPS Grant: Low Impact Design for Schools

- City partnered w/Santa Cruz City Schools and UCSC IDEASS
- $486,000 Grant Awarded to SC City Schools for Bay View Elementary
- Retrofit LID project: Bio-swales, pervious playground, and rain water catchment/cisterns
- City cost $15,000 (FY16) towards large rain garden and educational signage



# The End

News

# Palo Alto proceeds with storm water management fee increase

By **JACQUELINE LEE** | jlee1@bayareanewsgroup.com |
PUBLISHED: August 30, 2016 at 2:48 pm | UPDATED: August 31, 2016 at 7:56 am

PALO ALTO — Money from a proposed increase in storm water management fees would be spent more on operating costs than capital improvements, Palo Alto City Council decided on Monday, reversing a decision made earlier this year.

The council previously approved a resolution calling for a monthly fee of $13.65, up from $13.03.

The breakdown of the increased bill was going to be $6.62 as the base amount and $7.03 for capital improvements. Now, the allocation is reversed so that $7.48 is the base and $6.17 is for improvements.

City staff told council members that initial calculations were off because they were based on fiscal year 2016, rather than 2017, and more money is needed for operating costs.

A public protest hearing on the rate hike is set for Oct. 24. Property owners can file written opposition to the fee increase until then. If a majority does so, then the council has to terminate the fee increase process.

If there is no majority opposition, then the city will conduct a mail ballot election on the fee increase between Jan. 11 and Feb. 28.

If approved, the new fees would go into effect June 1 and generate about $6.9 million in revenue annually for the next 15 years.

In early 2015, the city identified about $37 million worth of capital improvements that are needed.

Property owners currently pay about $12.63 per month in storm drain bills.

Current fees will expire in June. If no action is taken to approve updated fees, then the rates will revert to $4.25, an amount property owners approved in 2005, which city leaders say is not enough to maintain operations.

Email Jacqueline Lee at jlee1@bayareanewsgroup.com or call her at 650-391-1334; follow her at twitter.com/jleenews.

**Jacqueline Lee** Jacqueline Lee is a reporter covering Palo Alto for the Bay Area News Group. Lee is an LA native and alum of USC Annenberg.

Follow Jacqueline Lee @jleenews




Environment

Commercial Sewer Service Charge

Residential Sewer Service Charge

Contact Us

City of San José
Revenue Management – Sewer Billing Unit

200 East Santa Clara Street
4th Floor
San José, CA 95113

Phone: (408) 535-7055

Home > Environment > Utility Services > Stormwater > Storm Sewer Service Charge

## Storm Sewer Service Charge

### Storm Sewer Service Charge Rate

The Storm Sewer Service Charge rate structure charges users of the storm sewerage system in San José based on the relative quality and quantity of stormwater runoff contributed by residential, commercial, institutional, and industrial properties. The rate structure apportions the costs of storm sewer service to properties in proportion to their relative contribution of flow and pollution to the storm sewer system.

Rates are computed to recover projected costs of the following:

- Stormwater pollution control and permit compliance
- Management, operation, maintenance, and rehabilitation of the storm sewer system
- Improvements to the storm sewer system
- Street sweeping
- Administrative services

Storm Sewer Service Charge rates are reviewed and adjusted annually, as cost and service demand levels change. The current rate structure for storm sewerage services described below became effective July 1, 2011, with San José City Council adoption of Resolution No. 75857 on June 14, 2011. The rates are structured for the estimated cost recovery requirements and the service demand levels of Fiscal Year 2011-12. View the current residential rates and commercial rates.

For Fiscal Years 2013-14, 2014-15, and 2015-16, no rate increases were adopted. Rates maintain at the same level as Fiscal Year 2011-12.

If you have questions regarding rates for storm sewerage service, please call us at (408) 535-7055.

# Sewer and Storm Water Fees

The charts below provide information on Sewer Fees and Storm Water Fees in the City of Alameda.

## SEWER SERVICE FEE, CITY OF ALAMEDA

| | FY2016 | FY2017<br>% Increase<br>3.0% | FY2018<br>% Increase<br>3.0% | FY2019<br>% Increase<br>3.0% | FY2020<br>% Increase<br>3.0% |
|---|---|---|---|---|---|
| **Single Family ($/month)** | **$23.93** | $24.65 | $25.39 | $26.15 | $26.93 |
| **Multi-Family ($/month)** | **$21.54** | $22.19 | $22.86 | $23.55 | $24.26 |
| **Commercial**<br>Fixed Charge ($/month)<br>(includes first 730 cubic feet) | **$21.54** | $22.19 | $22.86 | $23.55 | $24.26 |
| **Flow-Based Rate**<br>($ per Hundred cubic feet ) | **$2.96** | $3.05 | $3.14 | $3.23 | $3.33 |

# STORM WATER FEE, CITY OF ALAMEDA

The Fee is based on the amount of pollution that the City estimates enters the municipal storm water system as a result of the installation or maintenance of impervious surfaces.
2,000 square feet of impervious surface = 1 Impervious Surface Unit (ISU)

The Fee is calculated according to the following formula:
Number of Impervious Surface Units **(ISU)**
**multiplied by**
Fee per Equivalent Residential Unit **(ERU)**

| | Storm Water Fee |
|---|---|
| **Typical Single Family Residential Parcel**<br>A typical residential parcel has 5,000 square feet of surface area. 40 percent, or 2,000 square feet, is comprised of impervious surface (1 ISU). | **$56.15**<br>(1 Equivalent Residential Unit fee) |
| **Condominium (per unit)**<br>A typical condo unit has 600 square feet of impervious surface area (0.3 ISU). | **$16.85**<br>(0.3 x 1 ERU) |

**Other parcels with Impervious Surfaces** are subject to the Fee based upon stated formula Fee: Number of ISUs **multiplied by** Fee per ERU.

# MEASURE CW

## The Clean Water, Clean Beach Parcel Tax

During the November 8, 2016 Special Municipal Election, Culver City residents voted on Measure CW, the Clean Water, Clean Beach Parcel Tax. The results are as follows: YES - 73.82%; NO - 26.18%. Funds raised by Measure CW will be used for improvements in water quality in Ballona Creek, Marina del Rey, Santa Monica Bay, and the Pacific Ocean. Measure CW required approval by 2/3 of those voting on the measure to pass.

### Need for Measure CW

Dangerous bacteria, pesticides, toxic chemicals, oil and grease, trash and other pollutants are deposited on our roadways and flow into Ballona Creek, Marina del Rey, and the ocean through our storm drains, by rain, and other runoff water. These pollutants harm fish and wildlife, cause illness and infections for swimmers and surfers, and make beaches unsafe and unsightly for families and visitors. The State and Regional Water Quality Control Boards have implemented very strict pollution reduction regulations for storm water runoff. These regulations require the City of Culver City to develop and implement programs to reduce and prevent water pollution.

### Purpose of Measure CW

Measure CW establishes an annual Clean Water, Clean Beaches Parcel Tax in the City of Culver City. Measure CW was placed on the ballot by the City Council of the City of Culver City to create a dedicated source of funding to pay for water quality programs that will prevent pollution from reaching our waterways, beaches and the Ballona Creek Estuary. Measure CW required approval by 2/3 of those voting on the measure.

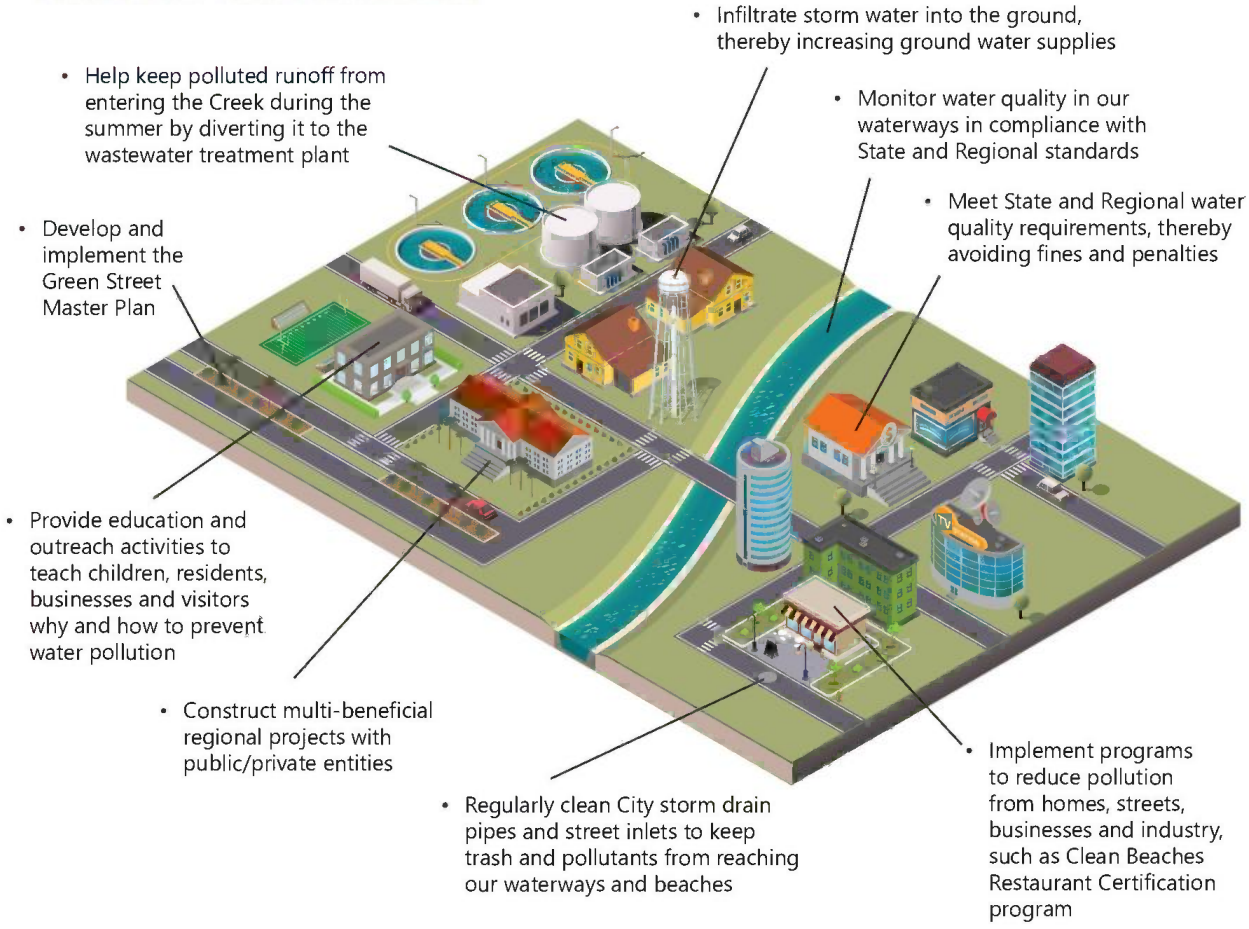
### Cost of Measure CW

- $99 annually per single family residential parcel
- $69 annually per multi-family residential dwelling unit
- $1,096 annually per acre of land or portion thereof for non-residential

Each parcel owner of a non-residential property will be taxed $1,096 per acre of land (or portion thereof) annually. The $1,096 will be pro-rated for non-residential parcels less than one acre. For example, a non-residential parcel of one-half acre will be taxed $548. Land owners are taxed, not individual businesses located on the non-residential property. For larger parcels with multiple tenants, the land owner will receive one bill based on the size of the parcel, not the tenants.

Tax-exempt parcels will not be charged. Charges will first appear on the tax statements in fall 2017. Measure CW is expected to generate about $2 million per year. All Measure CW money will be used here in Culver City to reduce water pollution.

## What will it be used for?




### Use of Measure CW Funds

Measure CW funds will be placed in a special Clean Water, Clean Beaches Fund, and funds must be used exclusively for reducing and preventing water pollution and managing storm water and urban runoff. The Financial Advisory Committee will oversee how the funds are spent.

What you need to know about Measure CW.

View the quick Fact Guide on Measure CW.

## Click below for important information on Measure CW

- Full Ballot Measure Text
- Argument in Favor
- Impartial Analysis

### Click Below for the Enhanced Watershed Management Programs and Coordinated Integrated Monitoring Plans

**Ballona Creek**

Enhanced Watershed Management Program for the Ballona Creek Watershed

Coordinated Integrated Monitoring Program (CIMP) for the Ballona Creek Watershed

**Marina Del Rey**

Marina del Rey Enhanced Watershed Management Program Plan

Marina del Rey Coordinated Integrated Monitoring Program

## City Contacts

Charles Herbertson, P.E. and L.S., Public Works Director and City Engineer e-mail or (310) 253-5635

Jeff Muir, Chief Financial Officer e-mail or (310) 253-5865

L.A. NOW LOCAL

# L.A. County votes to put new property tax before voters to clean storm water

By NINA AGRAWAL JUL 17, 2018 | 6:05 PM



Rainwater collects in 2017 on Klump Avenue in Sun Valley, an area prone to street flooding in stormy weather. (Luis Sinco / Los Angeles Times)

Los Angeles County supervisors voted Tuesday to place a property tax before voters in November to raise money for projects to capture and clean storm water.

The measure would allow the county to levy a tax of 2.5 cents per square foot of “impermeable space” on private property.

Government buildings, public schools and nonprofit organizations would be exempt.



Revenue from the tax, estimated to amount to $300 million annually, would fund the construction, operation and maintenance of projects that collect, clean and conserve storm water. The average tax for a single-family house would be $83.

Advocates of the Safe, Clean Water Program say it would improve water quality, enabling cities across the county to comply with federal clean water regulations as well as increase the local water supply.



“Can we ensure an adequate water supply for the future? Can we improve water quality? Can we make sure beaches are clean? The answer, happily, thanks to all of your work, is yes,” said Supervisor Sheila Kuehl, who has led the effort.

“L.A. County is heavily reliant on imported water and faces an uncertain future,” Department of Public Works Director Mark



FOR THE RECORD

JUL 17, 2018 | 9:45 PM

A previous version of this story said fines for failing to clean up water discharged into local waterways would total $20 billion over 20 years. That is L.A. County's estimated cost of compliance with the regulations.

LATEST L.A. NOW

Man charged with felony vandalism in attack on Trump's Walk of Fame star
23m

Ex-police officer at center of LAPD cadet scandal pleads no contest to statutory rape charges
1h

California's largest fire ever keeps growing
2h

L.A. temporarily banned rental scooters in March. So why are they everywhere?
3h

Yosemite reopens to a surreal scene of smoke, tourists and flames in the distance
5:00 AM

Pestrella said in a presentation before the board Tuesday. “Storm water capture systems are a sound investment in our water security efforts.”

More than 100 billion gallons of storm water is lost to the ocean from L.A. County every year, carrying with it 4,200 tons of trash and pollutants.

With the Safe, Clean Water Program in place, the county could capture up to 42 billion of those gallons, Pestrella said.

Though benefits to the water supply have been a major selling point for Kuehl and Pestrella, the primary goal of the program is to help cities meet costly water-quality mandates.

Under the federal Clean Water Act and related permits given out by the state, cities must clean up the water they discharge into local waterways or face possible costly fines and lawsuits. Compliance with the regulations is estimated to cost L.A. County a total of $20 billion over 20 years.

“We’ve got 88 cities in the county who have been unable to fully address water quality issues because there is no source of funding,” Kuehl said. “And the deadline to meet the requirements is getting closer and closer.”

More than 100 people spoke at Tuesday’s hearing, most in support of the proposed ballot measure.

Some cited the potential for job creation and benefits for disadvantaged communities, which are identified as a priority under the program.

“We support [this measure],” said Luis Melliz of the Council of Mexican Federations, an L.A.-based nonprofit. “Our most vulnerable communities suffer disproportionately from high flood risk, poor air quality, poor water quality, extreme heat ... and lack of green space.”

Others cited concerns about fairness to those who have already taken measures to mitigate storm water runoff and about the lack of a sunset date for the tax.

The program would grant credits to parcel owners who can show they already capture or treat storm water or have reduced the amount of runoff from their property, but they would have to recertify their eligibility every two years.

The proposed ordinance would reevaluate the need for the program after 30 years and possibly reduce the tax at that time, but it makes no guarantees.

Although the L.A. Chamber of Commerce formally adopted a neutral position on the measure at the last minute, other business groups continue to oppose it.



Mike Lewis of BizFed called the credit provisions burdensome, costly and "designed to discourage people from applying."

Peter Herzog of NAIOP, a commercial real estate organization, said attention had been diverted from the fact that the measure is "a brand new, permanent tax" with no implementing regulations yet attached.

Supervisor Kathryn Barger cast the lone dissenting vote.

"If this were a parcel tax that dealt strictly with the [storm water discharge] permit on compliance, I would be a yes vote today," she said. "I just can't vote for something that goes above and beyond at a time when I feel we need to be fiscally responsible."

The tax, which will appear on the Nov. 6 ballot, will need approval from two-thirds of voters.



Nina Agrawal CONTACT

Nina Agrawal is a staff writer for the Los Angeles Times. She previously reported for WLRN-Miami Herald News and for the Latin American affairs magazine Americas Quarterly. A Southern California native, Agrawal is a graduate of the University of Pennsylvania and Columbia University's Graduate School of Journalism and School of International and Public Affairs.

Orange County candidates who lost June primary say rival entered race just to lure away GOP votes

17m

PETA calls for boycott of family film 'Alpha' over alleged mistreatment of animals

29m

Twitter restricts far-right conspiracy theorist Alex Jones' account for a week

47m

# ATTACHMENT G

# APPROVAL LETTERS FOR TRASH PROVISIONS

# State of California
# Office of Administrative Law

| | |
|---|---|
| **In re:**<br>**State Water Resources Control Board** | **NOTICE OF APPROVAL OF REGULATORY ACTION** |
| **Regulatory Action:** | **Government Code Section 11353** |
| **Title 23, California Code of Regulations** | |
| **Adopt sections: 3008**<br>**Amend sections:**<br>**Repeal sections:** | **OAL Matter Number: 2015-1016-05** |
| | **OAL Matter Type: Regular (S)** |

On April 7, 2015, the State Water Resources Control Board (SWRCB) adopted Resolution 2015-0019, which approved an "Amendment to the Water Quality Control Plan for Ocean Waters of California to Control Trash" and "Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries" to provide a consistent regulatory approach to reduce trash in state waters. The amendments include six primary elements: a narrative water quality objective, a prohibition of discharge, corresponding applicability, implementation provisions, a time schedule, and monitoring and reporting requirements.

OAL approves this regulatory action pursuant to section 11353 of the Government Code.

Date: December 2, 2015

Lindsey S. McNeill
Attorney

For: DEBRA M. CORNEZ
Director

Original: Thomas Howard
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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OFFICE OF THE
REGIONAL ADMINISTRATOR

JAN 12 2016

Tom Howard, Executive Director
State Water Resources Control Board
P.O. Box 100
Sacramento, California 95812-100

Subject: USEPA Clean Water Act Approval Action on State Trash Water Quality Standards

Dear Mr. Howard:

Pursuant to section 303(c) of the Clean Water Act ("CWA") and 40 C.F.R. Part 131, I am pleased to approve California's groundbreaking water quality standards aimed specifically at curbing water pollution by trash throughout the state.

Section 303(c) of the CWA requires the U.S. Environmental Protection Agency to approve or disapprove new or revised state water quality standards. The standards subject to today's action were adopted by State Water Resources Control Board Resolution 2015-0019 on April 7, 2015 as part of Amendments to the Water Quality Control Plan for Ocean Waters of California to Control Trash (Appendix D of the Staff Report) and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries of California (Appendix E of the Staff Report) (collectively the "Trash Amendments" or "Amendments"),[1] and approved by the California Office of Administrative Law on December 3, 2015. The standards are in the form of the following narrative water quality criteria (referred to as "water quality objectives" by applicable California law and the Amendments):

> For the Ocean Plan: "Trash shall not be present in ocean waters, along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance."
>
> For the Inland Surface Waters and Enclosed Bays and Estuaries Plan: "Trash shall not be present in inland surface waters, enclosed bays, estuaries, and along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance."

[1] The public process leading to Resolution 2015-0019, which included notice of opportunity for public comment, public meetings, and written response to comments, is consistent with the procedural requirements of CWA section 303(c) and its implementing regulations, including 40 C.F.R. §131.20.

The narrative criteria apply to all surface waters of the state.[2] While existing narrative criteria in the Ocean Plan and individual regional Basin Plans refer only in general and varied terms to trash-related pollutants (such as floatables, foam, and sediments), these criteria define "trash" as "[a]ll improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials." As noted in the State Board's Final Staff Report for the Trash Amendments, this new definition of trash is meant to be inclusive: it encompasses both "litter" in the California Government Code and "waste" in the California Water Code and has no size limitation. Its coverage ranges broadly from plastic bags and bottles, expanded styrene, cigarette butts, cardboard, green waste, to smaller forms of trash such as preproduction plastic pellets.

Together, the water quality criteria for trash approved by EPA today[3] mark California's - and the Nation's - first articulation of a uniform water quality standard to address the far reaching impacts of trash of all types as a specific pollutant on a statewide scale. This is a milestone development in breadth of scope and clarity of focus towards our collective goal of trash-free waters, especially given California's considerable size, population, and coastline. With EPA's approval action, these narrative water quality criteria take effect for CWA purposes and are to be implemented and complied with through the National Pollutant Discharge Elimination System (NDPES) permits - the chief federal point source pollution control mechanism.

The Trash Amendments further couple the trash criteria with a comprehensive program of implementation built on the substantial experience developed at regional and local levels, especially the Los Angeles Region. Although this implementation program is not part of today's Section 303(c) approval action, it is worth highlighting here.

Much trash is generated on land and transported to waterways, riverbeds, shorelines, seafloor, and oceans via storm drains. The implementation program tackles this problem by prohibiting the discharge of trash through tailored and practical land-based controls and making them enforceable and reportable NPDES storm water permit requirements for municipal separate storm sewer systems, the California Department of Transportation, and industrial, commercial and construction activities. Under this scheme, California's municipalities and other applicable storm water permit holders must comply with the prohibition either by installing full trash capture systems in high trash-generating areas, or by demonstrating full capture system equivalency with a combination of trash capture devices and institutional and structural controls, such as increased street sweeping, educational outreach, and low impact or multi-benefit development. Rigorously implemented, these measures will advance statewide consistency in meeting the narrative trash criteria.

[2] The exceptions are waters within the Los Angeles Water Quality Control Board with existing total maximum daily loads for trash.

[3] EPA has initiated consultation on this approval action with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service under Section 7(a)(2) of the Endangered Species Act and retains the discretion to revise the approval in the unlikely event that the consultation results in the need for further EPA action.

Trash has widespread adverse effects on aquatic and marine habitats and life, public health, navigation, commerce, and recreation. The enormity of trash accumulating in our oceans has made marine debris a pressing global environmental challenge. I commend the State Board for its leadership in making the Trash Amendments a statewide regulatory mandate and a national model, and your staff for their tireless fact-finding and public engagement work in the years leading to the Amendments. I look forward to our continued cooperation to rid our rivers, lakes and marine environments of trash.

Sincerely,

Jared Blumenfeld

cc: Felicia Marcus, Chair, State Board
Rik Rasmussen, Division of Water Quality, State Board

# ATTACHMENT H-1

# WATER QUALITY CONTROL PLAN FOR THE SAN DIEGO REGION (BASIN PLAN)

# Water Quality Control Plan

## FOR THE SAN DIEGO BASIN

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

# WATER QUALITY CONTROL PLAN
## FOR THE SAN DIEGO BASIN (9)

**SEPTEMBER 8, 1994**

**(with amendments effective on or before May 17, 2016)**


**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD**

**SAN DIEGO REGION**

# WATER QUALITY CONTROL PLAN FOR THE SAN DIEGO BASIN (9)

Adopted by the
California Regional Water Quality Control Board
San Diego Region
on September 8, 1994

Approved by the
State Water Resources Control Board
on December 13, 1994
and the
Office of Administrative Law
on April 26, 1995

(with amendments effective on or before May 17, 2016)

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# FOREWORD

The most basic goal of the California Regional Water Quality Control Board, San Diego Region (Regional Board) is to preserve and enhance the quality of water resources in the San Diego Region for the benefit of present and future generations. The federal Clean Water Act and the California Porter-Cologne Water Quality Control Act require that the Regional Board adopt a water quality control plan to guide and coordinate the management of water quality in the Region. The purpose of the plan is to: (1) designate beneficial uses of the Region's surface and ground waters; (2) designate water quality objectives for the reasonable protection of those uses; and (3) establish an implementation plan to achieve the objectives. In conformance with this legislative mandate, the Regional Board adopted the *Comprehensive Water Quality Control Plan for the San Diego Basin* (Basin Plan) in 1975. The Regional Board subsequently adopted numerous amendments modifying specific Basin Plan water quality standards and policies to reflect current water quality conditions and priorities.

Over twenty years have passed since the Basin Plan was published in 1975. In the ensuing years the San Diego Region population has continued to grow and approaches to water quality management have changed. Water quality management has become a complex mix of public input, environmental legislation and regulations, regulatory programs, research, and litigation. Pollution from point source discharges such as sewage treatment plants and industry has largely been controlled through stringent pollution control laws and the efforts of the Regional Board and other agencies. The focus of the Regional Board's regulatory efforts in the coming years will be surface water bottom sediment contamination, ground water contamination and nonpoint sources of pollution. These concerns are the greatest remaining threats to water quality. To address these remaining challenges, pollution prevention needs to be emphasized and the cumulative effects of pollution on entire watersheds must be considered. These changes in the complexity and emphasis of the Regional Board's water quality program have resulted in the need for a major update and rewrite of the 1975 Basin Plan.

This Basin Plan, the *Water Quality Control Plan for the San Diego Basin* (9) was adopted by the Regional Board on September 8, 1994. It supersedes the previous 1975 Basin Plan and its amendments. Public involvement was extensive in the development and adoption of this Basin Plan. The Regional Board held several public hearings and workshops to allow interested persons, organizations, and governmental agencies an opportunity to comment on the content and adequacy of the Basin Plan prior to its adoption. All comments were responded to in writing and the Regional Board carefully considered them in developing the final Basin Plan. The Regional Board appreciates the efforts of all those who contributed a substantial amount of time and effort in commenting on the earlier administrative drafts.

The six chapters of this Basin Plan together comprise the "*blueprint*" plan the Regional Board will use for water quality management and control in the San Diego Region. Chapter 1 provides a summary overview of the physical features of the San Diego Region, the functions of the State and Regional Board, and the legal basis and authority for the Basin Plan. Chapter 2 designates the beneficial uses of surface and ground waters to be protected. Chapter 3 designates the water quality objectives necessary to ensure the reasonable protection of the beneficial uses. Chapter 4 describes the implementation plan for achieving and maintaining the beneficial uses and water quality objectives. The implementation plan describes the key Regional Board regulatory programs and policies the Board uses to manage and control water quality. The implementation plan also designates certain conditions and areas where waste discharges are prohibited. Chapter 5 describes applicable statewide water quality policies and plans developed by the State Water Resources Control Board. Finally, Chapter 6 provides a summary description of the Regional Board water quality monitoring and surveillance program.

This Basin Plan is a dynamic rather than fixed document and is always subject to modification based on changing needs and circumstances. Accordingly, the Regional Board will periodically consider changes to this Basin Plan as necessary and at a minimum of every three years. The Regional Board will continue to place a high priority on keeping the Basin Plan current with respect to applicable laws, policies, technologies, water quality conditions, and priorities in the Region.

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# 1. INTRODUCTION

## *INTRODUCTION*

In California, the regulation, protection and administration of water quality are carried out by the State Water Resources Control Board (State Board) and nine California Regional Water Quality Control Boards. The State Board consists of five full-time members appointed by the Governor for four year terms. In general, the State Board has overall responsibility for setting statewide policy on the administration of water rights and water quality control in California. The work of the State Board is carried out by a technical, legal, and administrative staff supervised by an executive director.

In recognition of the regional differences in water quality and quantity, the State is divided into nine regions (see Figure 1-1) for the purposes of regional administration of California's water quality control program. Each of the nine regions has a California Regional Water Quality Control Board (Regional Board) comprised of nine part-time members who are appointed by the Governor for four year terms. The regional boards are responsible for adoption and implementation of water quality control plans, issuance of waste discharge requirements, and performing other functions concerning water quality control within their respective regions, subject to State Board review or approval. The work of each regional board is carried out by a technical and administrative staff supervised by an executive officer.

Each of the nine regional boards is required to adopt a Water Quality Control Plan, or Basin Plan, which recognizes and reflects regional differences in existing water quality, the beneficial uses of the Region's ground and surface waters, and local water quality conditions and problems. This document is called the *Water Quality Control Plan for the San Diego Basin (9)*. (The terms Water Quality Control Plan and Basin Plan are used interchangeably throughout this document.)

There are two types of Water Quality Control Plans, Regional Board Basin Plans such as this document and statewide Water Quality Control Plans such as the *Ocean Plan* and *Thermal Plan*. Statewide plans are discussed in Chapter 5, *Plans and Policies*. Key terms and abbreviations used throughout this Basin Plan are included as a glossary and acronyms respectively, in Appendix A.

## *FUNCTION OF THE BASIN PLAN*

The San Diego Regional Board's Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan: (1) designates beneficial uses for surface and ground waters; (2) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's antidegradation policy; (3) describes implementation programs to protect the beneficial uses of all waters in the Region; and (4) describes surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan [California Water Code sections 13240 thru 13244, and section 13050(j)]. Additionally, the Basin Plan incorporates by reference all applicable State and Regional Board plans and policies.

The goal of the Regional Board is to achieve a balance between the competing needs of mankind for water of varying quality. Often times the constituents and quality of water needed to protect various beneficial uses will be different. The Basin Plan is the Regional Board's plan for achieving the balance between competing uses of surface and ground waters in the San Diego Region. Accordingly, this Basin Plan establishes or designates beneficial uses and water quality objectives for all the ground and surface waters of the Region. Beneficial uses are the uses of water necessary for the survival and well being of man, plants and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals of mankind. Water quality objectives are the levels of water quality constituents or characteristics which must be met to protect the beneficial uses. This Basin Plan also establishes an implementation program describing the actions by the Regional Board and others that are necessary to achieve and maintain the designated beneficial uses and water quality objectives of the Region's waters.

The Regional Board regulates waste discharge and reclaimed water use to minimize and control adverse effects on the quality and beneficial uses of the Region's ground and surface waters.


**VICINITY MAP, BASIN PLANNING AREAS**

Figure 1 - 1.

The Regional Board issues permits, called *"waste discharge requirements*" and "*master reclamation permits*" which require that waste and reclaimed water not be discharged in a manner that would cause an exceedance of applicable water quality objectives or adversely affect beneficial uses designated in the Basin Plan. The Regional Boards enforce these permits through a variety of administrative means.

## GEOGRAPHICAL SETTING

The geographical setting of the San Diego Region results in a number of physiographic and environmental characteristics. A discussion of each of the major elements is presented in the following subsections.

### PHYSIOGRAPHY

The San Diego Region occurs within the Peninsula Range Physiographic Province of California. One of the most prominent physical features in the region is the northwest-trending Peninsula Range which includes from north to south, the Santa Ana, Agua Tibia, Palomar, Volcan, Cuyamaca and Laguna mountains. The region exhibits a gently sloping dissected western surface and a steep eastern slope and is separated from the West Colorado River area (Region 7A) by abrupt fault scarps of marked relief.

The San Diego Region is divided into a coastal plain area, a central mountain-valley area, and an eastern mountain valley area. The coastal plain area comprises a series of wave cut benches covered by thin terrace deposits. This terraced surface has been deeply dissected by streams draining to the sea, and has been smoothed and rounded by local erosion. The surface of this area ranges from sea level to about 1,200 feet (ft) and extends from the coast inland in a band of about 10 miles in width. The central mountain-valley area is characterized by ridges and intermontane basins which extend from the coastal plain, northeastward to the Elsinore fault zone. The basins or valleys range in elevation from 500 to about 5,000 ft and are generally of fault block origin modified by erosion. The floors of the intermontane valleys are generally underlain by moderate thicknesses of alluvium and residuum; notable examples occur near El Cajon, Escondido and Ramona which range in elevation from about 500 to 1,500 ft above sea level. At higher elevations plateau surfaces have been developed in the central mountain-valley area. These surfaces are probably also of erosional origin; they occur at elevations ranging from 2,000 to 6,000 ft near the Laguna mountains, Santa Ysabel and Valley Center.

To the northeast of the Elsinore fault zone, the region has been designated as the eastern mountain-valley area. The area contains broad, relatively flat valleys which are structurally of block fault origin. Locally, the grabens contain thick sections of alluvial deposits. These valleys generally rise to the southeast from about 1,000 ft elevations near Temecula to the rolling plateaus of Glenoak, Lewis and Reed valleys which range from 3,000 to 3,500 ft in elevation. Surrounding mountains including Red mountain, Cahuilla mountain and Bachelor mountain, attain elevations ranging from 4,000 to 7,500 ft.

### CLIMATE

The San Diego Region's coastal climate is generally mild. Temperatures average about 65 degrees Fahrenheit (° F) and precipitation averages 10 to 13 inches. Proceeding inland, as elevations increase, average temperatures decline to 57° F in the Laguna mountain area and precipitation increases to more than 45 inches in the Palomar mountain area. Most of the precipitation falls during November through February. Temperature and rainfall intensity variations are larger in the inland portions. The maximum rainfall intensity was recorded as 11.5 inches in 90 minutes, at Campo on August 12, 1891. Precipitation occurs principally as rain, with snow common only in the high mountains. Runoff in the Region results mainly from rainfall. The melting of snowpack and surfacing ground water springs also contribute small additional amounts of runoff. The flow of surface and ground waters in the Region is in an east to west direction toward the Pacific Ocean.

### LAND USE / POPULATION

Land use within the Region varies considerably. The regional growth forecast for various land uses within the Region, for the San Diego Association of Governments', and for the Southern California Association of Governments' sphere of influence are shown in Appendix B-1 and B-2, respectively. The San Diego Association of Governments' regional growth forecast by hydrologic unit (HU) is shown in Appendix B-3.

The Region is experiencing population growth to continue to experience growth to the year 2015. Table 1-1 shows population projections for San Diego, Riverside, and Orange counties.

## *REGIONAL BOUNDARIES*


Shorebirds at Tijuana Estuary shoreline

The San Diego Region forms the southwest corner of California and occupies approximately 3,900 square miles of surface area. The western boundary of the Region consists of the Pacific Ocean coastline which extends approximately 85 miles north from the United States and Mexico border. The northern boundary of the Region is formed by the hydrologic divide starting near Laguna Beach and extending inland through El Toro and easterly along the ridge of the Elsinore Mountains into the Cleveland National Forest. The eastern boundary of the Region is formed by the Laguna Mountains and other lesser known mountains located in the Cleveland National Forest. The southern boundary of the Region is formed by the United States and Mexico border.

The San Diego Region encompasses most of San Diego county, parts of southwestern Riverside county and southwestern Orange county. The Region is divided into 11 major hydrologic units (HUs),[1] 54 hydrologic areas (HAs),[2] and 147 hydrologic subareas (HSAs).[3] The geographic boundaries and names of these HUs are shown in Table 1-2 and Figure 1-2.[4] A larger scale map of these HAs is contained in the rear pocket of this Basin Plan. The boundaries were initially designated by the State Department of Water Resources (DWR) and described in the report Names and Areal Code Numbers of Hydrologic areas in the Southern District which was published in April, 1964. The HUs, HAs and HSAs were subsequently enumerated by the State Board in the early 1970's. In accordance with the early DWR definitions, HUs are the entire watershed of one or more streams; HAs are major tributaries and/or major groundwater basins within the HU; and HSAs are major subdivisions of HAs including both water-bearing and nonwater-bearing formations.

### San Juan Hydrologic Unit (1.00)

The San Juan HU is a generally trapezoid-shaped area of 500 square miles. Laguna Beach, San Juan Capistrano, Dana Point, and San Clemente are other major population centers. Several smaller towns are scattered along the coast.

The two major natural surface water bodies of the unit are San Juan Creek and San Mateo Creek. San Juan Creek divides the unincorporated communities of Dana Point and Capistrano Beach in Orange county, and enters the Pacific Ocean at Doheny Beach State Park. The mouth of the creek is normally open to the ocean. Usually, the water at the mouth of the creek is essentially the same as that of the adjacent coastal waters. The mouth of San Mateo Creek forms a salt water tidal marsh and is entirely within the Camp Pendleton Naval Reservation.

The San Juan HU is comprised of the following five HAs; the Laguna, Mission Viejo, San Clemente, San Mateo, and San Onofre HAs.

**TABLE 1-1. POPULATION PROJECTIONS FOR THE STATE OF CALIFORNIA AND SAN DIEGO, RIVERSIDE, AND ORANGE COUNTIES**

| Location | Year 1990 | 1995 | 2000 | 2005 | 2010 | 2015 |
|---|---|---|---|---|---|---|
| **San Diego County** | 2,421,233 | 2,677,058 | 2,915,692 | 3,143,155 | 3,373,422 | 3,618,554 |
| **Riverside County** | 1,195,400 | 1,493,558 | 1,771,276 | 2,076,538 | 2,402,889 | 2,759,172 |
| **Orange County** | 2,415,269 | 2,667,706 | 2,862,106 | 2,992,855 | 3,099,374 | 3,193,64 |
| **Total for California** | 29,777,448 | 32,958,921 | 36,214,623 | 39,194,880 | 42,178,903 | 45,344,961 |

## TABLE 1 –2. HYDROLOGIC UNITS, AREAS AND SUBAREAS OF THE SAN DIEGO REGION

| BASIN NUMBER | HYDROLOGIC BASIN | | BASIN NUMBER | HYDROLOGIC BASIN | |
|---|---|---|---|---|---|
| 1.00 | SAN JUAN HYDROLOGIC UNIT | | 2.74 | Burnt | HSA |
| 1.10 | Laguna | HA | 2.80 | Aguanga | HA |
| 1.11 | San Joaquin Hills | HSA | 2.81 | Vail | HSA |
| 1.12 | Laguna Beach | HSA | 2.82 | Devils Hole | HSA |
| 1.13 | Aliso | HSA | 2.83 | Redec | HSA |
| 1.14 | Dana Point | HSA | 2.84 | Tule Creek | HSA |
| 1.20 | Mission Viejo | HA | 2.90 | Oakgrove | HA |
| 1.21 | Oso | HSA | 2.91 | Lower Culp | HSA |
| 1.22 | Upper Trabuco | HSA | 2.92 | Previtt Canyon | HSA |
| 1.23 | Middle Trabuco | HSA | 2.93 | Dodge | HSA |
| 1.24 | Gobernadora | HSA | 2.94 | Chihuahua | HSA |
| 1.25 | Upper San Juan | HSA | | | |
| 1.26 | Middle San Juan | HSA | 3.00 | SAN LUIS REY HYDROLOGIC UNIT | |
| 1.27 | Lower San Juan | HSA | 3.10 | Lower San Luis | HA |
| 1.28 | Ortega | HSA | 3.11 | Mission | HSA |
| 1.30 | San Clemente | HA | 3.12 | Bonsall | HSA |
| 1.31 | Prima Deshecha | HSA | 3.13 | Moosa | HSA |
| 1.32 | Segunda Deshecha | HSA | 3.14 | Valley Center | HSA |
| 1.40 | San Mateo Canyon | HA | 3.15 | Woods | HSA |
| 1.50 | San Onofre | HA | 3.16 | Rincon | HSA |
| 1.51 | San Onofre Valley | HSA | 3.20 | Monserate | HA |
| 1.52 | Las Pulgas | HSA | 3.21 | Pala | HSA |
| 1.53 | Stuart | HSA | 3.22 | Pauma | HSA |
| | | | 3.23 | La Jolla Amago | HSA |
| 2.00 | SANTA MARGARITA HYDROLOGIC UNIT | | 3.30 | Warner Valley | HA |
| 2.10 | Ysidora | HA | 3.31 | Warner | HSA |
| 2.11 | Lower Ysidora | HSA | 3.32 | Combs | HSA |
| 2.12 | Chappo | HSA | | | |
| 2.13 | Upper Ysidora | HSA | 4.00 | CARLSBAD HYDROLOGIC UNIT | |
| 2.20 | DeLuz | HA | 4.10 | Loma Alta | HA |
| 2.21 | DeLuz Creek | HSA | 4.20 | Buena Vista Creek | HA |
| 2.22 | Gavilan | HSA | 4.21 | El Salto | HSA |
| 2.23 | Vallecitos | HSA | 4.22 | Vista | HSA |
| 2.30 | Murrieta | HA | 4.30 | Agua Hedionda | HA |
| 2.31 | Wildomar | HSA | 4.31 | Los Monos | HSA |
| 2.32 | Murrieta | HSA | 4.32 | Buena | HSA |
| 2.33 | French | HSA | 4.40 | Encinas | HA |
| 2.34 | Lower Domenigoni | HSA | 4.50 | San Marcos | HA |
| 2.35 | Domenigoni | HSA | 4.51 | Batiquitos | HSA |
| 2.36 | Diamond | HSA | 4.52 | Richland | HSA |
| 2.40 | Auld | HA | 4.53 | Twin Oaks | HSA |
| 2.41 | Bachelor Mountain | HSA | 4.60 | Escondido Creek | HA |
| 2.42 | Gertrudis | HSA | 4.61 | San Elijo | HSA |
| 2.43 | Lower Tucalota | HSA | 4.62 | Escondido | HSA |
| 2.44 | Tucalota | HSA | 4.63 | Lake Wohlford | HSA |
| 2.50 | Pechanga | HA | | | |
| 2.51 | Pauba | HSA | 5.00 | SAN DIEGUITO HYDROLOGIC UNIT | |
| 2.52 | Wolf | HSA | 5.10 | Solana Beach | HA |
| 2.60 | Wilson | HA | 5.11 | Rancho Santa Fe | HSA |
| 2.61 | Lancaster Valley | HSA | 5.12 | La Jolla | HSA |
| 2.62 | Lewis | HSA | 5.20 | Hodges | HA |
| 2.63 | Reed Valley | HSA | 5.21 | Del Dios | HSA |
| 2.70 | Cave Rocks | HA | 5.22 | Green | HSA |
| 2.71 | Lower Coahuila | HSA | 5.23 | Felicita | HSA |
| 2.72 | Upper Coahuila | HSA | 5.24 | Bear | HSA |
| 2.73 | Anza | HSA | | | |

**TABLE 1 –2. HYDROLOGIC UNITS, AREAS AND SUBAREAS OF THE SAN DIEGO REGION**

| BASIN NUMBER | HYDROLOGIC BASIN | |
|---|---|---|
| 5.30 | San Pasqual | HA |
| 5.31 | Highland | HSA |
| 5.32 | Las Lomas Muertas | HSA |
| 5.33 | Reed | HSA |
| 5.34 | Hidden | HSA |
| 5.35 | Guejito | HSA |
| 5.36 | Vineyard | HSA |
| 5.40 | Santa Maria Valley | HA |
| 5.41 | Ramona | HSA |
| 5.42 | Lower Hatfield | HSA |
| 5.43 | Wash Hollow | HSA |
| 5.44 | Upper Hatfield | HSA |
| 5.45 | Ballena | HSA |
| 5.46 | East Santa Teresa | HSA |
| 5.47 | West Santa Teresa | HSA |
| 5.50 | Santa Ysabel | HA |
| 5.51 | Boden | HSA |
| 5.52 | Pamo | HSA |
| 5.53 | Sutherland | HSA |
| 5.54 | Witch Creek | HSA |
| | | |
| 6.00 | PENASQUITOS HYDROLOGIC UNIT | |
| 6.10 | Miramar Reservoir | HA |
| 6.20 | Poway | HA |
| 6.30 | Scripps | HA |
| 6.40 | Miramar | HA |
| 6.50 | Tecolote | HA |
| | | |
| 7.00 | SAN DIEGO HYDROLOGIC UNIT | |
| 7.10 | Lower San Diego | HA |
| 7.11 | Mission San Diego | HSA |
| 7.12 | Santee | HSA |
| 7.13 | El Cajon | HSA |
| 7.14 | Coches | HSA |
| 7.15 | El Monte | HSA |
| 7.20 | San Vicente | HA |
| 7.21 | Fernbrook | HSA |
| 7.22 | Kimball | HSA |
| 7.23 | Gower | HSA |
| 7.24 | Barona | HSA |
| 7.30 | El Capitan | HA |
| 7.31 | Conejos Creek | HSA |
| 7.32 | Glen Oaks | HSA |
| 7.33 | Alpine | HSA |
| 7.40 | Boulder Creek | HA |
| 7.41 | Inaja | HSA |
| 7.42 | Spencer | HSA |
| 7.43 | Cuyamaca | HSA |
| | | |
| 8.00 | PUEBLO SAN DIEGO HYDROLOGIC UNIT | |
| 8.10 | Point Loma | HA |
| 8.20 | San Diego Mesa | HA |
| 8.21 | Lindbergh | HSA |
| 8.22 | Chollas | HSA |
| 8.30 | National City | HA |
| 8.31 | El Toyan | HSA |
| 8.32 | Paradise | HSA |

| BASIN NUMBER | HYDROLOGIC BASIN | |
|---|---|---|
| 9.00 | SWEETWATER HYDROLOGIC UNIT | |
| 9.10 | Lower Sweetwater | HA |
| 9.11 | Telegraph | HSA |
| 9.12 | La Nacion | HSA |
| 9.20 | Middle Sweetwater | HA |
| 9.21 | Jamacha | HSA |
| 9.22 | Hillsdale | HSA |
| 9.23 | Dehesa | HSA |
| 9.24 | Galloway | HSA |
| 9.25 | Sequan | HSA |
| 9.26 | Alpine Heights | HSA |
| 9.30 | Upper Sweetwater | HA |
| 9.31 | Loveland | HSA |
| 9.32 | Japatul | HSA |
| 9.33 | Viejas | HSA |
| 9.34 | Descanso | HSA |
| 9.35 | Garnet | HSA |
| | | |
| 10.00 | OTAY HYDROLOGIC UNIT | |
| 10.10 | Coronado | HA |
| 10.20 | Otay Valley | HA |
| 10.30 | Dulzura | HA |
| 10.31 | Savage | HSA |
| 10.32 | Proctor | HSA |
| 10.33 | Jamul | HSA |
| 10.34 | Lee | HSA |
| 10.35 | Lyon | HSA |
| 10.36 | Hollenbeck | HSA |
| 10.37 | Engineer Springs | HSA |
| | | |
| 11.00 | TIJUANA HYDROLOGIC UNIT | |
| 11.10 | Tijuana Valley | HA |
| 11.11 | San Ysidro | HSA |
| 11.12 | Water Tanks | HSA |
| 11.20 | Potrero | HA |
| 11.21 | Marron | HSA |
| 11.22 | Bee Canyon | HSA |
| 11.23 | Barrett | HSA |
| 11.24 | Round Potrero | HSA |
| 11.25 | Long Potrero | HSA |
| 11.30 | Barrett Lake | HA |
| 11.40 | Monument | HA |
| 11.41 | Pine | HSA |
| 11.42 | Mount Laguna | HSA |
| 11.50 | Morena | HA |
| 11.60 | Cottonwood | HA |
| 11.70 | Cameron | HA |
| 11.80 | Campo | HA |
| 11.81 | Tecate | HSA |
| 11.82 | Canyon City | HSA |
| 11.83 | Clover Flat | HSA |
| 11.84 | Hill | HSA |
| 11.85 | Hipass | HSA |

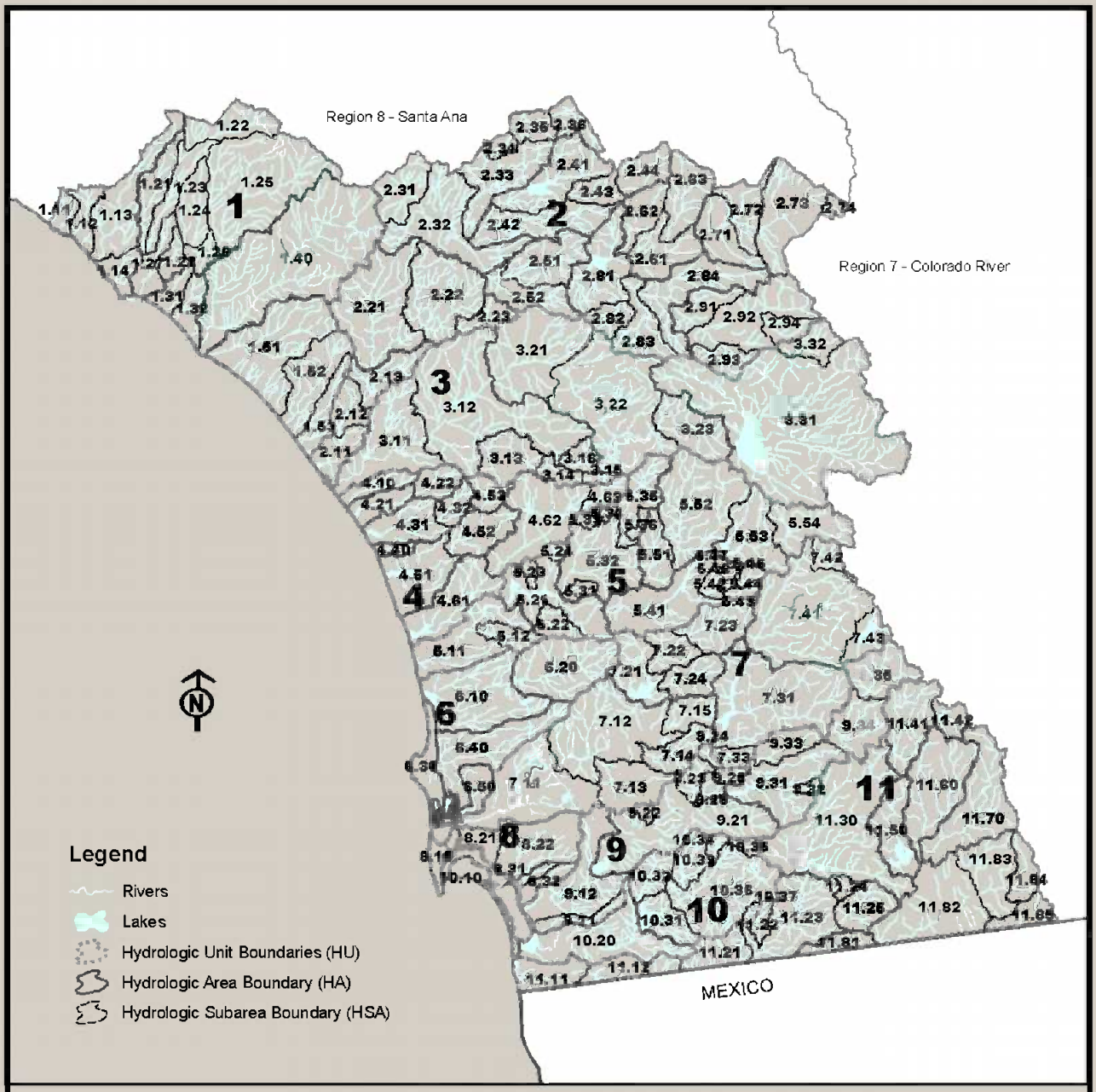


**Figure 1-2. San Diego Region Hydrologic Units, Areas and Subareas.**

## Santa Margarita Hydrologic Unit (2.00)


Arroyo chub at Rainbow Creek

The Santa Margarita HU is a rectangular area of about 750 square miles. Included in it are portions of Camp Pendleton as well as the civilian population centers of Murrieta, Temecula and part of Fallbrook.

The unit is drained largely by the Santa Margarita River, Murrieta Creek and Temecula River. The only coastal lagoon of the unit is the Santa Margarita Lagoon which lies totally within the Camp Pendleton Naval Reservation of the U.S. Marine Corps. The slough at the mouth of the river is normally closed off from the ocean by a sandbar.

The major surface water storage areas are Vail Lake and O'Neill Lake. Annual precipitation ranges from less than 12 inches near the coast to more than 45 inches inland near Palomar mountain.

The San Margarita HU is comprised of the following nine HAs; the Ysidora, Deluz, Murrieta, Auld, Pechanga, Wilson, Cave Rocks, Aguanga, and Oak Grove HAs.

## San Luis Rey Hydrologic Unit (3.00)

San Luis Rey HU is a rectangular area of about 565 square miles, and includes the population centers of Oceanside, and Valley Center, and portions of Fallbrook and Camp Pendleton. In addition there are several Indian reservations in the unit. The major stream system, the San Luis Rey River, is interrupted by Lake Henshaw, one of the largest water storage areas in the San Diego Region. Annual precipitation is heavier than in other units, ranging from less than 12 inches near the ocean to 45 inches near Palomar mountain.

The San Luis Rey Unit contains two coastal lagoon areas, the mouth of the San Luis Rey River and Loma Alta Slough. The mouth of the San Luis Rey River is entirely within the city of Oceanside and is adjacent to the city's northern boundary. The slough area at the mouth of the river is contiguous with Oceanside Harbor. Loma Alta Slough is entirely within the city of Oceanside and is the mouth of Loma Alta Creek. The slough is normally blocked off from the ocean by a sandbar.

The San Luis Rey HU is comprised of the following three HAs; the Lower San Luis, Monserate and Warner Valley Hydrologic areas.

## Carlsbad Hydrologic Unit (4.00)


Shore crab at Scripps Coastal Reserve

Carlsbad HU is a roughly triangular-shaped area of about 210 square miles, extending from Lake Wohlford on the east to the Pacific ocean on the west, and from Vista on the north to Cardiff-by-the-Sea on the south. The unit includes the cities of Oceanside, Carlsbad, Leucadia, Encinitas, Cardiff-by-the-Sea, Vista, and Escondido. The area is drained by Buena Vista, Agua Hedionda, San Marcos and Escondido creeks.

The Carlsbad HU contains four major coastal lagoons; Buena Vista, Agua Hedionda, Batiquitos and San Elijo. Buena Vista lies between the cities of Carlsbad and Oceanside, and is partially within each city. A sandbar occasionally forms across the mouth forming an ocean beach. The water level in the lagoon is maintained by an inflow of rising groundwater and return irrigation water from the area upstream on Vista Creek. A portion of the lagoon has been designated as a bird sanctuary.

Agua Hedionda Lagoon, at the mouth of Agua Hedionda Creek, is within the city of Carlsbad. The lagoon is routinely dredged to keep it open to the ocean. The lagoon serves as an integral part of a utility's power plant cooling water intake system and also provides a reserve cooling water supply. The easterly portion of the lagoon is used for water oriented recreation.

Batiquitos Lagoon, at the mouth of San Marcos Creek, enters the Pacific Ocean between the city of Carlsbad and the unincorporated community of Leucadia. San Elijo Lagoon is the tidal marsh at the mouth of Escondido Creek. The marsh is normally closed off from the ocean but is subject to tidal fluctuations.

The Carlsbad HU is comprised of the following six HAs; the Loma Alta, Buena Vista Creek,

Agua Hedionda, Encinas, San Marcos and Escondido Creek HAs.

### San Dieguito Hydrologic Unit (5.00)

San Dieguito HU is a rectangular-shaped area of about 350 square miles. It includes the San Dieguito River and its tributaries, along with Santa Ysabel and Santa Maria creeks.

The unit contains two major reservoirs - Lake Hodges and Sutherland, and a smaller facility, the San Dieguito Reservoir.

The unit contains one coastal lagoon, the San Dieguito Slough, located at the mouth of the San Dieguito River, which forms the northerly edge of the city of Del Mar. The lagoon is normally closed off from the ocean by a sandbar.

The San Dieguito HU is divided into five HAs; the Solana Beach, Hodges, San Pasqual, Santa Maria Valley and Santa Ysabel HAs.

### Penasquitos Hydrologic Unit (6.00)

Penasquitos HU is a triangular-shaped area of about 170 square miles, extending from Poway on the east to La Jolla on the west. There are no major streams in this unit although it is drained by numerous creeks. Miramar Reservoir, a major storage facility, contains imported Colorado River water.

The unit contains two coastal lagoons, Sorrento Lagoon and Mission Bay. Sorrento Lagoon is the mouth of Penasquitos Creek and empties into the ocean near the northerly boundary of the city of San Diego. Mission Bay and the mouth of the San Diego River form a 4,000 acre aquatic park. Water quality within Mission Bay generally is lower than that of the coastal ocean water due to the poor flushing characteristics of the bay and the input of nutrient material from storm runoff. Sludge from the city of San Diego's Point Loma plant is piped to an island in Mission Bay (Fiesta Island) for use as a soil conditioner and fertilizer.

Annual precipitation in the unit ranges from less than 8 inches along the ocean to 18 inches inland. Poway, and La Jolla are the major population centers.

The Penasquitos HU is comprised of the following five HAs; the Miramar Reservoir, Poway, Scripps, Miramar, and Tecolote HAs.


Grunion spawning at Ocean Beach

### San Diego Hydrologic Unit (7.00)

San Diego HU is a long, triangular-shaped area of about 440 square miles drained by the San Diego River. El Capitan, San Vicente, Cuyamaca, Jennings, and Murray reservoirs are the major storage facilities. San Vicente Reservoir, Murray Reservoir, Jennings, and Murray Reservoir store mainly Colorado River water, whereas, El Capitan mainly stores local runoff and some Colorado River water. Cuyamaca Reservoir stores only local runoff.

Much of the impounded water is used to serve major population centers, including a portion of the San Diego metropolitan area and the communities of El Cajon, Santee, Lakeside, Alpine and Julian. Annual precipitation ranges from less than 11 inches at the coast to about 35 inches around Cuyamaca and El Capitan Reservoir. The San Diego HU is comprised of the following four HAs; Lower San Diego, San Vicente, El Capitan and Boulder Creek HAs.

### Pueblo San Diego Hydrologic Unit (8.00)

Pueblo San Diego HU is a triangular-shaped area of about 60 square miles with no major stream system. It is bordered to the north, by the watershed of the San Diego River and on the south, in part, by that of the Sweetwater River. The major population center is the city of San Diego. The unit is relatively dry with an annual precipitation of less than 11 inches to 13 inches. The Pueblo San Diego HU is comprised of the following three HAs; the Point Loma, San Diego Mesa and National City HAs.

San Diego Bay lies offshore of this unit. The bay is approximately 13 miles long and varies from ½ to 1½ miles in width.

### Sweetwater Hydrologic Unit (9.00)

Sweetwater HU is an elongated northeasterly trending strip with an area of about 230 square miles. It is traversed along its length by the Sweetwater River. The annual precipitation varies from less than 11 inches at the coast to about 35 inches inland.

The Sweetwater HU is comprised of the following three HAs; the Lower Sweetwater, Middle Sweetwater, and Upper Sweetwater HAs.

### Otay Hydrologic Unit (10.00)

Otay HU is a club-shaped area of about 160 square miles. The major stream system traversing the area is the Otay River and its tributaries. The Lower Otay Reservoir is the terminus of the second San Diego Aqueduct. Major population centers include the communities of Imperial Beach in the coastal area and Dulzura inland. The annual precipitation generally increases landward from the coast and varies from less than 11 to 19 inches.

The Coronado, Otay, and Dulzura HAs comprise the Otay HU. The Coronado HA is composed of the North Island Naval Air Station, the city of Coronado and the Silver Strand.

### Tijuana Hydrologic Unit (11.00)

Tijuana HU is a triangular-shaped area that is drained by Cottonwood and Campo creeks, which are tributaries to the Tijuana River. It covers an area of about 470 square miles and lies mainly in the mountain-valley section.

The unit's only coastal lagoon is the Tijuana Estuary which occupies approximately 2,000 acres and is generally open to the ocean. Most of the area can be classified as a salt water marsh with a number of arms of open water. Water quality is generally the same as that of the sea water except during periods of runoff when a variety of wastes, which originate in Mexico, are carried into the lagoon from the surface flow in the Tijuana River.

Willet at Tijuana Estuary shoreline

The unit is sparsely populated with the major population centers at San Ysidro and Campo. Annual precipitation varies from less than 11 inches near the coast to more than 25 inches farther inland near Laguna mountain. Runoff is captured by Morena Reservoir and Barrett Lake on Cottonwood Creek.

The Tijuana HU is comprised of the following eight HAs; the Tijuana Valley, Potrero, Barrett Lake, Monument, Morena, Cottonwood, Cameron and Campo HAs. The Tijuana Valley Hydrologic Area (HA) is arbitrarily divided by the United States - Mexico boundary. Surface water quality has been adversely affected by runoff coming across the border from Mexico. Ground water quality has been affected by seawater intrusion and waste discharges in both the United States and Mexico.

## *WATER RESOURCES*

The water resources in the San Diego Region are classified as coastal waters, surface waters, ground waters, imported surface waters, and reclaimed water. Fresh water supplied within the Region is obtained from local surface and ground water development projects and imported surface water programs.

Gray whale

### *COASTAL WATERS*

Coastal waters in the Region include bays, harbors, estuaries, beaches, and open ocean. Deep draft commercial harbors include San Diego Bay and Oceanside Harbor. Shallower small craft harbors include Mission Bay and Dana Point Harbor. Important estuaries are represented by coastal lagoons such as Tijuana Estuary, Sweetwater Marsh, San Diego River flood control channel, Kendall-Frost wildlife reserve, San Dieguito River Estuary, San Elijo Lagoon, Batiquitos Lagoon, Agua Hedionda Lagoon, Buena Vista Lagoon, San Luis Rey River Estuary, and Santa Margarita River Estuary.

### SURFACE WATERS

The San Diego Region has thirteen principal stream systems originating in the western highlands which flow to the Pacific Ocean. From north to south these stream systems are Aliso Creek, San Juan Creek, San Mateo Creek,

## *GROUND WATERS*

All major drainage basins in the San Diego Region contain ground water basins. The basins are relatively small in area and usually shallow. Although these ground water basins are limited in size, the ground water yield from the basins has been historically important to the development of the Region. A number of the larger ground water basins can be of future significance in the Region for storage of both imported waters and reclaimed wastewaters. Nearly all of the local ground waters of the Region have been intensively developed for municipal and agricultural supply purposes.

## *IMPORTED SURFACE WATERS*

The San Diego Region receives all of its imported water supplies from the Metropolitan Water District of Southern California (MWD). The MWD was created by the California State Legislature as a special district in 1928. MWD distributes wholesale water through 27 member agencies (cities and water districts) in portions of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura Counties. The MWD serves more than one-half of the drinking water supply used by 16 million persons in the coastal plain of Southern California.

The MWD supplies water to the following five member agencies in the San Diego Region: (1) Coastal Municipal Water District, (2) Municipal Water District of Orange County, (3) Western Municipal Water District of Riverside County, (4) Eastern Municipal Water District and (5) San Diego County Water Authority. The San Diego County Water Authority, the largest purveyor of MWD water in the San Diego Region, allocates water supplies to member agencies in San Diego County. The MWD obtains its water supplies from the Colorado River Aqueduct and the State Water Project.

The Colorado River Aqueduct is owned and operated by the MWD. Construction of the aqueduct began in 1931 and the first deliveries of imported water to member agencies took place in 1941. This aqueduct transports water from Lake Havasu on the Colorado River, 242 miles to its terminus at Lake Matthews in Riverside County. The aqueduct has an annual maximum capacity of 1.3 million acre-feet.

In 1964, the United States Supreme Court limited California's annual diversions from the Colorado River on a dependable basis to 4.4 million acre-feet in the case Arizona vs. California. As a result of the Supreme Court's decision, MWD's annual diversions from the Colorado River were limited to approximately 550,000 acre-feet. The United States Department of the Interior has the discretion to allow California to use any water that Arizona and Nevada have available from the Colorado River, but do not use. During declarations of surplus, MWD has the highest priority of any California contractor to divert surplus waters from the Colorado River.

MWD's other primary source of water is the State Water Project (SWP). The SWP is owned by the State of California and operated by the California Department of Water Resources. SWP water originates from Lake Oroville on the Feather River and surplus flows in the Sacramento - San Joaquin Delta in northern California. The project transports water from the Sacramento-San Joaquin Delta via the 444-mile long California Aqueduct to 29 contract agencies in the State.

The MWD has an annual entitlement to SWP water of 2,011,500 acre-feet out of a total maximum contractual entitlement of 4.2 million acre-feet for the 29 contractors. The current firm yield of the SWP, 2.4 million acre-feet, falls below the total SWP contractor requests of approximately 3.6 million acre-feet. The current firm yield of the SWP is based on the average annual water supplies available if the hydrologic conditions during the years 1928 - 1934 reoccurred. The firm yield of the SWP can supply only about one-half of the contract entitlement due to the lack of sufficient SWP water conveyance facilities. The demand for SWP water is expected

to increase to 4.2 million acre-feet by the year 2010. MWD water supply from the SWP will be subject to limitations unless SWP supplies are increased.

Steadily increasing demands for water have led to the need to import water from the Colorado River and the State Water Project. In November 1947, construction was completed on the first pipeline of the San Diego Aqueduct to deliver Colorado River water into the Region. The pipeline was constructed by the U.S. Navy to meet the increased demand for water caused by accelerated population and industrial growth during the World War II years of 1941 - 1945. Additional pipelines to convey imported water were constructed in subsequent years. Beginning in 1978, State Water Project water from Lake Oroville on the Feather River and surplus flows in the Sacramento - San Joaquin Delta in northern California were blended with the Colorado River water.

In the recent past the MWD water supplies consisted of approximately seventy percent from the Colorado River and thirty percent from the State Water Project. In 1993, the drought reduced the availability of State Water Project waters during the year and MWD water supplies consisted of approximately ninety-three percent from the Colorado River and seven percent from the State Water Project. The San Diego Region is highly dependent upon imported water supplies to meet the residential, industrial, commercial, agricultural, and public water demand. Imported water (i.e., Colorado River and State Water Project) supplies about ninety percent of the demand; surface runoff into local reservoirs and local ground water supplies the remaining ten percent.

The delivery of the maximum amount of SWP water benefits the Region in the following ways:

- SWP water improves the potential for conjunctive uses of water resources.
- SWP water enhances and maintains designated beneficial uses of the Region's surface and ground waters;
- SWP water improves the potential for attainment of water quality objectives;
- SWP water improves the viability of recharge of ground water basins;
- SWP water increases the potential for water reclamation.

The effective implementation of water reclamation in the Region is contingent on the availability of supply waters with relatively low salinity, or total dissolved solids (TDS) concentration. The Colorado River has a high TDS concentration of 600 - 750 milligrams per liter (mg/l). When this water is used for urban needs the TDS increases by about 300 mg/l to 900 -1050 mg/l. This quality of water is, at best, marginal for agricultural and ground water recharge uses of reclaimed water. In contrast, TDS concentrations in State Water Project waters are approximately 250 mg/l except during drought periods. The lower TDS concentrations found in State Water Project waters enables water supply agencies to blend SWP waters with Colorado River water supplies to meet drinking water quality standards and reclaimed water discharge limitations.

Water supply demand is expected to continue to increase as a result of population growth in the Region. To meet the projected water demand, water supply agencies are working to increase both the capacity and flexibility of conveyance systems and to intensify development of local water supplies through wastewater reclamation, ground water management, and desalination of seawater. The increased use of local supplies is expected to meet eighteen percent of the total water supply needed by the year 2010. The remaining eighty-two percent of the demand will have to be met by imported water.

## *RECLAIMED WATER*

Reclaimed water is an important and growing component of the Region's water supply. Reclaimed water is obtained through extensive treatment of municipal wastewater to produce a safe and reliable water supply for non-potable uses. Reclaimed water is used to irrigate parks, agriculture, planned community greenbelt areas, golf courses and freeway landscaping. Reclaimed water use to the maximum extent feasible is important because it reduces dependence on imported water supply and leaves the Region less vulnerable to imported water supply shortages. The use of reclaimed water in the Region is expanding. For example, the San Diego County Water Authority reported that in Fiscal Year 1993, the total volume of reclaimed water used in the Authority's service area was

# *REGIONAL BOARD WATER QUALITY MANAGEMENT POLICY*

The five policy statements in this section form the Regional Board's Water Quality Management Policy for the San Diego Region. Following each principle policy statement are interpretations and examples of applications of the policy. In certain instances the Regional Board may find it necessary to exercise discretion in applying these policies within the interpretations presented.

### POLICY ONE

**Water quality objectives, beneficial uses, and water quality control plans and policies adopted by the State Water Resources Control Board and the Regional Water Quality Control Board shall be an integral part of the basis for water quality management.**

★ Whenever the existing water quality exceeds the water quality objectives contained in the *Water Quality Control Plan for the San Diego Basin (9),* such existing high quality shall be maintained until it has been demonstrated to the Regional Board that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial uses of such water, and will not result in water quality less than that described in the *Water Quality Control Plan for the San Diego Basin (9).*[5]

★ Any waste discharged to existing high quality water will be required to meet waste discharge requirements that will result in the best practicable treatment or control of the discharge necessary to assure that pollution will not occur and the highest water quality consistent with maximum benefit to the people of the State will be maintained.[5]

### POLICY TWO

**Water shall be reclaimed and reused to the maximum extent feasible.**

★ The Regional Board will encourage and recommend funding for water reclamation projects that meet the following conditions and that do not adversely affect vested water rights, unreasonably impair instream beneficial uses, or place an unreasonable burden on present water supply systems: [6]

- √ Beneficial uses will be made of wastewater that would otherwise be discharged to marine or brackish receiving water or evapotranspiration ponds.
- √ Reclaimed water will be used to replace or supplement the use of fresh water or better quality water.
- √ Reclaimed water will be used to preserve, restore, or enhance instream beneficial uses that include but are not limited to, fish, wildlife, recreation, and aesthetics associated with any surface water body or wetlands.

★ The Regional Board will encourage and promote water reclamation while taking into consideration the Regional Board's responsibility of protecting and enhancing beneficial uses and recognizing the need to protect the public health and environment.

★ The Regional Board will require wastewater treatment facilities to provide for appropriate disposal or storage of surplus reclaimed water.

### POLICY THREE

**Point sources and nonpoint sources of pollution shall be controlled to protect designated beneficial uses of water.**[7]

★ Treatment levels at least as stringent as those defined in the federal Clean Water Act will be required of municipal and industrial point sources which are subject to regulation under the Clean Water Act.[8]

★ Sewage collection agencies shall implement a comprehensive pretreatment program

including industrial waste ordinances to control the quality and quantity of pollutants which may adversely affect the operation of a municipal wastewater treatment facility, or which may cause the effluent limitations for the facility to be exceeded, or which may pass through the treatment works or will otherwise be incompatible with such works.

★ Nonpoint sources will be controlled in conformance with the Clean Water Act and the Coastal Zone Act Reauthorization Amendments. Nonpoint source control programs will generally be the responsibility of federal, state, and local agencies, and individuals having land management responsibilities. Such controls will be implemented preferably through best management practices,[9] (BMPs). If BMPs fail, controls will be implemented through waste discharge requirements or other regulatory actions.[7]

**POLICY FOUR**

**Instream beneficial uses shall be maintained, and when practical, restored, and enhanced.**

★ Coordination shall be encouraged among local agencies with regard to all aspects of planning and land use control.

★ Plans for future development and management of the State's water resource must assure adequate protection of existing instream beneficial uses, and where feasible, include measures to enhance these uses.

★ Instream uses for recreation, fish, wildlife, and related purposes shall be balanced with other uses.

★ The need for water to be impounded must be demonstrated, taking full account of instream values.

★ Reservoir operations shall involve careful consideration of instream uses, even where such uses satisfy altered or enhanced instream values.

**POLICY FIVE**

**A detailed and comprehensive knowledge of the beneficial uses, water quality and activities affecting water quality throughout the Region shall be maintained.**

★ The development of a modern comprehensive information gathering, storing, and retrieval system to effectively aid in evaluating water quality throughout the Region shall be encouraged.

# *LEGAL BASIS AND AUTHORITY*

Federal and state laws have been enacted which establish the requirements for adequate planning, implementation, management and enforcement, for the control of water quality. The principal federal and state laws pertaining to the regulation of water quality are known respectively as, the 1972 Federal Water Pollution Control Act (also known as the Clean Water Act) and Division 7 of the 1969 California Water Code (also known as the Porter-Cologne Water Quality Control Act). The laws are similar in many ways. The fundamental purpose of both laws is to protect the beneficial uses of water. An important distinction between the two is that the Porter-Cologne Water Quality Control Act addresses both ground and surface waters while the Clean Water Act addresses surface water only.

In addition, federal and state regulations and policies have been developed to augment and clarify the laws and to provide detail not included in the law.

## *FEDERAL LAWS AND REGULATIONS*

The basic federal law dealing with surface water quality control is the Federal Water Pollution Control Act of 1972 (Clean Water Act). Certain statutory provisions in two other federal laws, the National Environmental Policy Act of 1969 and the Endangered Species Act, supplement the Clean Water Act. Federal regulations implementing the Clean Water Act provisions for water quality planning and management are contained in 40 CFR 130, *EPA Requirements for Water Quality Planning and Management* and 40 CFR 131, *EPA Procedures for Approving State Water Quality Standards*.

## *FEDERAL WATER POLLUTION CONTROL ACT*

The Federal Water Pollution Control Act was amended in 1972 and is commonly referred to as the Clean Water Act. The objective of the Clean Water Act is to "*restore and maintain the chemical, physical and biological integrity of the Nation's waters*" to make all surface waters "*fishable*" and "*swimmable*". The seven goals set forth in the law to achieve this objective are to:

(1) Eliminate the discharge of pollutants to navigable waters by 1985;

(2) Provide water quality which protects and fosters propagation of fish, shellfish and wildlife and allows recreation in and on the water by 1983;

(3) Prohibit discharge of toxic pollutants in toxic amounts;

(4) Provide financial assistance to construct publicly owned treatment systems;

(5) Develop and implement areawide waste treatment management plans;

(6) Develop technology necessary to carry out these goals; and

(7) Develop and implement programs for control of nonpoint sources of pollution.

In 1972, five titles were added as amendments to the Clean Water Act. Title 1 provides for research and related programs, Title 2 provides grants for construction of treatment works, Title 3 provides for standards and enforcement, Title 4 provides for permits and licenses, and Title 5 provides for general provisions.

Clean Water Act sections 106, 205(j), 205(g), 208, 303 and 305 establish requirements for state water quality planning, management, and implementation in regard to surface waters. The Clean Water Act requires that states adopt water quality standards to protect public health or welfare, enhance the quality of water, and serve the purposes of the Clean Water Act. "*Serve the purposes of the Act*" (as defined in sections 101(a), 101(a)(2), and 303(c) of the Act) means that water quality standards:

- Include provisions for restoring and maintaining the chemical, physical, and biological integrity of state waters;

- Whenever attainable, achieve a level of water quality that provides for the protection and propagation of fish, shellfish, and wildlife, and recreation in and on the water ("*fishable*" and "*swimmable*"); and

- Consider the use and value of state waters for public water supplies, propagation of fish and wildlife, recreation, agriculture and industrial purposes, and navigation.

The states are also required to have a continuing planning process called the Triennial Review process, which includes public hearings at least once every three years to review the water quality standards and revise them if necessary.

## *NATIONAL ENVIRONMENTAL POLICY ACT OF 1969*

The National Environmental Policy Act (NEPA) declares a national environmental policy and its goals. The overall objectives of NEPA are: (1) to ensure that environmental factors are considered in the decision making process of any federal action and (2) to provide full public disclosure of any federal action. Accordingly, NEPA requires that an Environmental Impact Statement (EIS) shall be "*included in every recommendation or report on proposals for legislation and other major federal actions significantly affecting the quality of the human environment*". Federal actions include the operation of programs; the construction of facilities; the provision of funding to others; and a federal agency's decision on whether to grant its required permission for activities of others, such as private businesses or state or local governments.

NEPA establishes a continuing policy for all levels of government and concerned public and private organizations to create and maintain conditions under which man and nature can exist in productive harmony and fulfill the social, economic and other requirements of present and future generations. NEPA directs an interdisciplinary approach to ensure integrated use of all talents in planning and decision making having impact on the environment (section 102). Each report or recommendation must be

accompanied by a detailed statement prepared by the responsible official on:

- The environmental impact of the proposed action;
- Any adverse environmental effects which cannot be avoided if the action is taken;
- Alternatives to the action;
- Relationship between local short-term uses of the environment, and maintenance and enhancement of long-term productivity; and
- Any irreversible and irretrievable commitments of resources if the proposed action is taken.

Appropriate alternatives to proposed actions must be studied and developed when conflicts in use of available resources are encountered.

NEPA directs the preservation of acceptable environments and the restoration of those that have been degraded. The spirit of the Act is also carried into the State reviews of proposed actions upon the environment. (See discussion on the California Environmental Quality Act later in this chapter).

## *ENDANGERED SPECIES ACT*

The federal Endangered Species Act (ESA) establishes federal policy regarding protection of endangered and threatened species. The ESA is directed specifically at projects subject to the NEPA which may adversely affect endangered and threatened species. Section 7 of the federal ESA requires all federal agencies, in consultation with the Fish and Wildlife Service and the National Marine Fisheries Service, ensure that their actions do not jeopardize the existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat. The definition of a federal action is very broad and covers almost every water program administered by the United States Environmental Protection Agency (USEPA). All aspects of the USEPA's surface water quality criteria and standards adoption and implementation process are subject to the consultation process. The overriding goal of the consultation process is to provide for the protection and recovery of threatened and endangered species and the ecosystems on which they depend.

## *APPLICABLE FEDERAL REGULATIONS*

The federal regulations, promulgated by the USEPA to implement the Clean Water Act provisions for water quality planning and management, are contained in 40 CFR 130, EPA Requirements for Water Quality Planning and Management and 40 CFR 131, EPA Procedures for Approving State Water Quality Standards. The regulations contained in 40 CFR 131 require states to:

- Designate appropriate beneficial uses for surface waters;
- Establish narrative and numeric criteria to protect beneficial uses;
- Establish an antidegradation policy to protect and maintain existing beneficial uses and the water quality necessary to protect those uses; and
- Hold a public hearing to review surface water quality standards at least once every three years and revise them if appropriate.

The regulations contained in 40 CFR 130 require states to also develop and follow a water quality planning and management system consisting of the following elements:

- Monitoring methods and procedures to compile and analyze data on surface waters;
- Identification of surface waters that are "*water quality limited*" or not meeting water quality standards;
- A ranking of surface water bodies based on severity of pollution and beneficial uses of the waters. The surface water body ranking must also include a determination of how best to utilize available resources to solve the water quality problems; and
- Pollutant loading allocations to ensure that water quality standards are not exceeded.

These regulations are discussed in detail in Chapters 2 and 3.


## CALIFORNIA LAWS AND REGULATIONS

State of California laws that directly affect water resources planning are contained principally in the California Water Code. Certain statutory provisions in the Water Resources Code, Health and Safety Code, Public Resources Code, Fish and Game Code, Food and Agriculture Code, Government Code, Harbors and Navigation Code, California Environmental Quality Act, and the California Endangered Species Act supplement the water quality provisions of the California Water Code. The chief state regulations in the CCR pertaining to water quality are contained in Title 22 and Title 23.

### CALIFORNIA WATER CODE

The California Water Code contains provisions which control almost every consideration of water and its use. Division 2 of the Water Code provides that the State Board shall consider and act upon all applications for permits to appropriate waters. The State Board's authority includes water quality considerations in granting a water right. Division 3 deals with dams and reservoirs; Division 5 pertains to flood control; Division 6 controls conservation, development and utilization of the state water resources; Division 7, covers water quality protection and management; and Divisions 11 through 21 provide for the organization, operation, and financing of municipal, county and local, water-oriented agencies.

### ADJUDICATIONS TO PROTECT THE QUALITY OF GROUND WATER (DIVISION 2 OF THE CALIFORNIA WATER CODE)

California Water Code section 2100 provides that the State Board may make a formal determination or judgment in order to protect ground water quality. Thus, the State Board, upon a finding of existing or threatened irreparable damage, may file an action in the Superior Court to restrict pumping or to impose physical solutions, or both, to the extent necessary to prevent destruction of, or irreparable injury to, the quality of ground water. The State Board may take such action only if an affected local agency charged with this responsibility fails to take appropriate action.

### PORTER-COLOGNE WATER QUALITY CONTROL ACT

Division 7 of the California Water Code is the basic water quality control law for California. This law is titled the Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The Porter-Cologne Act establishes a regulatory program to protect water quality and to protect beneficial uses of the state waters.

The Porter-Cologne Act section 13000 provides that:

- The quality of all waters of the state shall be protected for the use and enjoyment by the people of the state; and
- Activities and factors which may affect the quality of the waters of the state shall be regulated to attain the highest water quality that is reasonable, considering all demands being made or to be made and the total values involved, beneficial and detrimental, economic and social, tangible and intangible.

The Porter-Cologne Act establishes the State Board and the regional boards as the principle state agencies responsible for control of water quality. The State Board is responsible for:

- Issuing rights for the appropriation of surface water;
- Preventing waste and unreasonable use of water;
- Adjudicating water rights at the request of water users or the courts;
- Adopting state-wide water quality control policy;
- Reviewing actions of regional boards;
- Implementing the federal Clean Water Act; and
- Operation of a grants and loan program for the construction of sewage treatment plants.

The regional boards are responsible for:

- Issuance of waste discharge requirements to regulate the discharge of waste to surface and ground waters;

- Enforcement of the waste discharge requirements by the issuance of cease and desist orders, cleanup and abatement orders, administrative civil liability orders, and court action;

- Water quality control planning within their region; and

- Surveillance and monitoring to detect new sources of pollution and to ensure that ongoing discharges are in compliance with waste discharge requirements.

The Porter-Cologne Act empowers the regional boards to formulate and adopt, for all areas within the regions, a Water Quality Control Plan (Basin Plan) which designates beneficial uses and establishes such water quality objectives as in its judgment will ensure reasonable protection of beneficial uses. Each regional board establishes water quality objectives that will insure the reasonable protection of beneficial uses and the prevention of nuisance. The California Water Code provides flexibility for some change in water quality provided that beneficial uses are not adversely affected. The factors which are to be considered by the Regional Board in establishing water quality objectives are described in Chapter 3, Water Quality Objectives, (page 3-1).

The State Board may adopt water quality control plans for surface waters that overlap Regional Board boundaries, are statewide in scope, or are otherwise considered significant. Statewide plans supersede Regional Water Quality Control Plans where conflict occurs. The Regional Water Quality Control Plans are required to conform with policies of the State Board.

The California Water Code also requires that each regional board include an implementation plan in the Basin Plan. Implementation plans must include as a minimum:

- A description of the nature of the actions necessary to achieve the water quality objectives, including recommendations for appropriate actions by any entity, public or private;

- A time schedule for the actions to be taken; and

- A description of the surveillance to be undertaken to determine compliance with the water quality objectives.

## *CALIFORNIA ENVIRONMENTAL QUALITY ACT OF 1973*

The California Environmental Quality Act (CEQA) is a very important and expansive environmental protection law in California. It was enacted by the state legislature in 1973 and is contained in the Public Resources Code sections 21000 through 21177. CEQA is the state-level equivalent of the federal NEPA.

The overall objectives of both laws, NEPA and CEQA, are to provide full public disclosure of a project and to ensure that environmental factors are considered in the decision making process. CEQA requires all state agencies, boards and commissions to include in any report on any project having significant effect on the environment an Environmental Impact Report (EIR). The EIR records the scope of the applicant's proposal and analyzes all its known environmental effects. The EIR must discuss any significant environmental effects which cannot be avoided if the proposal is implemented, proposed mitigative measures to minimize the impact of the project and alternatives to the project. Also the EIR must discuss the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity and the growth-inducing impacts of the proposed project. The EIR is circulated to interested agencies and members of the public who request a copy. The public has a 45 day period for review during which comments on the EIR are accepted.

State agencies cannot approve a project for which alternatives or mitigation measures exist which would significantly reduce the environmental impacts, unless overriding social and/or economic considerations apply.

Activities of the State and Regional Boards subject to CEQA include adoption of Basin Plans and amendments thereto, issuance of National Pollutant Discharge Elimination System

(NPDES) permits, and Waste Discharge Requirements (WDRs). The basin planning process however, has been certified by the Secretary of Resources as being exempt from CEQA's requirement for preparation of an EIR or negative declaration and initial study CCR Title 14, section 15251). Under the basin planning process, a plan amendment, as well as a technical report and backup materials, serve as a functional equivalent to an EIR or negative declaration and initial study. The CEQA Notice of Filing, Environmental Checklist Form, and Notice of Decision must be filed to comply with CEQA.

## *CALIFORNIA ENDANGERED SPECIES ACT*

The California Endangered Species Act (CESA) as amended in 1987 (California Fish and Game Code, sections 2050 thru 2098) establishes state policy regarding protection of endangered and threatened species. CESA is directed specifically at projects subject to the CEQA which may adversely affect endangered and threatened species.

Pursuant to CESA, the Regional Board must consult with the California Department of Fish and Game (DFG) to determine if the Basin Plan would jeopardize the continued existence of any endangered or threatened species or adversely affect the habitat of the species. CESA requires the DFG to issue written findings regarding whether or not Regional Board adoption of the Basin Plan will cause jeopardy to endangered or threatened species.

CESA policy requires that the Regional Board not approve a Basin Plan, which in DFG's opinion, would jeopardize endangered or threatened species. CESA also requires the Regional Board to adopt reasonable and prudent alternatives in the Basin Plan which would minimize any adverse effects identified by DFG to endangered or threatened species. If the alternatives are infeasible, the Regional Board is required to adopt reasonable mitigation and enhancement measures in the Basin Plan.

## *OTHER STATE STATUTES*

Certain statutory provisions contained in the Health and Safety Code, Fish and Game Code, Harbors and Navigation Code, and the Food and Agriculture Code, supplement the water quality provisions of the California Water Code. The Health and Safety Code has statutory provisions providing for the regulation of hazardous waste, hazardous materials, surface impoundments containing hazardous waste, underground and aboveground storage of hazardous substances, and underground injection of toxic substances and the discharge of cancer causing chemicals to sources of drinking water. The Harbors and Navigation Code has statutory provisions to prevent the unauthorized discharges of waste from vessels to surface waters. The Food and Agriculture Code has statutory provisions providing for the prevention of pollution of ground water which may be used for drinking water supplies. The Fish and Game Code has statutory provisions to prevent unauthorized diversions of any surface water body as well as waste discharges deleterious to fish, plant, animal, or bird life. The Government Code requires the Governor to establish a state oil spill and toxic disaster contingency plans.

## *CALIFORNIA CODE OF REGULATIONS*

The administrative procedures of the State Board and regional boards and regulations relating to many facets of water rights and water quality are contained in Title 23, (WATERS) Division 3, (Water Resources Control Board) Chapters 3, 4, 15, and 16 California Code of Regulations (CCR). Requirements for quality of water for domestic uses, wastewater reclamation criteria, and hazardous waste management are contained in Title 22, Division 4 (Environmental Health).

## *HISTORY OF BASIN PLANNING IN THE SAN DIEGO REGION*

The Dickey Act, enacted by the State of California in 1949, established nine Regional Water Pollution Control Boards in California. Regional Water Pollution Control Boards were directed to establish water quality objectives in order to protect the quality of receiving waters from adverse impacts of discharges. During the first few years, the San Diego Regional Water Pollution Control Board only established narrative objectives for discharges. By 1952, the San Diego Regional Water Pollution Control Board began including numerical limits in requirements for discharges and adopting water quality objectives for receiving waters.

In the late 1960's the San Diego Regional Board conducted an extensive investigation to define water quality objectives for the entire San Diego

Region. A report was prepared for each major hydrologic unit of the Region. These reports described the following topics for each hydrologic unit:

- Geology and land use;
- Precipitation and runoff;
- Water quality;
- Surface and ground water use;
- Imported water use;
- Waste disposal;
- Beneficial uses;
- Water quality objectives; and
- The water quality implementation program.

These early reports led to the definition and designation of beneficial uses for the surface and ground waters of the Region. The beneficial uses defined in the early reports have remained intact, for the most part, to the present day.

With the enactment of the Porter-Cologne Water Quality Act in 1969, the names of the Regional Water Pollution Control Boards were changed to Regional Water Quality Control Boards, and their authority was broadened. Furthermore, the Act required the Regional Water Quality Control Boards to initiate development of comprehensive regional Water Quality Control Plans.

In 1971, the San Diego Regional Board adopted an Interim Water Quality Control Plan (Interim Plan) which expanded the number of beneficial uses designated for inland surface waters, and coastal waters subject to tidal action. The Interim Plan was prepared to satisfy state and federal requirements for grant programs for sewage treatment plant construction. In addition, the Interim Plan satisfied the Porter-Cologne Act requirements that each regional board adopt a Water Quality Control Plan. As the term "*interim*" implies, the document was adopted as the first step towards development of a comprehensive fully developed Water Quality Control Plan. The Interim Plan was amended in 1972 to designate a beneficial use for clamming and shellfish harvesting at various locations in coastal waters.

In 1975, the San Diego Regional Board adopted the Comprehensive Water Quality Control Plan Report for the San Diego Region that compiled all of the existing beneficial uses, water quality objectives, and policies into one document and rescinded all individually-adopted objectives and policies. The 1975 Basin Plan was amended by the Regional Board on numerous occasions since 1975. A summary of Basin Plan amendments adopted by the Regional Board between 1979 and 2005 and approved by the State Board, Office of Administrative Law, and USEPA is presented in Chapter 5 (Plans and Policies) of this Basin Plan.

Since 1975, progress has been made toward the control of a number of water quality problems identified in the 1975 Basin Plan, including the control of point source discharges and the development of new programs to address nonpoint source pollution issues in the Region. At the same time, many new issues and areas of concern have arisen as health scientists have identified increasingly lower concentrations of toxic substances as health risks. Furthermore, advancing analytical technology enables detection of contaminants at increasingly lower concentrations. The State and Regional Board's Continuing Planning Process, based on the latest scientific information, addresses both "*old*" and "*new*" water quality issues.

## *CONTINUING PLANNING PROCESS*

As part of the State's continuing planning process, components of the Basin Plan are reviewed as new data and information become available or as specific needs arise. Comprehensive updates of the Basin Plan occur in response to state and federal legislative requirements and as funding becomes available. In addition, State Board and other governmental entities' (federal, state, and local) plans, which can affect water quality, are incorporated into the planning process. The Basin Plan provides consistent long-term standards and program guidance for the Region.

# *BASIN PLAN REVIEW AND AMENDMENT PROCESS*

The following discussion applies to the review and amendment process for any Water Quality Control Plan, (i.e., a Statewide Plan or a Regional Board Basin Plan).

## TRIENNIAL REVIEW

Statewide plans and Regional Board Basin Plans are flexible documents which must be reviewed and revised regularly to adapt to changing conditions. A major review of both types of Plans is performed every three years as part of the update process for the "*Triennial Review*". The Triennial Review is required by the federal Clean Water Act [section 303(c)(1)]. In addition, state law requires that water quality control plans be reviewed periodically (California Water Code section 13240), and that the State Board review statewide plans at least every three years (California Water Code sections 13170 and 13170.2). These reviews are comprehensive and include a public scoping hearing to identify the issues and water quality standards to be addressed. The review identifies standards which are appropriate and, therefore, require no revisions. Information on new or existing water quality objectives comes from monitoring data, compliance inspections, discharger reports, and public complaints. Monitoring data provides information on background conditions which are used to set water quality objectives.

The State or Regional Board evaluates all available information and determines whether revisions to water quality standards are needed and the nature of any necessary revisions. A work plan is prepared which identifies appropriate revisions. These revisions, and a time schedule for implementation, are then incorporated into the Statewide Plan or Regional Board Basin Plan by way of the amendment process discussed below.

## BASIN PLAN AMENDMENT PROCESS

Whenever a Statewide Plan or Regional Board Basin Plan for surface waters is to be revised, public participation requirements must be met, as called for in 40 CFR Part 25 (Public Participation in Programs Under the Resource Conservation and Recovery Act and the Clean Water Act). When water quality standards are changed, a public hearing must be held. Notice for the public hearing generally must be given 45 days prior to the hearing, and the documents to be considered at the hearing must be available to the public 30 days prior to the hearing. After the hearing, a summary of comments received and responses to those comments must be prepared before action is taken.

For Regional Board adoption of a Basin Plan amendment, a quorum of Board members must be present (five of the nine members). For State Board approval of a proposed Regional Board amendment, a quorum must also be present (three of the five members). In both cases the vote of a majority of the quorum is required to take action. If a State Board hearing is being held regarding a Statewide Plan or to review an amendment proposed by a Regional Board, one or more members of the State Board may conduct the hearing upon authorization of the State Board. In cases where such a hearing is conducted, any final action must be taken by a majority of all members of the State Board (i.e., 3 votes). Usually State Board hearings are of a controversial nature and most, if not all, Board members elect to attend. The State Board may approve a Basin Plan amendment proposed by a Regional Board or return it to the Regional Board for further consideration. Upon resubmission, the State Board may either approve or, after a public hearing in the affected region, revise and approve such plan (California Water Code section 13245).


Basin planning is also influenced by several federal administrative guidance documents, such as USEPA's Technical Support Document for Water Quality-Based Toxics Control, the Water Quality Standards Handbook, and "*Gold Book*" Quality Criteria for Water, 1986 and waste load allocation manuals.

Basin Plan amendments are generally initiated by the appropriate Regional Board, and Statewide Plan amendments are initiated by the State Board. Amendments may also be initiated by any other interested parties. In this case, the proposed amendment submitted by the interested party is reviewed by Regional Board to determine if the information is adequate to support the requested change to the Basin Plan. The Regional Board will review the technical information and may either accept it as complete or reject it as incomplete. Whenever new or revised water quality standards are proposed in a Regional Board Basin Plan amendment, the standards must be approved by the State Board before the amendment becomes effective. A proposed standard revision to a statewide plan or Regional Board Basin Plan takes effect upon approval by the Office of Administrative Law (OAL). A standard contained in a Regional Basin Plan amendment which relates to surface waters

or a standard in a statewide plan must be submitted to the United States Environmental Protection Agency (USEPA) for approval [40 CFR section 131.20 (c)] following State Board review. If the standard revision is disapproved by the USEPA, the original standard remains in effect until revised by the basin planning process, or the USEPA promulgates its own rule which supersedes the standard revision [40 CFR section 131.21 (c)].

## *BASIN PLAN AMENDMENT PROCEDURES*

(1) Advance notice of plan amendments is required (California Water Code §13244) and must be advertised for hearings. For amendments that include a prohibition, a public notice must be published for three consecutive days in a newspaper of wide circulation in the area of the prohibition. For other actions, notice must be published for one day in a newspaper of wide circulation. Usually, the hearing notice must be published at least 45 days prior to the hearing (40 CFR section 25.5).

A CEQA Notice of Filing must be circulated at least 45 days prior to State and Regional Board action on a proposed amendment. Where the hearing(s) process is completed and adoption is scheduled for a regularly scheduled State or Regional Board Meeting, a ten-day notice requirement for agenda items applies (Government Code section 11125).

(2) For controversial and/or complex amendments, comments should be requested from interested persons prior to drafting an amendment. This step would be informal by written correspondence or in a workshop session (the public can attend such workshops, which are not "*public hearings*" and would precede the hearing notice in number 3 below). Comments received would be considered in the initial draft of the amendment and the alternatives.

(3) The hearing notice must be specific enough to allow an effective opportunity for public participation. Although it is preferable to include the draft plan amendment and technical report with the hearing notice, as indicated above, these documents can be made available at a later date that is at least 30 days before the hearing (40 CFR section 25.5). The notice should include:

(a) The general area to be regulated;
(b) The specific proposed plan amendment and a statement of the availability of a technical report and backup material;
(c) Either of the following,
  (i) Alternatives to the proposal or
  (ii) A statement that additional rules, consistent with the general purpose of the plan amendment and complementary to the specific proposed rules, are under consideration.
(d) A statement as to whether action on the amendment will be taken immediately at the close of the hearing.

(4) A copy of the hearing notice should be sent to:

(a) Those who normally receive notices of plan review or those who, in the judgment of staff, would be interested in the proposed amendment(s).
(b) Those who have commented on the plan review or amendment.
(c) Those federal, state and local agencies who have jurisdiction by law or who have expertise with respect to the subject(s) of the proposed amendment(s).
(d) Specific interested parties affected by the proposed action.

(5) The State or Regional Board(s) may require that written testimony or other evidence be submitted in advance of the public hearing (Title 23 CCR section 649.4). If this option is chosen, the hearing notice should specify the details. Charts, graphs, and other testimony which are presented as evidence must be left with the State or Regional Board(s) in order to be considered as part of the record.

(6) The hearing notice can state that more than one hearing is scheduled and list the dates for each in order to save processing time. Alternatively, the notice may state that action on the amendment could take place following the close of the hearing. Some delays may also be avoided by

having special hearings on dates other than regularly scheduled State or Regional Board meetings.

(7) The State or Regional Board(s) must prepare written responses to comments received at least 15 days before the State or Regional Board intends to take action. Copies of responses will be available at the State or Regional Board meeting for any person to review. Late comments should be responded to at the State or Regional Board meeting. If appropriate, the Environmental Checklist Form may be revised based on a review of comments received.

(8) The State or Regional Board(s) must prepare a summary report including:
   (a) A brief description of the proposed activity;
   (b) Reasonable alternatives to the proposed activity; and
   (c) Mitigation measures to minimize any potential significant adverse environmental impacts of the proposed activity identified in the Environmental Checklist Form. Conclusions must be made as to what, if any, potential significant adverse impacts, feasible alternatives, and feasible mitigation measures exist. These conclusions must be accompanied by a statement of supporting facts. In adopting proposed amendments, the State or Regional Board must mandate those feasible alternatives or feasible mitigation measures which are within its jurisdiction. The State or Regional Board cannot approve the proposed amendment if there are feasible alternatives or feasible mitigation measures which would substantially lessen the potential significant adverse environmental impacts (Public Resource Code section 21080.5).

(9) The hearing must, at a minimum, be recorded electronically (Title 23 CCR section 647.4). Controversial matters usually are recorded by a stenographic reporter.

(10) At the hearing, all interested persons are given an opportunity to be heard. Reasonable limitations on public participation are appropriate and may be indicated in an opening statement (i.e., impose time limits on testimony, encourage groups to designate a spokesperson, and require witnesses to summarize written testimony). There is no right to cross-examination at the hearings. Persons wishing clarification of prior evidence or comments may request the same from the State or Regional Board.

Cross-examination must be allowed when an amendment takes on quasi-judicial features; for example, when considering a prohibition against increasing existing discharges from a relatively small number of dischargers. Cross-examination may also be allowed at the discretion of the Chairperson, if it appears that the cross-examination will assist the State or Regional Board in its deliberations.

(11) At the close of the hearing, it may be desirable to leave the record open to provide interested persons an additional opportunity to submit written comments. If the record is left open, all interested persons will be told at the hearing that they may review and respond to written comments received during the time that the record is left open. For example, the record could be left open ten days for written submittals and an additional five days for written comments in response to these submittals. Once the record is closed, no additional evidence will be received at the State or Regional Board meeting to consider adoption of the amendment; however, brief comments on the proposal will be allowed.

(12) After the close of the hearing and any comment period, the amendment may be adopted as proposed. If the draft amendment is to be modified, based on the hearing, and the notice is adequate as outlined in number 3 above, a final plan amendment may be adopted when the product is a logical outgrowth of the draft amendment or a statement in the notice. Where changes in the final draft are not a logical outgrowth of the original proposal, an additional notice, hearing, and opportunity to comment will be provided. When changes are proposed by the State or Regional Board, the procedure is:

(a) For each proposed change, consideration is given as to whether the change is a logical outgrowth of the original proposal. If the change was (1) not contemplated in the technical report, notice, or draft amendment and (2) not discussed during the hearing(s) or in written comments received, it is not a logical outgrowth of the original proposal; and an additional notice and comment period will be provided. When the issues are complex, controversial, or confusing, an additional comment period on a new draft amendment is often allowed (even if it can be argued that the changes are a logical outgrowth of the original proposal).

(b) If the change is a logical outgrowth of the original draft amendment, it may be voted upon without an additional notice and comment period. If the vote on the amendment is delayed so that the full amendment can be retyped, etc., normal meeting notice requirements may be followed (Title 23 CCR section 647.2).

(c) If the change is not a logical growth, a motion may be made to incorporate it into the draft amendment. If this motion passes, consideration of the amendment should be continued so that the revisions can be circulated for comments as provided in number 4 above.

(13) Revisions to plan amendments are based on the evidence developed at the hearing. This requirement does not preclude the State or Regional Board(s) from adopting an amendment immediately after the hearing if all evidence has been considered.

(14) If a Basin Plan amendment is quasi-judicial (focused on the rights and duties of a limited number of individuals such as in a small isolated prohibition area), the State or Regional Board resolution adopting the plan amendment will contain findings that are adequate to enable another interested person to "*bridge the analytical gap*" between the evidence the amendment itself.

(15) When a Regional Board amendment is adopted, it must then be forwarded to the State Board for approval. The State Board will review the proposed amendment with extensive evaluation of technical, policy, and legal consistency considerations. The State Board is required to act upon submission of a water quality control plan or revision within 60 days after the Regional Board has submitted the plan, or 90 days after resubmission of the plan (California Water Code section 13246). A Basin Plan revision adopted by a Regional Board is not effective until it is approved by State Board (California Water Code section 13245) and the Office of Administrative Law. An amendment package to be processed for approval must include all of the following:

(a) A memorandum of transmittal including a list of all material that was part of the Regional Board record, staff contact person, and request date for State Board action. If expeditious treatment is requested, the reason for this request should be stated.

(b) A copy of the certified Regional Board resolution including adopted amendments as it will be incorporated into the appropriate Basin Plan and a copy of all documents which were considered by the Regional Board prior to adoption of the Basin Plan amendment.

(c) The Regional Board technical report with detailed rationale for changes, any technical support documentation or background information, and information regarding any relevant State Board or Regional Board actions.

(d) An environmental document and any related CEQA documents.

(e) Copies of written public comments and written Regional Board responses.

(f) A responsiveness summary of any verbal responses to comments received after written comment deadline.

(g) A tape recording or transcript of the public hearing.

(h) Two sets of interested persons mailing lists, typed on self-adhesive address labels or pre-addressed envelopes, plus a typed interested persons list for State Board files.

(16) State Board review of a proposed plan amendment may result in approval or return to the Regional Board for consideration and resubmission. Upon resubmission, the State Board may approve, or, after a public hearing in the affected region, revise and approve the proposed plan amendment (California Water Code section 13245).

(17) Following State Board approval of the plan amendment, there is a 30-working day review period by the Office of Administrative Law. The Regional Board is responsible for preparing the administrative record (Items 15 b, c, d, e, f, and g above), a clear and concise summary, and a summary of necessity for review by the Office of Administrative Law. The summary of necessity is normally contained in the technical report. The Office of Chief Counsel at the State Board prepares a certification that the action was taken in compliance with all applicable requirements of Porter-Cologne.

(18) When the proposed Regional Board amendment has been approved by the Office of Administrative Law, the Regional Board must post a CEQA Notice of Decision with the Secretary of Resources for at least 30 days following Office of Administrative Law approval. When the State Board adopts a Statewide Plan amendment, the State Board must post the 30-day Notice of Decision.

(19) If water quality standards for surface waters are revised in the plan update, the revised plan must be submitted to the USEPA for approval, pending an USEPA determination that the standards meet the requirements of the Clean Water Act (40 CFR 130.10). The amendments must be forwarded to USEPA within 30 days of adoption by the State Board.

# REFERENCES


California Administrative Code. 1985 (and all amendments thereto). Title 22 and Title 23.

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Planning and Conservation League Foundation. June 1985. Citizen's Guide to the California Environmental Quality Act. 14 pp.

San Diego County Water Authority. 1993. Forty-Seventh Annual Report of Authority Operations for Fiscal Year Ending June 30, 1993. San Diego, California. 161 pp.

San Diego County Water Authority. November, 1993. Water Resources Plan, Urban Water Management Plan. San Diego, California. 83 pp.


# ENDNOTES

1. Hydrologic Unit - A classification embracing one or more of the following features which are defined by surface drainage divides: (1) In general, the total watershed area, including water- bearing and non - water bearing formations, such as the total drainage area of the San Diego River Valley; and (2) in coastal areas, two or more small contiguous watersheds having similar hydrologic characteristics, each watershed being directly tributary to the ocean and all watersheds emanating from one mountain body located immediately adjacent to the ocean.

2. Hydrologic Area - A major logical subdivision of a hydrologic unit which includes both water- bearing and nonwater - bearing formations. It is best typified by a major tributary of a stream, a major valley, or a plain along a stream containing one or more ground water basins and having closely related geologic, hydrologic, and topographic characteristics. Area boundaries are based primarily on surface drainage boundaries. However, where strong subsurface evidence indicates that a division of ground water exists, the area boundary may be based on subsurface characteristics.

3. Hydrologic Subarea - A major logical subdivision of a hydrologic area which includes both water- bearing and nonwater - bearing formations.

4. On February 10, 1994 the Regional Board adopted Resolution No. 94-25, A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region for the Laguna (1.10), Mission Viejo (1.20), and San Clemente (1.30), Hydrologic Areas. These hydrologic subareas are: Oso (1.21), Upper Trabuco (1.22), Middle Trabuco (1.23), Upper San Juan (1.25), Middle San Juan (1.26), Lower San Juan (1.27) and Ortega (1.28). The San Clemente Hydrologic Area (1.30) is broken into two hydrologic subareas: Prima Deshecha (1.31) and Segunda Deshecha (1.32).

5. State Water Resources Control Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California.

6. State Water Resources Control Board Resolution No. 77-1, Policy with Respect to Water Reclamation in California.

7. Point sources of pollution refer to pollutants discharged to water through any discernible, confined, and discrete conveyance. Nonpoint sources of pollution refer to pollutants from diffuse sources that reach water through means other than a discernable, confined, and discrete conveyance.

8. State Board Policy for Regulating Point and Nonpoint Sources of Pollution in Accordance with the Federal Water Pollution Control Act.

9. Best Management Practices are defined as the practice, or combination of practices, that are determined to be the most effective, practicable means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals (including technological, economic, and institutional consideration.

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# BENEFICIAL USES



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# 2. BENEFICIAL USES

## *INTRODUCTION*

The purpose of this chapter is to designate the beneficial uses for all surface and ground waters in the San Diego Region. Beneficial uses form the cornerstone of water quality protection under the Basin Plan. Once beneficial uses are designated, appropriate water quality objectives can be established and programs that maintain or enhance water quality can be implemented to ensure the protection of beneficial uses.

Beneficial uses are defined as the uses of water necessary for the survival or well being of man, plants and wildlife. These uses of water serve to promote the tangible and intangible economic, social and environmental goals of mankind. Examples include drinking, swimming, industrial and agricultural water supply, and the support of fresh and saline aquatic habitats.

Section 303 of the federal Clean Water Act (33 U.S.C. section1313) defines the term water quality standards as both the uses of the surface (navigable) waters and the water quality criteria which are applied to protect those uses. A water quality standard defines the water quality goals for a water body by designating the use or uses to be made of the water body, by setting criteria to protect the uses, and by protecting water quality through antidegradation provisions. Under the Porter-Cologne Water Quality Control Act (California Water Code, Division 7, Chapter 2 section13050), these concepts are defined separately as beneficial uses and water quality objectives. Beneficial uses and water quality objectives are required to be established for all waters of the State, both surface and ground waters. Beneficial uses of the surface and ground waters of the San Diego Region are discussed in this chapter; water quality objectives and water quality criteria are discussed in Chapter 3. Numerous key terms used throughout this chapter are defined in the Glossary which is included as Appendix A of this Basin Plan.

## *BENEFICIAL USES*

The designation of beneficial uses must satisfy all of the applicable requirements of the California Water Code, Division 7 and the federal Clean Water Act. California Water Code, Division 7 is also known as the Porter-Cologne Water Quality Control Act. These two names are used interchangeably.

The designation of beneficial uses for the waters of the State by the Regional Board is mandated under California Water Code section 13240. The Clean Water Act, section 303 requires that the State adopt designated beneficial uses for surface waters. The requirements of both Acts applicable to the designation of beneficial uses are summarized below.

### *BENEFICIAL USE DESIGNATION UNDER THE PORTER-COLOGNE WATER QUALITY CONTROL ACT*

The Porter-Cologne Act establishes a comprehensive program for the protection of beneficial uses of the waters of the state. California Water Code section 13050(f) describes the beneficial uses of surface and ground waters that may be designated by the State or Regional Board for protection as follows:

"*Beneficial uses of the waters of the state that may be protected against quality degradation include, but are not necessarily limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.*"

Significant points regarding the designation of beneficial uses are:

(1) Fish, plants, and other wildlife, as well as humans, use water beneficially. Designation of beneficial uses often includes subcategories of the above beneficial uses cited in California Water Code section 13050(f).

(2) Waste transport or waste assimilation in the state's surface and ground waters may not be designated as beneficial uses under the Porter-Cologne Act. The direction of the Act is to protect surface and ground waters against the adverse effects of waste constituents. (California Water Code section 13000, section 13241, and section

13263). Surface or ground waters may be used for waste disposal or waste assimilation if designated beneficial uses are protected. In authorizing the discharge of waste, the Regional Board need not authorize utilization of the full waste assimilation capacities of the receiving waters [California Water Code section 13263(d)]. All discharges of waste into waters of the state are privileges not rights [California Water Code section 13263(g)].

(3) Designated beneficial uses may include potential beneficial uses if existing water quality will support the use or if the necessary level of water quality can reasonably be achieved. [Water Code section13241 (a) and (c)]. Potential and existing uses are defined later in this chapter.

(4) An existing beneficial use ordinarily must be designated for protection unless another beneficial use requiring more stringent objectives is designated. The existing beneficial use designation is necessary to comply with the statutory policy in California Water Code section 13000, which provides in part that "*...the quality of all waters in the state shall be protected for use and enjoyment by the people of the state.*"

(5) California Water Code section 13000 provides in part that: "*The Legislature ...finds and declares that activities and factors which may affect the quality of the waters of the state shall be regulated to attain the highest possible water quality that is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible.*" This policy establishes a general principal of nondegradation, with flexibility to allow some change in water quality which is in the best interests of the state. Changes in water quality are allowed only where beneficial uses are not unreasonably affected.

(6) The designation of beneficial uses must take into account the constitutional prohibition of waste and unreasonable waste of water. Designation of a beneficial use for protection should not require a waste of water pursuant to the California Constitution, article X, section 2.

(7) The protection and enhancement of beneficial uses require that certain quality and quantity objectives be met for surface and ground waters.

## *BENEFICIAL USE DESIGNATION UNDER THE CLEAN WATER ACT*

Beneficial uses for surface waters are designated under the Clean Water Act section 303 in accordance with regulations contained in 40 CFR 131. The State is required to specify appropriate water uses to be achieved and protected. The beneficial use designation of surface waters of the state must take into consideration the use and value of water for public water supplies, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation.

Significant points regarding the designation of beneficial uses under the Clean Water Act are:

(1) Existing beneficial uses are those uses actually attained in the water body on or after November 28, 1975 [40 CFR 131.3(e)].

(2) States are prohibited from adopting waste transport or waste assimilation as a designated use for surface waters [40 CFR 131.10(a)].

(3) The water quality standards of downstream waters must be considered and maintained [40 CFR 131.10(b)].

(4) States may adopt sub-categories of a use and set the appropriate criteria to reflect the varying needs of such sub-categories of uses. For example criteria should be set to differentiate between cold water and warm water fisheries [40 CFR 131.10(c)].

(5) At a minimum, uses are deemed attainable if they can be achieved by the imposition of effluent limits required under Clean Water Act, sections 301(b) and 306 and cost effective and reasonable best management practices for nonpoint source control [40 CFR 131.10(d)].

(6) States may adopt seasonal uses as an alternative to redesignation of the beneficial uses of a water body to uses requiring less stringent water quality criteria [40 CFR 131.10(f)].

(7) States may remove a designated beneficial use or substitute sub-categories of a use only if (a) the use is not an existing use and (b) the state can demonstrate that attaining the designated use is not feasible for one of the following reasons [40 CFR 131.10(g)]:

- naturally occurring pollutant concentrations prevent the attainment of the use; or
- natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use; or
- human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or
- dams, diversions, or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or
- physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or
- controls more stringent than the controls for effluent limitations in Clean Water Act sections 301 (b) and 306 would result in substantial and widespread economic and social impact.

(8) States may not remove designated uses if (a) they are existing uses, unless a use requiring more stringent criteria is added, or (b) such uses will be attained by implementing effluent limits under Clean Water Act sections 301 (b) and 306 and by implementing best management practices for nonpoint source control [40 CFR 131.10(h)].

(9) If existing uses are higher than those specified in water quality standards, a state must revise its standards to reflect the uses actually being attained [40 CFR 131.10(i)].

(10) If the designated uses do not include the uses specified in section 101(a) (2) of the Clean Water Act, or if the state wants to remove a use specified in section 101 (a) (2), the state must conduct a "*use attainability analysis*" [40 CFR 131.10(j)]. A use attainability analysis is defined in 40 CFR 131.3(g) as a "*structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors.*" The uses listed in section 101 (a)(2) are protection and propagation of fish, shellfish, and wildlife, and recreation (i.e., fishable/ swimmable uses).

# *BENEFICIAL USE DEFINITIONS*

In 1972, the State Board adopted a uniform list and description of beneficial uses to be applied throughout all basins of the State. During the 1994 Basin Plan update, beneficial use definitions were revised and some new beneficial uses were added. Overall, the following twenty-three beneficial uses are now defined statewide and are designated within the San Diego Region:

***Municipal and Domestic Supply (MUN)*** - Includes uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.

***Agricultural Supply (AGR)*** - Includes uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.

***Industrial Process Supply (PROC)*** - Includes uses of water for industrial activities that depend primarily on water quality.

***Industrial Service Supply (IND)*** - Includes uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.

***Ground Water Recharge (GWR)*** - Includes uses of water for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.

***Freshwater Replenishment (FRSH)*** - Includes uses of water for natural or artificial maintenance of surface water quantity or quality (e.g., salinity).

***Navigation (NAV)*** - Includes uses of water for shipping, travel, or other transportation by private, military, or commercial vessels.

***Hydropower Generation (POW)*** - Includes uses of water for hydropower generation.


Beachgoers at La Jolla Shores

***Contact Water Recreation (REC-1)*** - Includes uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and SCUBA diving, surfing, white water activities, fishing, or use of natural hot springs.

***Non-contact Water Recreation (REC-2)*** - Includes the uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

***Commercial and Sport Fishing (COMM)*** - Includes the uses of water for commercial or recreational collection of fish, shellfish, or other organisms including, but not limited to, uses involving organisms intended for human consumption or bait purposes.

***Aquaculture (AQUA)*** - Includes the uses of water for aquaculture or mariculture operations including, but not limited to, propagation, cultivation, maintenance, or harvesting of aquatic plants and animals for human consumption or bait purposes.

***Warm Freshwater Habitat (WARM)*** - Includes uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.

***Cold Freshwater Habitat (COLD)*** - Includes uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.

***Inland Saline Water Habitat (SAL)*** - Includes uses of water that support inland saline water ecosystems including, but not limited to, preservation or enhancement of aquatic saline habitats, vegetation, fish, or wildlife, including invertebrates.

***Estuarine Habitat (EST)*** - Includes uses of water that support estuarine ecosystems including, but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g., estuarine mammals, waterfowl, shorebirds).


Los Penasquitos Lagoon

***Marine Habitat (MAR)*** - Includes uses of water that support marine ecosystems including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shellfish, or wildlife (e.g., marine mammals, shorebirds).

***Wildlife Habitat (WILD)*** - Includes uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

Kelp on beach at
San Diego – La Jolla Ecological Reserve

***Preservation of Biological Habitats of Special Significance (BIOL)*** - Includes uses of water that support designated areas or habitats, such as established refuges, parks, sanctuaries, ecological reserves, or Areas of Special Biological Significance (ASBS), where the preservation or enhancement of natural resources requires special protection.

The following coastal waters have been designated as ASBS and State Water Quality Protection Areas (SWQPAs) in the San Diego Region. SWQPAs are a nonterrestrial marine or estuarine area designed to protect marine species or biological communities from an undesirable alteration in natural water quality, including, but not limited to, ASBS that have been designated by the State Water Resources Control Board through its water quality planning process. ASBS are a subset of State Water Quality Protection Areas (SWQPAs). For detailed descriptions of the boundaries of SWQPAs/ASBS, see the discussion on SWQPAs/ASBS in Chapter 5, Plans and Policies:

- Irvine Coast, Orange County
- Heisler Park, Orange County
- La Jolla, San Diego County
- San Diego-Scripps, San Diego County

The following areas are designated Marine Life Refuges. A legal description of the boundaries of each marine life refuge is contained in the Fish and Game Code of California, Division 7 (Refuges), Chapter 2 (Specific Refuge Boundaries), Article 6 (Marine Life Refuge):

- Irvine Coast Marine Life Refuge, Orange County
- Laguna Beach Marine Life Refuge, Orange County
- South Laguna Beach Marine Life Refuge, Orange County
- Niguel Marine Life Refuge, Orange County
- Dana Point Marine Life Refuge, Orange County
- Doheny Beach Marine Life Refuge, Orange County
- City of Encinitas Marine Life Refuge, San Diego County
- San Diego Marine Life Refuge, San Diego County

The following coastal waters have been designated by the California legislature as Marine Protected Areas. Marine Protected Areas are named discrete geographic areas designated to protect and conserve marine life and habitat. All State Marine Parks, State Marine Reserves, and/or State Marine Conservation Areas are classified as Marine Protected Areas. A coastal water may be designated with more than one classification. A legal description of the boundaries of each Marine Protected Area can be found at California Department of Fish and Game, Marine Region, 20 Lower Ragsdale Drive, Suite 100, Monterey, CA 93940.

The following areas are designated State Marine Parks:

- Irvine Coast State Marine Park, Orange County
- Laguna Beach State Marine Park, Orange County
- South Laguna Beach State Marine Park, Orange County
- Niguel State Marine Park, Orange County
- Dana Point State Marine Park, Orange County
- Doheny Beach State Marine Park, Orange County
- Buena Vista Lagoon State Marine Park, San Diego County
- Batiquitos Lagoon State Marine Park, San Diego County
- San Elijo Lagoon State Marine Park, San Diego County
- San Dieguito Lagoon State Marine Park, San Diego County

The following areas are designated State Marine Reserves:

- Heisler Park State Marine Reserve, Orange County
- Agua Hedionda Lagoon State Marine Reserve, San Diego County

The following areas are designated State Marine Conservation Areas:

- Crystal Cove State Marine Conservation Area, Orange County
- Doheny State Marine Conservation Area, Orange County
- Encinitas State Marine Conservation Area, San Diego County
- Cardiff and San Elijo State Marine Conservation Area, San Diego County
- San Diego – Scripps State Marine Conservation Area, San Diego County
- La Jolla State Marine Conservation Area, San Diego County
- Mia J. Tegner State Marine Conservation Area, San Diego County

The following areas are designated Ecological Reserves by the Fish and Game Commission (California Code of Regulations, Title 14, section 630). A legal description of the boundaries of each ecological reserve is on file at the California Department of Fish and Game headquarters, 1416 Ninth Street, Sacramento, CA 95814, and at California Department of Fish and Game, Lands and Facilities Branch, 1812 Ninth Street, Sacramento, CA 95814:

- Agua Hedionda Lagoon Ecological Reserve, San Diego County
- Batiquitos Lagoon Ecological Reserve, San Diego County
- Blue Sky Ecological Reserve, San Diego County
- Boden Canyon Ecological Reserve, San Diego County
- Boulder Creek/Rutherford Ranch, San Diego County
- Buena Vista Lagoon Ecological Reserve, San Diego County
- Carlsbad Highlands Ecological Reserve, San Diego County
- Crestridge Ecological Reserve, San Diego County
- Dairy Mart Ponds Ecological Reserve, San Diego County
- Del Mar Mesa/ Lopez Ridge Ecological Reserve, San Diego County
- Heisler Park Ecological Reserve, Orange County
- Laguna Laurel Ecological Reserve, Orange County
- Lake Hodges Ecological Reserve, San Diego County
- McGinty Mountain Ecological Reserve, San Diego County
- Meadowbrook Ecological Reserve, San Diego County
- Otay Mountain Ecological Reserve, San Diego County
- Pilgrim Creek Ecological Reserve, San Diego County
- Plaisted Creek Ecological Reserve, San Diego County
- Rancho Jamul Ecological Reserve, including the Headquarters Unit, San Diego County
- San Diego - La Jolla Ecological Reserve, San Diego County
- San Diego River Ecological Reserve, San Diego County
- San Dieguito Lagoon Ecological Reserve, San Diego County
- San Elijo Lagoon Ecological Reserve, San Diego County
- San Luis Rey River Ecological Reserve, San Diego County
- Santa Rosa Plateau Ecological Reserve, Riverside County
- Sycuan Peak Ecological Reserve, San Diego County

The following area is designated a Wildlife Area by the Fish and Game Commission (California Code of Regulations, Title 14, section 630). A legal description of the boundaries of the wildlife area is on file at the California Department of Fish and Game headquarters, 1416 Ninth Street, Sacramento 95814, and at California Department of Fish and Game, Lands and Facilities Branch, 1812 Ninth Street, Sacramento, CA 95814:

- Hollenbeck Canyon Wildlife Area, San Diego County

The following areas are designated Natural Preserves by the State Park and Recreation Commission (Public Resources Code, Division 5, Chapter 1, Article 1.7 section 5019.71). A legal description of each natural preserve is on file at the California Department of Parks and Recreation headquarters, 1416 Ninth Street, Sacramento, CA 95814:

- Trestles Wetlands Natural Preserve, San Diego County
- Los Penasquitos Marsh Natural Preserve, San Diego County
- Ellen Browning Scripps Natural Preserve, San Diego County
- Silver Strand Natural Preserve, San Diego County
- Tijuana Estuary Natural Preserve, San Diego County

The following area is designated a National Estuarine Research Reserve by the National Oceanic and Atmospheric Administration (NOAA) (Coastal Zone Management Act of 1972 as amended section 315, 16 USC 1461). A legal description of the boundaries of the national estuarine research reserve is on file at the NOAA headquarters, Office of Ocean and Coastal Resource Management, NOAA, Washington, D.C., 20235:

- Tijuana River National Estuarine Research Reserve, San Diego County

Tijuana River mouth
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California Coastal Records Project www.californiacoastline.org

The following areas are managed by the U.S. Fish and Wildlife Service as part of the National Wildlife Refuge System A legal description of the boundaries of each National Wildlife Refuge is on file at the San Diego National Wildlife Refuge Complex, 6010 Hidden Valley Road, Carlsbad, CA 92011:

- San Diego National Wildlife Refuge, San Diego County
  - Otay – Sweetwater Unit
  - Vernal Pool Unit
- San Diego Bay National Wildlife Refuge, San Diego County
  - South San Diego Bay Unit
  - Sweetwater Marsh Unit
- Tijuana Slough National Wildlife Refuge, San Diego County

***Rare, Threatened, or Endangered Species (RARE)*** - Includes uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened or endangered.

***Migration of Aquatic Organisms (MIGR)*** - Includes uses of water that support habitats necessary for migration, acclimatization between fresh and salt water, or other temporary activities by aquatic organisms, such as anadromous fish.

***Spawning, Reproduction, and/or Early Development (SPWN)*** - Includes uses of water that support high quality habitats suitable for reproduction, early development and sustenance of marine fish and/or cold freshwater fish.

***Shellfish Harvesting (SHELL)*** - Includes uses of water that support habitats suitable for the collection of filter-feeding shellfish (e.g., clams, oysters and mussels) for human consumption, commercial, or sport purposes.

# *EXISTING AND POTENTIAL BENEFICIAL USES*

The water resources of the San Diego Region have been extensively developed over the years and today's existing beneficial uses will probably continue into the future. Since the adoption of the Basin Plan in 1975, changes in land use patterns and resultant changes in water quality have led to some subsequent modifications of beneficial use designations. Minor modifications have also been also made to clarify the definition of some of the beneficial use designations.

The beneficial use designations described in this chapter are categorized as "*existing*" or "*potential*" beneficial uses. An existing beneficial use can be established by demonstrating that:

- Fishing, swimming, or other uses have actually occurred since November 28, 1975; or
- The water quality and quantity is suitable to allow the use to be attained.

Existing beneficial uses were originally determined as part of a use survey of water resources in the Region described in Chapter 1, *History of Basin Planning in the San Diego Region.* Beneficial use designations have also been determined using additional information gathered since 1975. Beneficial uses are

designated as "*potential*" for a variety of reasons, including:

- Plans are proposed to put the water to a future use;
- Potential exists to put the water to a future use;
- The public desires to put the water to future use;
- The water is potentially suitable for municipal or domestic water supply under the terms of the *Sources of Drinking Water* Policy (State Board Resolution No. 88-63); or
- The Regional Board has designated a beneficial use as a regional water quality goal.

## *BENEFICIAL USES FOR SPECIFIC WATER BODIES*

Designated beneficial uses are summarized in the tables at the end of this chapter as follows:

Table 2-2 Inland Surface Waters,

Table 2-3 Coastal Waters,

Table 2-4 Reservoirs and Lakes, and

Table 2-5 Ground Water.

In the tables, a "●" indicates an existing beneficial use that was actually attained in the surface or ground water on or after November 28, 1975. A "O" indicates a potential beneficial use that may develop in future years. A "+" indicates that the water body has been exempted by the Regional Board from the municipal use designation under the terms and conditions of State Board Resolution No. 88-63, *Sources of Drinking Water* Policy.

Designated beneficial uses are generally, but not always, present throughout the entire reach of a particular hydrologic unit, area, subarea, or water body. Designated beneficial uses may not be present throughout the year. Specific beneficial uses near or below discharges will be carefully evaluated by the Regional Board during the development of waste discharge requirements or enforcement orders.

Beneficial uses are designated for (a) native waters and (b) imported waters stored in a reservoir. They do not represent the use of water directly imported into the hydrologic basin, unless storage of the imported water occurs within the basin. The lack of a beneficial use listed for any given area does not rule out the possibility of existing or future beneficial uses. Existing beneficial uses which have not been formally designated in this Basin Plan are protected as well as designated uses.

## *DESIGNATION OF RARE BENEFICIAL USE*

The RARE beneficial use designation was based, in large part, on the information contained within RareFind. RareFind is the personal computer application of the California Department of Fish and Game's (DFG's) Natural Diversity Data Base (NDDB). The NDDB tracks the location and condition of California's rare, threatened, endangered, and sensitive plants, animals and natural communities. The NDDB is the most complete single source of information on California's rare, endangered, threatened and sensitive species, and natural communities. However, the absence of a special animal, plant or natural community from the RareFind report does not necessarily mean that they are absent from the area in question, only that no occurrence data are currently entered in the NDDB inventory.

Under the Fish and Game Code, as well as the California Environmental Quality Act, a state lead agency is required to consult with the Department of Fish and Game (DFG) to determine whether a project under consideration (e.g., the Basin Plan or a permitting process) will adversely affect any threatened or endangered species. The consultation process is important in identifying bodies of water that support threatened or endangered species. During the Basin Plan consultation process in 1994, the DFG provided recent sightings of the bald eagle (*Haliaeetus leucocephalus*). The U.S. Fish and Wildlife Service provided recent surveys for the least Bell's vireo (*Vireo belli pusillus*) and southwestern willow flycatcher (*Empidonax trailli extimus*). These and other information sources are listed in the references for this chapter.

To ensure the applicability of the RareFind information, only current sightings (i.e., those sightings since November 28, 1975) were used. In addition, consideration was given to the frequency, abundance, and occurrence history

for each sighting(s), and how recent the sighting was. The RARE designation has been added where there is substantial evidence that the water body supports threatened or endangered species. By definition, water bodies with a RARE designation support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened or endangered. Those plant or animal species which were used in the designation of specific water bodies with the RARE beneficial use are shown in Table 2-1. The Regional Board can provide specific information about the sighting(s) used to designate the RARE beneficial use. However, it is the responsibility of the lead agency or project sponsor to provide adequate information as to whether a proposed project will affect fish and wildlife (including plants) and their habitats.

The RARE beneficial use is generally, but not always, present throughout the entire reach of a particular waterbody. Also, the RARE beneficial use may not be present throughout the year. The RARE designation is placed on bodies of water where the protection of a threatened or endangered species depends on the water either directly, or to support its habitat. The purpose of the RARE designation for a particular water body is to highlight the existence of the threatened or endangered species. This will ensure that, absent extraordinary circumstances, they are not placed in jeopardy by the quality of the discharges to those water bodies.

Recognition that a water body is used by threatened or endangered species (RARE designation) does not necessarily mean that any particular suite of water quality objectives will be applied to the water body. In the absence of species specific or site specific objectives, the Regional Board would rely on objectives for WARM and COLD to implement the RARE designation. The existing WARM and COLD beneficial use designations are believed to be stringent enough to protect threatened or endangered species. If these issues arise in the future, they will be decided on a case-by-case basis, considering the most recent scientific data, site-specific factors, and other beneficial uses.

## *DESIGNATION OF COLD FRESHWATER HABITAT BENEFICIAL USE*

Water bodies with a "*Cold Freshwater Habitat*" (COLD) beneficial use designation support cold freshwater ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.

In the San Diego Region, the cold freshwater fish used for the COLD designation is the rainbow trout. The rainbow trout, *Oncorhynchus mykiss*, is native to the Region. Rainbow trout which migrate from fresh water to the ocean are known as steelhead and those which remain in fresh water are known as a resident population. In addition, hatchery stocked rainbow trout have been planted throughout the Region since the 1880's. Some of these hatchery stocked trout have developed wild populations, and some have hybridized with native trout populations. Other species of trout may have been stocked from time to time, by various mechanisms into the Region's water bodies. (One of these trout is the European brown trout, *Salmo trutta*. At the present time, the brown trout is no longer stocked due to concern for its impacts on fishery resources and the fact that it is picivorous.)

Cold fresh water bodies are usually below 70° F, contain well-oxygenated water, and contain cold freshwater aquatic habitat suitable for cold freshwater fish. Optimum temperatures for growth and for most life stages of rainbow trout are 56 to 70° F (Moyle, 1976). The temperature tolerance for rainbow trout is reported to be from about 32° F to the mid-80's depending on the oxygen content of the water, size of fish, and the degree of acclimation. To survive at the higher water temperatures, trout require a gradual acclimation and water that is saturated with oxygen. Also, smaller trout may withstand the higher temperatures better than the larger fish.

Rainbow trout prefer well-oxygenated water but can survive at very low oxygen levels, the level tending to be less at lower temperatures and longer periods of acclimation. For example, mean lethal oxygen concentrations range from 1.05 part per million (ppm) at 52° F to 1.51 ppm at 68° F for rainbow trout averaging 3.8 inches in length (McAfee, 1966).

Rainbow trout do well in waters of pH from 7 to 8 and have adapted to waters of varying pH, ranging from at least 5.8 to 9.6 (Sigler, 1987).

## Table 2 - 1. Water - Dependent Threatened or Endangered Species Which Were Considered in the RARE Beneficial Use Designation

| NAME | STATUS* | TYPE | HABITAT REMARKS |
|---|---|---|---|
| Blue whale<br>*Balaenoptera musculus* | FE | Mammal | Ocean |
| Western snowy plover<br>*Charadrius alexandrinus nivosus* (breeding) | FE, CSC | Shore bird | Beaches, Estuarine Salt Ponds |
| Pacific green sea turtle<br>*Chelonia mydas* | FE | Reptile | Marine |
| Salt-marsh bird's beak<br>*Cordylanthus maritimus* ssp. *maritimus* | SE, FE | Plant | Salt Marsh |
| Southwestern willow flycatcher<br>*Empidonax traillii extimus* | SE,<br>Proposed FE | Bird | Riparian Woodland Habitat |
| Tidewater goby<br>*Eucyclogobius newberryi* (Girard) | FE | Fish | Shallow Marine Waters, and in the Lower Reaches of Streams |
| Bald eagle<br>*Haliaeetus leucocephalus* | SE, FT, CP | Bird | Lake |
| Humpback whale<br>*Megaptera novaeangliae* | FE | Mammal | Ocean |
| Willowy monardella<br>*Monardella linoides* ssp. *viminea* | SE, C2 | Plant | Riparian Scrub Habitat |
| Belding's savannah sparrow<br>*Passerculus sandwichensis beldingi* | SE, C2 | Bird | Coastal Wetlands |
| California brown pelican<br>*Pelecanus occidentalis californicus* | SE, FE | Bird | Estuarine, Marine, Subtidal, and Marine Pelagic Waters |
| Light-footed clapper rail<br>*Rallus longirostris levipes* | FE, CP | Bird | Coastal Marshes, Mudflats |
| California least tern<br>*Sterna antillarum browni* | SE, FE | Bird | Marine, Coastal Area Waters |
| Least Bell's vireo<br>*Vireo bellii pusillus* | SE, FE | Bird | Riparian Woodland Habitat |

Status *

Federally threatened (FT) or endangered (FE) species are defined under section 3 of the federal Endangered Species Act of 1973 (50 CFR 17). An endangered species is any species, including subspecies and varieties, "*in danger of extinction throughout all or a significant portion of its range*." A threatened species is any species "*likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range*." Threatened and endangered species have been the subject of a proposed and final rule (or regulation) published in the Federal Register. Thus, these species are also referred to as listed species. Proposed species are species proposed for listing as a threatened or endangered species for which a proposed rule, but not a final rule, has been published in the Federal Register.

Proposed species are granted limited protection under the federal Endangered Species Act. These species must be addressed by federal agencies in biological assessments (section 7), and are given special management consideration by regulatory agencies. Candidate species are species under consideration for listing, but have not been subject to a proposed rule. Categories for candidate species relate solely to the level of biological information available and not to the degree of threat. Candidate species are not protected under the federal Endangered Species Act.

Candidate species however, are afforded special management consideration due to their status and sensitivity. The U.S. Fish and Wildlife Service provides technical assistance to Federal, State and local agencies on the conservation and management of candidate species. Candidate species in category 1 (C1) are those taxa that seem to conform to the State definition of threatened or endangered species and should be added to the offical list. Candidate species in category 2 (C2) are those taxa that have populations that are low, scattered, or highly localized. Their populations have declined in abundance in recent years and so require management to prevent them from becoming threatened species.

The definitions of state threatened (ST) or endangered (SE) species under the California Endangered Species Act are the same as under the federal Endangered Species Act. Under the State Act, all animals previously listed as Rare have been "*grandfathered*" into the State Act as threatened. All plants previously listed as Rare have been kept as Rare. All plants now listed under the State Act are listed as threatened or endangered.

California Species of Special Concern (CSC) are animal species that have no specific status as a state listed species, but which appear to be vulnerable to extinction because of declining populations, limited ranges, or rarity. CSC meet the criteria for state listing and are commonly addressed under the California Environmental Quality Act. The category of California Fully Protected Species (CP) was established by the California legislature and prohibits the possession or taking of sensitive animals, or parts thereof (sections 3511, 4700, 5050, and 5515, Fish and Game Code).

In cold fresh water bodies, where the water body is free-flowing, such as in a river, stream or creek, the habitat usually supports a diversity of aquatic insects, including those aquatic insects which require a high quality of water. Typically, there is overhanging cover and shade, provided by a variety of aquatic plants, terrestrial plants, and trees. Another characteristic is that the bottom substrate usually contains structure, provided by tree root wads, logs, boulders, or gravel.

## *DESIGNATION OF SPAWNING, REPRODUCTION, AND/ OR EARLY DEVELOPMENT BENEFICIAL USE*

In the San Diego Region, the 'spawning, reproduction and/or early development' (SPWN) beneficial use designation is assigned only to water bodies with MAR and/ or COLD beneficial uses. The marine fish used for the SPWN designation includes any marine fish. The cold freshwater fish used for the SPWN designation is the rainbow trout. Rainbow trout usually spawn in the Spring, and require spawning areas with gravel and cool, free-flowing, well-oxygenated water. Rainbow trout prefer to spawn in rivers, streams and creeks with a moderate gradient and containing riffles, however some populations of rainbow trout are also known to successfully spawn in lake inlets and outlets. The fry of rainbow trout need suitable nurseries, which allow protection from predators, such as the slow, shallow areas adjacent to riffles, with shade from bank vegetation. The fry also require an abundance of aquatic insects for forage.

## *SOURCES OF DRINKING WATER POLICY*


Clouds

In November 1986, the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) was approved by the California voters. Proposition 65 prohibits the discharge of toxic substances into "*sources of drinking water*". The State Board has defined the term "*sources of drinking water*" in Resolution No. 88-63, *Sources of Drinking Water* Policy. This policy specifies that, except under specifically defined conditions, all surface and ground waters of the state are to be protected as existing or potential sources of municipal and domestic water supply. The exceptions include where:

- The total dissolved solids concentration of surface and ground waters exceed 3,000 milligrams per liter (mg/l);
- The water source has a low sustainable yield of less than 200 gallons per day for a single well;
- There is contamination that cannot reasonably be treated for domestic use with either best management practices or best economically available treatment practices;
- The surface waters are in particular municipal, industrial, and agricultural conveyance and holding facilities; and
- The ground waters are regulated geothermal energy ground waters.

Resolution No. 88-63 provides that any water body designated with an existing or potential municipal and domestic supply (MUN) beneficial use is also defined as a suitable or potentially suitable source of drinking water. The policy also allows a water body to retain beneficial use designations assigned prior to the State Board's adoption of the "*Sources of Drinking Water*" Policy.

## *EXCEPTIONS TO THE "SOURCES OF DRINKING WATER" POLICY*

In 1989 the Regional Board adopted Resolution No. 89-33, *'Incorporation of* "*Sources of Drinking Water*" Policy into the Water Quality Control Plan (Basin Plan) of the San Diego Region'. Resolution No. 89-33 incorporates the State Board's "*Sources of Drinking Water*" Policy into the Basin Plan. Resolution No. 89-33 also provides an initial list of surface and ground water hydrologic units (HUs), areas (HAs), and subareas (HSAs) which the Regional Board has previously determined do not support the MUN or "*Sources of Drinking Water*" designation. Since 1989, additional areas have also been identified as exceptions to the "*Sources of Drinking Water*" Policy. These ground and surface water HUs, HAs, and HSAs are identified in Tables 2-2 and 2-5 with a "+" indicating that the water body has been exempted by the Regional Board from the municipal use designation under the terms and conditions of State Board Resolution No. 88-63, "*Sources of Drinking Water*" Policy.

## *INLAND SURFACE WATERS*

Inland surface waters consist of all waters in the Region exclusive of the waters of the Pacific Ocean, enclosed bays and estuaries, coastal lagoons, and ground waters. The existing and potential beneficial uses of inland surface waters and their tributaries in the Region are presented in Table 2-2. Hydrologic unit, area, and subarea numbers are noted in Table 2-2 as a cross reference to the classification system developed by the California Department of Water Resources. For those surface water bodies that cross into other hydrologic units, such water bodies appear more than once in a table. In Table 2-2, starting from the north and proceeding towards the south within the Region, watersheds are listed by the direction of flow from the headwaters downstream to the outlet. Within a particular watershed, the mainstream water body is listed first and is placed flush left in the table, the upstream tributaries are listed below the mainstream water body and placed to the right. In most instances, surface waters are subdivided into reaches at hydrologic subarea boundaries. Those waters not specifically listed (generally smaller tributaries) are designated with the same beneficial uses as the streams, lakes, or reservoirs to which they are tributary.

Although most free flowing streams in the Region are essentially interrupted in character having both perennial and ephemeral components, several beneficial uses, including aesthetic enjoyment and habitats for fish and wildlife, are made of these surface waters. Beneficial uses of inland surface waters generally include REC-1 (swimmable) and WARM or COLD. Additionally, inland waters are usually designated as IND, PRO, REC-2, WILD, and are sometimes designated as BIOL and RARE. Inland surface waters that meet the criteria mandated by the *Sources of Drinking Water* Policy are designated MUN. Unless otherwise designated by the Regional Board, all inland surface waters in the Region are considered suitable or potentially suitable as a municipal and domestic water supply.

## *COASTAL WATERS*

Coastal waters discussed in this section may be defined as waters subject to tidal action and include the water bodies defined below. Beneficial uses of coastal waters in the region generally include REC-1, REC-2, EST, WILD, RARE, and MAR. The Pacific Ocean and San Diego Bay also include NAV.

- ***Ocean Waters***

Ocean Waters are the territorial marine waters of the Region as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons.

- ***Enclosed Bays***

Enclosed bays are indentations along the coast which enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays includes all bays where the narrowest difference between the headlands or outermost harbor works is less than 75% of the greatest dimension of the enclosed portion of the bay. Enclosed bays do not include inland surface waters or ocean waters.

- ***Estuaries***

Estuaries means waters, including coastal lagoons, located at the mouths of streams which serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams which are temporarily separated from the ocean by sandbars are considered estuaries. Estuarine waters are considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and sea water. Estuaries do not include inland surface waters or ocean waters.

Beneficial uses for these coastal waters provide habitat for marine life and are used extensively for recreation, boating, shipping, and commercial and sport fishing. Coastal waters in the San Diego Region have as many as fourteen designated beneficial uses.

All coastal lagoons of the Region are included in the category "*Coastal Waters*". The mouths of most of the rivers and creeks are continually

affected by tidal action and present a relatively stable environment for wildlife and vegetation. Other coastal lagoons may be separated from tidal action by earthen deposits and thus present an environment with major seasonal variations. Such conditions result in the development of a unique biologic community highly specific to that area. Occasionally, the mouths of these coastal lagoons are opened, subjecting the lagoons to tidal flushing to enhance their value for recreational use. This action would not alter the categories of beneficial uses of the coastal lagoons.

A listing of coastal waters in the San Diego Region and the existing and potential beneficial uses of each are summarized in Table 2-3.

Lower Otay Reservoir

## *RESERVOIRS AND LAKES*

The water resources with the greatest diversity of beneficial uses in the Region are the man-made water storage reservoirs and lakes. Located in nearly all of the Region's hydrologic units, these reservoirs and lakes intercept surface runoff and store imported water supplies. As such, the storage reservoirs serve as: (1) sources of supply for municipalities, agricultural areas, and industrial operations; (2) recreational bodies; and (3) habitats for fish and wildlife. In a few cases, such as reservoirs used primarily for drinking water, REC-1 uses can be restricted or prohibited by the entities that manage these waters. Many of these reservoirs, however, are designated as potential for REC-1, reflecting federal Clean Water Act goals.

A listing of existing and potential beneficial uses of major reservoirs and lakes in the San Diego Region is given in Table 2-4.

## *GROUND WATERS*

Ground water is defined as subsurface water that occurs beneath the water table in soils and geologic formations that are fully saturated. Ground water bearing formations sufficiently permeable to transmit and yield significant quantities of water are called aquifers (Bouwer, 1978). A ground water basin is defined as a hydrogeologic unit containing one large aquifer or several connected and interrelated aquifers (Todd, 1980).

The principal ground water basins in the San Diego Region are small and shallow. Only a small portion of the Region is underlain by permeable geologic formations that can accept, transmit and yield appreciable quantities of ground water. In many parts of the Region, usable ground water occurs outside of the principal ground water basins. There are ground water bearing geologic formations in the Region that do not meet the definition of an aquifer. Accordingly, the term "*ground water*" for basin planning and regulatory purposes, includes all subsurface waters that occur in fully saturated zones within soils, and other geologic formations. Subsurface waters are considered ground water even if the waters do not occur in an aquifer or an identified ground water basin.

Ground waters in the San Diego Region can have as many as six designated beneficial uses including: (1) municipal and domestic; (2) agricultural; (3) industrial service supply; (4) industrial process supply; (5) ground water recharge; and (6) freshwater replenishment. Nearly all of the ground water development in the Region has been for the purpose of municipal and agricultural supply. Ground water uses in some hydrologic units have been expanded to include industrial uses, especially gravel and sand washing. The fresh water replenishment designation has been assigned to ground water basins that are utilized for supplying water to a lake or stream. The ground water recharge designation has been applied to ground water hydrologic units which are used to recharge another hydrologic unit.

Most of the ground waters in the Region have been extensively developed; the availability of potential future uses of ground water resources is limited. Further development of ground water resources would probably necessitate ground

water recharge programs to maintain adequate ground water table elevations.

Ground waters that meet the criteria mandated by the *Sources of Drinking Water* Policy are designated MUN. Unless otherwise designated by the Regional Board all ground waters in the Region are considered suitable or potentially suitable as sources of drinking water.

The Regional Board has deleted beneficial use designations in portions of certain hydrologic ground water units, areas or subareas. Available information indicated that the beneficial uses in portions of these hydrologic ground water basins did not occur and were not likely to occur in the future. The Regional Board will issue waste discharge requirements and enforcement orders in these basins in conformance with the terms and conditions of State Board Resolution No. 68-16, *Statement of Policy With Respect to Maintaining High Quality of Waters in California*. It is the Regional Board's intent that water quality be maintained in conformance with the terms and conditions of Resolution No. 68-16.

A listing of the beneficial uses of the ground waters in the Region is presented in Table 2-5.

# BENEFICIAL USE TABLES

Designated beneficial uses are summarized in the tables at the end of this chapter as follows:

Table 2-2 Inland Surface Waters;
Table 2-3 Coastal Waters;
Table 2-4 Reservoirs and Lakes; and
Table 2-5 Ground Water.

In the tables, a "●" indicates an existing beneficial use that was actually attained in the surface or ground water on or after November 28, 1975. A "○" indicates a potential beneficial use that will probably develop in future years through the implementation of various control measures. Potential uses also include uses that have been developed in the past but have been abandoned for reasons other than water quality. A "+" indicates that the water body has been exempted by the Regional Board from the municipal use designation under the terms and conditions of State Board Resolution No. 88-63, *Sources of Drinking Water* Policy.

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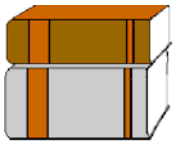


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# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC 1 | REC 2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **Orange County Coastal Streams** | | | | | | | | | | | | | | | | |
| Moro Canyon | 1.11 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| unnamed intermittent coastal streams | 1.11 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| Emerald Canyon | 1.11 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| Boat Canyon | 1.11 | + | ● | | | | | | ○ | ● | ● | ● | | ● | | |
| Laguna Canyon | 1.12 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| Blue Bird Canyon | 1.12 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| Rim Rock Canyon | 1.12 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| unnamed intermittent coastal streams | 1.13 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| Hobo Canyon | 1.13 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| **Aliso Creek Watershed** | | | | | | | | | | | | | | | | |
| Aliso Creek [3] | 1.13 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| English Canyon | 1.13 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| Sulphur Creek | 1.13 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| Wood Canyon | 1.13 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| *Aliso Creek Mouth* | 1.13 | See Coastal Waters – Table 2-3 | | | | | | | | | | | | | | |

● Existing Beneficial Use

○ Potential Beneficial Use

\+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

[3] Aliso Creek, San Juan Creek, Tecolote Creek, Forrester Creek, San Diego River (lower), and Chollas Creek are designated as water quality limited segments for indicator bacteria pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads have been adopted to address these impairments. See Chapter 3, *Water Quality Objectives,* Bacteria –Total Coliform, Fecal Coliform, *E. Coli*, and Enterococci, and Chapter 7, *Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)*.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **Dana Point Watershed** | | | | | | | | | | | | | | | | |
| unnamed intermittent coastal streams | 1.14 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| Salt Creek | 1.14 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| San Juan Canyon | 1.14 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| Arroyo Salada | 1.14 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| **San Juan Creek Watershed** | | | | | | | | | | | | | | | | |
| San Juan Creek [3] | 1.25 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Morrell Canyon | 1.25 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Decker Canyon | 1.25 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Long Canyon | 1.25 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Lion Canyon | 1.25 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | ● |
| Hot Spring Canyon | 1.25 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | ● |
| Cold Spring Canyon | 1.25 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Lucas Canyon | 1.25 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Aliso Canyon | 1.25 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Verdugo Canyon | 1.25 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Bell Canyon | 1.25 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Fox Canyon | 1.25 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |

● Existing Beneficial Use

○ Potential Beneficial Use

\+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

[3] Aliso Creek, San Juan Creek, Tecolote Creek, Forrester Creek, San Diego River (lower), and Chollas Creek are designated as water quality limited segments for indicator bacteria pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads have been adopted to address these impairments. See Chapter 3, *Water Quality Objectives,* Bacteria -Total Coliform, Fecal Coliform, *E. Coli*, and Enterococci, and Chapter 7, *Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)*.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **San Juan Creek Watershed – continued** | | | | | | | | | | | | | | | | | |
| Dove Canyon | 1.24 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Crow Canyon | 1.25 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| San Juan Creek | 1.26 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Trampas Canyon | 1.26 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Canada Gobernadora | 1.24 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Canada Chiquita | 1.24 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| San Juan Creek | 1.28 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| San Juan Creek | 1.27 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Horno Creek | 1.27 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Arroyo Trabuco Creek | 1.22 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | ● |
| Holy Jim Canyon | 1.22 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | ● |
| Falls Canyon | 1.22 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Rose Canyon | 1.22 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Hickey Canyon | 1.22 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Live Oak Canyon | 1.22 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Arroyo Trabuco Creek | 1.23 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Tijeras Canyon | 1.23 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |

● Existing Beneficial Use

\+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **San Juan Creek Watershed – continued** | | | | | | | | | | | | | | | | | |
| Arroyo Trabuco Creek | 1.27 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Oso Creek | 1.21 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| La Paz Creek | 1.21 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| *San Juan Creek Mouth* | 1.27 | See Coastal Waters – Table 2-3 | | | | | | | | | | | | | | |
| **Orange County Coastal Streams** | | | | | | | | | | | | | | | | | |
| Prima Deshecha Canada | 1.31 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| unnamed intermittent coastal streams | 1.30 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| Segunda Deshecha Canada | 1.32 | + | ● | | | | | | ○ | ● | | ● | | ● | | |
| **San Mateo Creek Watershed** | | | | | | | | | | | | | | | | | |
| San Mateo Creek | 1.40 | + | | | | | | | ○ | ● | | ● | ● | ● | ● | ● |
| Devil Canyon Creek | 1.40 | + | | | | | | | ○ | ● | | ● | ● | ● | | ● |
| Cold Spring Canyon | 1.40 | + | | | | | | | ○ | ● | | ● | ● | ● | | |
| San Mateo Canyon | 1.40 | + | | | | | | | ○ | ● | | ● | ● | ● | ● | ● |
| Los Alamos Canyon | 1.40 | + | | | | | | | ○ | ● | | ● | ● | ● | | ● |
| Wildhorse Canyon | 1.40 | + | | | | | | | ○ | ● | | ● | ● | ● | | |
| Tenaja Canyon | 1.40 | + | | | | | | | ○ | ● | | ● | ● | ● | | ● |
| Bluewater Canyon | 1.40 | + | | | | | | | ○ | ● | | ● | ● | ● | | |

● Existing Beneficial Use

○ Potential Beneficial Use

\+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC 1 | REC 2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **San Mateo Creek Watershed – continued** | | | | | | | | | | | | | | | | | |
| Nickel Canyon | 1.40 | + | | | | | | | ○ | ● | | ● | ● | ● | | |
| Christianitos Creek | 1.40 | + | | | | | | | ○ | ● | | ● | ● | ● | | |
| Gabino Canyon | 1.40 | + | | | | | | | ○ | ● | | ● | ● | ● | | |
| La Paz Canyon | 1.40 | + | | | | | | | ○ | ● | | ● | ● | ● | | |
| Blind Canyon | 1.40 | + | | | | | | | ○ | ● | | ● | ● | ● | | |
| Talega Canyon | 1.40 | + | | | | | | | ○ | ● | | ● | ● | ● | | |
| *San Mateo Creek Mouth* | 1.40 | See Coastal Waters – Table 2-3 | | | | | | | | | | | | | | |
| **San Onofre Creek Watershed** | | | | | | | | | | | | | | | | | |
| San Onofre Creek | 1.51 | + | ● | | | | | | ● | ● | | ● | ● | ● | | ● |
| San Onofre Canyon North Fork | 1.51 | + | ● | | | | | | ● | ● | | ● | ● | ● | | ● |
| Jardine Canyon | 1.51 | + | ● | | | | | | ● | ● | | ● | ● | ● | | |
| San Onofre Canyon | 1.51 | + | ● | | | | | | ● | ● | | ● | ● | ● | | ● |
| San Onofre Canyon South Fork | 1.51 | + | ● | | | | | | ● | ● | | ● | ● | ● | ● | |
| *San Onofre Creek Mouth* | 1.51 | See Coastal Waters – Table 2-3 | | | | | | | | | | | | | | |
| unnamed intermittent coastal streams | 1.51 | + | ● | | | | | | ● | ● | | ● | | ● | | |
| Foley Canyon | 1.51 | + | ● | | | | | | ● | ● | | ● | | ● | | |
| Horno Canyon | 1.51 | + | ● | | | | | | ● | ● | | ● | | ● | | |

● Existing Beneficial Use

○ Potential Beneficial Use

\+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC 1 | REC 2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **San Onofre Creek Watershed – continued** | | | | | | | | | | | | | | | | |
| Las Flores Creek | 1.52 | + | ● | | | | | | ● | ● | | ● | ● | ● | ● | |
| Piedra de Lumbre Canyon | 1.52 | + | ● | | | | | | ● | ● | | ● | ● | ● | ● | |
| unnamed intermittent coastal streams | 1.52 | + | ● | | | | | | ● | ● | | ● | | ● | | |
| Aliso Canyon | 1.53 | + | ● | | | | | | ● | ● | | ● | ● | ● | ● | |
| French Canyon | 1.53 | + | ● | | | | | | ● | ● | | ● | | ● | ● | |
| Cockleburr Canyon | 1.53 | + | ● | | | | | | ● | ● | | ● | | ● | | |
| **Santa Margarita River Watershed** | | | | | | | | | | | | | | | | |
| Santa Margarita River | 2.22 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | ● | |
| Murrieta Creek | 2.31 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Bundy Canyon | 2.31 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Slaughterhouse Canyon | 2.31 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Murrieta Creek | 2.32 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Murrieta Creek | 2.52 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Cole Canyon | 2.32 | ● | ● | ● | ● | | | | ○ | ● | ● | ● | | ● | | |
| Miller Canyon | 2.32 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Warm Springs Creek | 2.36 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Diamond Valley | 2.36 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |

● Existing Beneficial Use

○ Potential Beneficial Use

\+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **Santa Margarita River Watershed - continued** | | | | | | | | | | | | | | | | |
| Goodhart Canyon | 2.36 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Pixley Canyon | 2.36 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Warm Springs Creek | 2.35 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Domenigoni Valley | 2.35 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Warm Springs Creek | 2.34 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Warm Springs Creek | 2.33 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| French Valley | 2.33 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Santa Gertrudis Creek | 2.42 | ● | ● | ● | ● | ○ | | | ● | ● | | ● | | ● | | |
| Long Valley | 2.42 | ● | ● | ● | ● | ○ | | | ● | ● | | ● | | ● | | |
| Glenoak Valley | 2.42 | ● | ● | ● | ● | ○ | | | ● | ● | | ● | ● | ● | | |
| Tucalota Creek | 2.43 | ● | ● | ● | ● | ○ | | | ● | ● | | ● | ● | ● | | |
| Willow Canyon | 2.44 | ● | ● | ● | ● | ○ | | | ● | ● | | ● | ● | ● | | |
| *Lake Skinner* | 2.41 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| Tucalota Creek | 2.41 | ● | ● | ● | ● | ○ | | | ● | ● | | ● | | ● | | |
| Crown Valley | 2.41 | ● | ● | ● | ● | ○ | | | ● | ● | | ● | ● | ● | | |
| Rawson Canyon | 2.41 | ● | ● | ● | ● | ○ | | | ● | ● | | ● | ● | ● | | |
| Tucalota Creek | 2.42 | ● | ● | ● | ● | ○ | | | ● | ● | | ● | | ● | | |

● Existing Beneficial Use

○ Potential Beneficial Use

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **Santa Margarita River Watershed - continued** | | | | | | | | | | | | | | | | |
| Santa Gertrudis Creek | 2.32 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Long Canyon | 2.32 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Temecula Creek | 2.93 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Kohler Canyon | 2.93 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | ● | ● | | |
| Rattlesnake Creek | 2.93 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | ● | ● | | |
| Temecula Creek | 2.92 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Chihuahua Creek | 2.94 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Chihuahua Creek | 2.92 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Cooper Canyon | 2.92 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Iron Spring Canyon | 2.92 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Temecula Creek | 2.91 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Culp Valley | 2.91 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Temecula Creek | 2.84 | ● | ● | ● | ● | ● | | | ● | ● | | ● | ● | ● | | ● |
| Tule Creek | 2.84 | ● | ● | ● | ● | ● | | | ● | ● | | ● | ● | ● | | |
| Million Dollar Canyon | 2.84 | ● | ● | ● | ● | ● | | | ● | ● | | ● | ● | ● | | |
| Cottonwood Creek | 2.84 | ● | ● | ● | ● | ● | | | ● | ● | | ● | ● | ● | | ● |
| Temecula Creek | 2.83 | ● | ● | ● | ● | ● | | | ● | ● | | ● | ● | ● | | ● |

● Existing Beneficial Use

○ Potential Beneficial Use

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **Santa Margarita River Watershed - continued** | | | | | | | | | | | | | | | | | |
| Long Canyon | 2.83 | ● | ● | ● | ● | ● | | | ● | ● | | ● | ● | ● | | ● |
| *Vail Lake* | 2.81 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | | |
| Wilson Creek | 2.63 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Wilson Creek | 2.61 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Cahuilla Creek | 2.73 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Hamilton Creek | 2.74 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Hamilton Creek | 2.73 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Cahuilla Creek | 2.72 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Cahuilla Creek | 2.71 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Elder Creek | 2.71 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Cahuilla Creek | 2.61 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Wilson Creek | 2.81 | ● | ● | ● | ● | ● | | | ● | ● | | ● | ● | ● | | |
| Lewis Valley | 2.62 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Arroyo Seco Creek | 2.81 | ● | ● | ● | ● | ● | | | ● | ● | | ● | ● | ● | | |
| Arroyo Seco Creek | 2.82 | ● | ● | ● | ● | ● | | | ● | ● | | ● | ● | ● | | ● |
| Kolb Creek | 2.81 | ● | ● | ● | ● | ● | | | ● | ● | | ● | ● | ● | | |
| Temecula Creek | 2.81 | ● | ● | ● | ● | ● | | | ● | ● | | ● | ● | ● | | ● |

● Existing Beneficial Use

○ Potential Beneficial Use

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **Santa Margarita River Watershed - continued** | | | | | | | | | | | | | | | | |
| Temecula Creek | 2.51 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Temecula Creek | 2.52 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Pechanga Creek | 2.52 | ● | ● | ● | ● | ● | | | ○ | ● | | ● | | ● | | |
| Rainbow Creek[3] | 2.23 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | | ● |
| Rainbow Creek[3] | 2.22 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | | ● |
| Sandia Canyon | 2.22 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | | ● |
| Walker Basin | 2.22 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Santa Margarita River | 2.21 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | ● | |
| DeLuz Creek | 2.21 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | ● | ● |
| Cottonwood Creek | 2.21 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Camps Creek | 2.21 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | | ● |
| Fern Creek | 2.21 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | | ● |
| Roblar Creek | 2.21 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| *O'Neill Lake* | 2.13 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| Santa Margarita River | 2.13 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | ● | |
| Wood Canyon | 2.13 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Santa Margarita River | 2.12 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | ● | |

● Existing Beneficial Use

○ Potential Beneficial Use

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

[3] Rainbow Creek is designated as an impaired water body for total nitrogen and total phosphorus pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads (TMDLs) have been adopted to address these impairments. See Chapter 3, Water Quality Objectives for Biostimulatory Substances and Chapter 7, Total Maximum Daily Loads.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **Santa Margarita River Watershed - continued** | | | | | | | | | | | | | | | | |
| Santa Margarita River | 2.11 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | ● | |
| Pueblitos Canyon | 2.11 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | ● | |
| Newton Canyon | 2.11 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| *Santa Margarita Lagoon* | 2.11 | See Coastal Waters – Table 2-3 | | | | | | | | | | | | | | |
| **San Luis Rey River Watershed** | | | | | | | | | | | | | | | | |
| San Luis Rey River | 3.32 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | |
| Johnson Canyon | 3.32 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | |
| San Luis Rey River | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | |
| Canada Aguanga | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | |
| Dark Canyon | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | |
| Bear Canyon | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | |
| Cow Canyon | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | |
| Blue Canyon | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | |
| Rock Canyon | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | |
| Agua Caliente Creek | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | |
| unnamed Tributary | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | ● |
| Canada Agua Caliente | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | |

● Existing Beneficial Use

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **San Luis Rey River Watershed- continued** | | | | | | | | | | | | | | | | |
| Canada Verde | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | |
| Ward Canyon | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | |
| *Lake Henshaw* | 3.31 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| West Fork San Luis Rey River | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | ● |
| Fry Creek | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | |
| Iron Springs Creek | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | ● |
| Buena Vista Creek | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | |
| Cherry Canyon | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | | ● | | |
| Bertha Canyon | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | | ● | | |
| Hoover Canyon | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | | ● | | |
| Buck Canyon | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | | ● | | |
| Bergstrom Canyon | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | | ● | | |
| San Ysidro Creek | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | | ● | | |
| Matagual Creek | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | |
| Carrizo Creek | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | |
| Carrista Creek | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | | ● | | |
| Kumpohui Creek | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | | ● | | |

● Existing Beneficial Use

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **San Luis Rey River Watershed - continued** | | | | | | | | | | | | | | | | |
| San Luis Rey River | 3.31 | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | | |
| San Luis Rey River | 3.23 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | ● |
| Wigham Creek | 3.23 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | |
| Prisoner Creek | 3.23 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | |
| Lusardi Canyon | 3.23 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | |
| Cedar Creek | 3.23 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | |
| San Luis Rey River | 3.22 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | |
| Bee Canyon | 3.22 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | |
| Paradise Creek | 3.22 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | |
| Hell Creek | 3.22 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | |
| Horsethief Canyon | 3.22 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | |
| Potrero Creek | 3.22 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | |
| Plaisted Creek | 3.22 | ● | ● | ● | | | | ● | ● | ● | ● | ● | ● | ● | | |
| Yuima Creek | 3.22 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | |
| Sycamore Canyon | 3.22 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | |
| Pauma Creek | 3.22 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | ● |
| Doane Creek | 3.22 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | ● |

● Existing Beneficial Use

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **San Luis Rey River Watershed - continued** | | | | | | | | | | | | | | | | |
| Chimney Creek | 3.22 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | |
| French Creek | 3.22 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | ● |
| Lion Creek | 3.22 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | ● |
| Harrison Canyon | 3.22 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | |
| Jaybird Creek | 3.22 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | |
| Frey Creek | 3.22 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | |
| Agua Tibia Creek | 3.22 | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | | ● |
| San Luis Rey River | 3.21 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Marion Canyon | 3.21 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Magee Creek | 3.21 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Castro Canyon | 3.21 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Trujillo Creek | 3.21 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Pala Creek | 3.21 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | | ● |
| Gomez Creek | 3.21 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Couser Canyon | 3.21 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Double Canyon | 3.21 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Rice Canyon | 3.21 | ● | ● | ● | | | | | ● | ● | | ● | ● | ● | | |

● Existing Beneficial Use

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC 1 | REC 2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **San Luis Rey River Watershed – continued** | | | | | | | | | | | | | | | | |
| San Luis Rey River | 3.12 | + | ● | ● | | | | | ● | ● | ● | ● | | ● | ● | |
| Live Oak Creek | 3.12 | + | ● | ● | | | | | ● | ● | | ● | | ● | ● | |
| Keys Creek | 3.12 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| Moosa Canyon | 3.15 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| unnamed intermittent streams | 3.16 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| Moosa Canyon | 3.14 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| Moosa Canyon | 3.13 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| *Turner Lake* | 3.13 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| South Fork Moosa Canyon | 3.13 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| Moosa Canyon | 3.12 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| Gopher Canyon | 3.12 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| South Fork Gopher Canyon | 3.12 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| San Luis Rey River | 3.11 | + | ● | ● | | | | | ● | ● | | ● | | ● | ● | |
| Pilgrim Creek | 3.11 | + | ● | ● | | | | | ● | ● | ● | ● | ● | ● | ● | |
| Windmill Canyon | 3.11 | + | ● | ● | | | | | ● | ● | | ● | ● | ● | | |
| Tuley Canyon | 3.11 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| Lawerence Canyon | 3.11 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| *Mouth of San Luis Rey River* | 3.11 | See Coastal Waters – Table 2-3 | | | | | | | | | | | | | | |

● Existing Beneficial Use

\+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC 1 | REC 2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **San Diego County Coastal Streams** | | | | | | | | | | | | | | | | |
| Loma Alta Creek | 4.10 | + | | | | | | | ○ | ● | | ● | | ● | | |
| *Loma Alta Slough* | 4.10 | See Coastal Waters – Table 2-3 | | | | | | | | | | | | | | |
| *Buena Vista Lagoon* | 4.21 | See Coastal Waters – Table 2-3 | | | | | | | | | | | | | | |
| Buena Vista Creek | 4.22 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| Buena Vista Creek | 4.21 | + | ● | ● | | | | | ● | ● | | ● | | ● | ● | |
| *Agua Hedionda* | 4.31 | See Coastal Waters – Table 2-3 | | | | | | | | | | | | | | |
| Agua Hedionda Creek | 4.32 | ● | ● | ● | | | | | ● | ● | | ● | | ● | | |
| Buena Creek | 4.32 | ● | ● | ● | | | | | ● | ● | | ● | | ● | | |
| Agua Hedionda Creek | 4.31 | ● | ● | ● | | | | | ● | ● | ● | ● | | ● | | |
| Letterbox canyon | 4.31 | ● | ● | ● | | | | | ● | ● | | ● | | ● | | |
| Canyon de las Encinas | 4.40 | + | | | | | | | ○ | ● | | ● | | ● | | |
| Cottonwood Creek | 4.51 | + | ● | | | | | | ● | ● | | ● | | ● | | |
| Moonlight Creek | 4.51 | + | ● | | | | | | ● | ● | | ● | | ● | | |

● Existing Beneficial Use

○ Potential Beneficial Use

\+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| San Marcos Creek Watershed | | | | | | | | | | | | | | | | | |
| *Batiquitos Lagoon* | 4.51 | See Coastal Waters – Table 2-3 | | | | | | | | | | | | | | | |
| San Marcos Creek | 4.52 | + | ● | | | | | | ● | ● | | ● | | ● | | | |
| unnamed intermittent streams | 4.53 | + | ● | | | | | | ● | ● | | ● | | ● | | | |
| San Marcos Creek | 4.51 | + | ● | | | | | | ● | ● | | ● | | ● | | | |
| Encinitas Creek | 4.51 | + | ● | | | | | | ● | ● | | ● | | ● | | | |
| **Escondido Creek Watershed** | | | | | | | | | | | | | | | | | |
| *San Elijo Lagoon* | 4.61 | See Coastal Waters – Table 2-3 | | | | | | | | | | | | | | | |
| Escondido Creek | 4.63 | ● | ● | ○ | | | | ● | ● | ● | | ● | ● | ● | | | |
| *Lake Wohlford* | 4.63 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | | |
| *Lake Dixon* | 4.62 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | | |
| Escondido Creek | 4.62 | ● | ● | ○ | | | | | ● | ● | | ● | ● | ● | | | |
| Reidy Canyon | 4.62 | ● | ● | ○ | | | | | ● | ● | | ● | ● | ● | | | |
| Escondido Creek | 4.61 | ● | ● | ○ | | | | | ● | ● | ● | ● | ● | ● | | | |

● Existing Beneficial Use

○ Potential Beneficial Use

\+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **San Dieguito Creek Watershed** | | | | | | | | | | | | | | | | |
| Santa Ysabel Creek | 5.54 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | ● |
| Dan Price Creek | 5.54 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Santa Ysabel Creek | 5.53 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Witch Creek | 5.53 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | ● |
| *Sutherland Lake* | 5.53 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| Bloomdale Creek | 5.53 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Santa Ysabel Creek | 5.52 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | ● | |
| *Lake Poway* | 5.52 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| Black Canyon | 5.52 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | ● |
| Scholder Creek | 5.52 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Temescal Creek | 5.52 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Bear Creek | 5.52 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Quail Canyon | 5.52 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Carney Canyon | 5.52 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Santa Ysabel Creek | 5.51 | ● | ● | ● | ● | | | | ● | ● | ● | ● | ● | ● | | |
| Boden Canyon | 5.51 | ● | ● | ● | ● | | | | ● | ● | ● | ● | ● | ● | | |
| Clevenger Canyon | 5.51 | ● | ● | ● | ● | | | | ● | ● | ● | ● | ● | ● | | |

● Existing Beneficial Use

○ Potential Beneficial Use

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **San Dieguito River Watershed – continued** | | | | | | | | | | | | | | | | |
| Santa Ysabel Creek | 5.32 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | ● | |
| Tims Canyon | 5.32 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Schoolhouse Canyon | 5.32 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Rockwood Canyon | 5.35 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Guejito Creek | 5.35 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| unnamed intermittent streams | 5.36 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Rockwood Canyon | 5.32 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| Santa Maria Creek | 5.41 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Hatfield Creek | 5.45 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Hatfield Creek | 5.44 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Wash Hollow Creek | 5.43 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Wash Hollow Creek | 5.44 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Hatfield Creek | 5.42 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Santa Teresa Valley | 5.46 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| unnamed intermittent streams | 5.47 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Hatfield Creek | 5.41 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |

● Existing Beneficial Use

○ Potential Beneficial Use

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **San Dieguito River Watershed – continued** | | | | | | | | | | | | | | | | | |
| Santa Maria Creek | 5.32 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| unnamed intermittent streams | 5.33 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| unnamed intermittent streams | 5.34 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| San Dieguito River | 5.32 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | ● | |
| Cloverdale Creek | 5.32 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | ● | |
| San Dieguito River | 5.21 | ● | ● | ● | ● | | | | ● | ● | ● | ● | ● | ● | ● | |
| Highland Valley | 5.31 | ● | ● | ● | ● | | | | ○ | ● | | ● | | ● | | |
| *Lake Hodges* | 5.21 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| Kit Carson Creek | 5.21 | ● | ● | ● | ● | ○ | | | ● | ● | | ● | | ● | ● | |
| West Branch Kit Carson Creek | 5.24 | ● | ● | ● | ● | ○ | | | ● | ● | | ● | | ● | | |
| East Branch Kit Carson Creek | 5.24 | ● | ● | ● | ● | ○ | | | ● | ● | | ● | | ● | | |
| Green Valley Creek | 5.21 | ● | ● | ● | ● | ○ | | | ● | ● | | ● | | ● | | |
| Green Valley Creek | 5.22 | ● | ● | ● | ● | ○ | | | ● | ● | | ● | | ● | | |
| Felicita Creek | 5.23 | ● | ● | ● | ● | ○ | | | ● | ● | | ● | | ● | | |
| West Fork Felicita Creek | 5.23 | ● | ● | ● | ● | ○ | | | ● | ● | | ● | | ● | | |
| East Fork Felicita Creek | 5.23 | ● | ● | ● | ● | ○ | | | ● | ● | | ● | | ● | | |

● Existing Beneficial Use

○ Potential Beneficial Use

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **San Dieguito River Watershed - continued** | | | | | | | | | | | | | | | | |
| *San Dieguito Reservoir* | 5.21 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| Warren Canyon | 5.21 | ● | ● | ● | ● | | | | ● | ● | ● | ● | ● | ● | | |
| San Bernardo Valley | 5.21 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | ● | |
| unnamed intermittent streams | 5.24 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| unnamed intermittent streams | 5.23 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| unnamed intermittent streams | 5.22 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| San Dieguito River | 5.11 | + | ○ | ○ | | | | | ● | ● | | ● | ● | ● | | ● |
| Lusardi Creek | 5.12 | + | ○ | ○ | | | | | ● | ● | | ● | | ● | | |
| Lusardi Creek | 5.11 | + | ○ | ○ | | | | | ● | ● | | ● | | ● | | |
| La Zanja Canyon | 5.11 | + | ○ | ○ | | | | | ● | ● | | ● | | ● | | |
| Gonzales Canyon | 5.11 | + | ○ | ○ | | | | | ● | ● | | ● | | ● | | |
| *San Dieguito Lagoon* | 5.11 | See Coastal Waters – Table 2-3 | | | | | | | | | | | | | | |
| **Los Penasquitos Creek Watershed** | | | | | | | | | | | | | | | | |
| *Los Penasquitos Lagoon* | 6.10 | See Coastal Waters – Table 2-3 | | | | | | | | | | | | | | |
| Soledad Canyon | 6.10 | + | ● | ● | | | | | ○ | ● | | ● | ● | ● | | |
| Carol Canyon | 6.10 | + | ● | ● | | | | | ○ | ● | | ● | ● | ● | ● | |

● Existing Beneficial Use

○ Potential Beneficial Use

+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC 1 | REC 2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **Los Penasquitos Creek Watershed – continued** | | | | | | | | | | | | | | | | |
| *Miramar Reservoir* | 6.10 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| Los Penasquitos Creek | 6.20 | + | ● | ○ | | | | | ● | ● | | ● | ● | ● | | |
| Rattlesnake Creek | 6.20 | + | ● | ○ | | | | | ● | ● | | ● | ● | ● | | |
| Poway Creek | 6.20 | + | ● | ○ | | | | | ● | ● | | ● | | ● | | |
| Beeler Creek | 6.20 | + | ● | ○ | | | | | ● | ● | | ● | | ● | | |
| Chicarita Creek | 6.20 | + | ● | ○ | | | | | ● | ● | | ● | | ● | | |
| Cypress Canyon | 6.20 | + | ● | ○ | | | | | ● | ● | | ● | | ● | | |
| Los Penasquitos Creek | 6.10 | + | ● | ● | | | | | ○ | ● | ● | ● | | ● | | |
| unnamed tributary | 6.10 | + | ● | ● | | | | | ○ | ● | | ● | | ● | ● | |
| Carmel Valley | 6.10 | + | ● | ● | | | | | ○ | ● | | ● | | ● | | |
| Deer Canyon | 6.10 | + | ● | ● | | | | | ○ | ● | | ● | | ● | | |
| McGonigle Canyon | 6.10 | + | ● | ● | | | | | ○ | ● | | ● | | ● | | |
| Bell Valley | 6.10 | + | ● | ● | | | | | ○ | ● | | ● | | ● | | |
| Shaw Valley | 6.10 | + | ● | ● | | | | | ○ | ● | | ● | | ● | | |
| **San Diego County Coastal Streams** | | | | | | | | | | | | | | | | |
| unnamed intermittent coastal streams | 6.30 | + | | | | | | | ○ | ● | | ● | | ● | | |

● Existing Beneficial Use

○ Potential Beneficial Use

\+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **Rose Canyon Watershed** | | | | | | | | | | | | | | | | | |
| Rose Canyon | 6.40 | + | | ○ | | | | | ● | ● | | ● | | ● | | |
| San Clemente Canyon | 6.40 | + | | ○ | | | | | ● | ● | | ● | ● | ● | ● | ● |
| **Tecolote Creek Watershed** | | | | | | | | | | | | | | | | | |
| Tecolote Creek [3] | 6.50 | + | | | | | | | ○ | ● | | ● | | ● | | |
| **San Diego River Watershed** | | | | | | | | | | | | | | | | | |
| San Diego River | 7.41 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Coleman Creek | 7.42 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Eastwood Creek | 7.42 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Jim Green Creek | 7.42 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Mariette Creek | 7.42 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Boring Creek | 7.42 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Bailey Creek | 7.42 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Coleman Creek | 7.41 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Setenec Creek | 7.42 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Setenec Creek | 7.41 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Temescal Creek | 7.41 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Paine Bottom | 7.41 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |

● Existing Beneficial Use

○ Potential Beneficial Use

\+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

[3] Aliso Creek, San Juan Creek, Tecolote Creek, Forrester Creek, San Diego River (lower), and Chollas Creek are designated as water quality limited segments for indicator bacteria pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads have been adopted to address these impairments. See Chapter 3, *Water Quality Objectives*, Bacteria -Total Coliform, Fecal Coliform, *E. Coli*, and Enterococci, and Chapter 7, *Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)*.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **San Diego River Watershed – continued** | | | | | | | | | | | | | | | | |
| Orinoco Creek | 7.41 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Iron Springs Canyon | 7.41 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Dye Canyon | 7.41 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Richie Creek | 7.41 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Cedar Creek | 7.41 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | ● |
| Sandy Creek | 7.41 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Dehr Creek | 7.41 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | ● |
| Kelly Creek | 7.41 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| *Cuyamaca Reservoir* | 7.43 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| Little Stonewall Creek | 7.43 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | ● |
| Boulder Creek | 7.41 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | ● |
| Azalea Creek | 7.41 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Johnson Creek | 7.41 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Sheep Camp Creek | 7.41 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| San Diego River | 7.31 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| *El Capitan Reservoir* | 7.31 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| Isham Creek | 7.31 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |

● Existing Beneficial Use

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **San Diego River Watershed – continued** | | | | | | | | | | | | | | | | |
| Sand Creek | 7.31 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Conejos Creek | 7.31 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | ● |
| King Creek | 7.31 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| West Fork King Creek | 7.31 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Echo Valley | 7.31 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Peutz Valley | 7.31 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Chocolate Canyon | 7.32 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Alpine Creek | 7.33 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Chocolate Canyon | 7.31 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| San Diego River | 7.15 | ○ | | ● | | | | | ● | ● | | ● | | ● | ● | |
| San Diego River | 7.12 | ○ | | ● | | | | | ● | ● | | ● | | ● | ● | |
| *Lake Jennings* | 7.12 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| Quail Canyon | 7.12 | ○ | | ● | | | | | ● | ● | | ● | | ● | | |
| Wildcat Canyon | 7.12 | ○ | | ● | | | | | ● | ● | | ● | | ● | | |
| San Vicente Creek | 7.23 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Swartz Canyon | 7.23 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Klondike Creek | 7.23 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |

● Existing Beneficial Use

○ Potential Beneficial Use

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **San Diego River Watershed – continued** | | | | | | | | | | | | | | | | | |
| San Vicente Creek | 7.22 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Darney Canyon | 7.22 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Longs Gulch | 7.22 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| *San Vicente Reservoir* | 7.21 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| West Branch San Vicente Creek | 7.21 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Aqueduct Arm Creek | 7.21 | ● | ● | ● | ● | ○ | | | ● | ● | | ● | | ● | | |
| Padre Barona Creek | 7.24 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Wright Canyon | 7.24 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Featherstone Canyon | 7.24 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Padre Barona Creek | 7.12 | ○ | | ● | | | | | ● | ● | | ● | | ● | | |
| Foster Canyon | 7.21 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| San Vicente Creek | 7.12 | ○ | | ● | | | | | ● | ● | | ● | | ● | | |
| Slaughterhouse Canyon | 7.12 | ○ | | ● | | | | | ● | ● | | ● | | ● | | |
| Los Coches Creek | 7.14 | ○ | | ● | | | | | ● | ● | | ● | | ● | | |
| Rios Canyon | 7.14 | ○ | | ● | | | | | ● | ● | ● | ● | | ● | | |
| Los Coches Creek | 7.12 | ○ | | ● | | | | | ● | ● | | ● | | ● | | |
| Forrester Creek [3] | 7.13 | ○ | | ● | | | | | ● | ● | | ● | | ● | | |

● Existing Beneficial Use

○ Potential Beneficial Use

+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

[3] Aliso Creek, San Juan Creek, Tecolote Creek, Forrester Creek, San Diego River (lower), and Chollas Creek are designated as water quality limited segments for indicator bacteria pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads have been adopted to address these impairments. See Chapter 3, *Water Quality Objectives*, Bacteria -Total Coliform, Fecal Coliform, *E. Coli*, and Enterococci, and Chapter 7, *Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)*.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **San Diego River Watershed - continued** | | | | | | | | | | | | | | | | |
| Forrester Creek [3] | 7.12 | ○ | | ● | | | | | ● | ● | | ● | | ● | | |
| Sycamore Canyon | 7.12 | + | ● | ● | | | | | ● | ● | | ● | | ● | ● | |
| unnamed tributary | 7.12 | + | ● | ● | | | | | ● | ● | | ● | | ● | ● | |
| Clark Canyon | 7.12 | + | ● | ● | | | | | ● | ● | | ● | | ● | ● | |
| West Sycamore Canyon | 7.12 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| Quail Canyon | 7.12 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| Little Sycamore Canyon | 7.12 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| Spring Canyon | 7.12 | + | ● | ● | | | | | ● | ● | | ● | | ● | ● | |
| Oak Canyon | 7.12 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| San Diego River [3] | 7.11 | + | ● | ● | | | | | ● | ● | ● | ● | | ● | ● | |
| unnamed tributary | 7.11 | + | ● | ● | | | | | ● | ● | | ● | | ● | ● | |
| Alvarado Canyon | 7.11 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| *Lake Murray* | 7.11 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| Murphy Canyon | 7.11 | + | ● | ● | | | | | ● | ● | | ● | | ● | ● | |
| Shepherd Canyon | 7.11 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| Murray Canyon | 7.11 | + | ● | ● | | | | | ● | ● | | ● | | ● | | |
| *Mouth of San Diego River* | 7.11 | See Coastal Waters – Table 2-3 | | | | | | | | | | | | | | |

● Existing Beneficial Use

○ Potential Beneficial Use

\+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

[3] Aliso Creek, San Juan Creek, Tecolote Creek, Forrester Creek, San Diego River (lower), and Chollas Creek are designated as water quality limited segments for indicator bacteria pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads have been adopted to address these impairments. See Chapter 3, *Water Quality Objectives*, Bacteria -Total Coliform, Fecal Coliform, *E. Coli*, and Enterococci, and Chapter 7, *Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)*.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **Pueblo San Diego Watershed** | | | | | | | | | | | | | | | | | |
| unnamed intermittent coastal streams | 8.10 | + | | | | | | | ○ | ● | | ● | | ● | | |
| Powerhouse Canyon | 8.21 | + | | | | | | | ○ | ● | | ● | | ● | | |
| Chollas Creek [3,4] | 8.22 | + | | | | | | | ○ | ● | | ● | | ● | | |
| South Chollas Valley | 8.22 | + | | | | | | | ○ | ● | | ● | | ● | | |
| unnamed intermittent streams | 8.31 | + | | | | | | | ○ | ● | | ● | | ● | | |
| Paradise Creek | 8.32 | + | | | | | | | ○ | ● | | ● | | ● | | |
| Paradise Valley | 8.32 | + | | | | | | | ○ | ● | | ● | | ● | | |
| **Sweetwater River Watershed** | | | | | | | | | | | | | | | | | |
| Sweetwater River | 9.35 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | ● |
| Stonewall Creek | 9.35 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | ● |
| Harper Creek | 9.35 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | ● |
| Cold Stream | 9.35 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | ● |
| Japacha Creek | 9.35 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | ● |
| Juaquapin Creek | 9.35 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | ● |
| Arroyo Seco | 9.35 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Sweetwater River | 9.34 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | ● |

● Existing Beneficial Use

○ Potential Beneficial Use

\+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

[3] Chollas Creek is designated as an impaired water body for copper, lead and zinc pursuant to Clean Water Act Section 303(d). A Total Maximum Daily Load (TMDL) has been adopted to address this impairment. See Chapter 3, Water Quality Objectives for Toxicity and Toxic Pollutants and Chapter 7, Total Maximum Daily Loads

[4] Aliso Creek, San Juan Creek, Tecolote Creek, Forrester Creek, San Diego River (lower), and Chollas Creek are designated as water quality limited segments for indicator bacteria pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads have been adopted to address these impairments. See Chapter 3, *Water Quality Objectives*, Bacteria -Total Coliform, Fecal Coliform, *E. Coli*, and Enterococci, and Chapter 7, *Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)*.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **Sweetwater River Watershed - continued** | | | | | | | | | | | | | | | | |
| Descanso Creek | 9.34 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Samagatuma Creek | 9.34 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Sweetwater River | 9.31 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | ● |
| Viejas Creek | 9.33 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| Viejas Creek | 9.31 | ● | ● | ● | ● | | | | ● | ● | | ● | ● | ● | | |
| *Loveland Reservoir* | 9.31 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| Taylor Creek | 9.31 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Japatul Valley | 9.32 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Sweetwater River | 9.21 | ● | ● | ● | ● | | | | ● | ● | ● | ● | | ● | ● | |
| unnamed tributary | 9.21 | ● | ● | ● | ● | | | | ● | ● | ● | ● | | ● | ● | |
| Lawson Creek | 9.21 | ● | ● | ● | ● | | | | ● | ● | ● | ● | | ● | | |
| Beaver Canyon | 9.21 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Wood Valley | 9.21 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Sycuan Creek | 9.25 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| North Fork Sycuan Creek | 9.26 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| North Fork Sycuan Creek | 9.25 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Dehesa Valley | 9.23 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Harbison Canyon | 9.23 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |

● Existing Beneficial Use

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **Sweetwater River Watershed - continued** | | | | | | | | | | | | | | | | | |
| Galloway Valley | 9.24 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Mexican Canyon | 9.21 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| unnamed intermittent streams | 9.22 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Steel Canyon | 9.21 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| *Sweetwater Reservoir* | 9.21 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| Coon Canyon | 9.21 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Sweetwater River | 9.12 | + | | ● | | | | | ○ | ● | | ● | | ● | | |
| Spring Valley | 9.12 | + | | ● | | | | | ○ | ● | | ● | | ● | | |
| Wild Mans Canyon | 9.12 | + | | ● | | | | | ○ | ● | | ● | | ● | | |
| Long Canyon | 9.12 | + | | ● | | | | | ○ | ● | | ● | | ● | | |
| Rice Canyon | 9.12 | + | | ● | | | | | ○ | ● | | ● | | ● | | |
| Telegraph Canyon | 9.11 | + | | ● | | | | | ○ | ● | | ● | | ● | | |
| **San Diego County Coastal Streams** | | | | | | | | | | | | | | | | |
| unnamed intermittent coastal streams | 10.10 | + | | | | | | | ○ | | | ● | | | | |

● Existing Beneficial Use

○ Potential Beneficial Use

\+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **Otay River Watershed** | | | | | | | | | | | | | | | | |
| Jamul Creek | 10.34 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Jamul Creek | 10.33 | ● | ● | ● | ● | | | | ● | ● | ● | ● | | ● | | |
| Jamul Creek | 10.36 | ● | ● | ● | ● | | | | ● | ● | ● | ● | | ● | | |
| Dulzura Creek | 10.37 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Dulzura Creek | 10.36 | ● | ● | ● | ● | | | | ● | ● | ● | ● | | ● | ● | |
| Dutchman Canyon | 10.36 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Pringle Canyon | 10.36 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Sycamore Canyon | 10.36 | ● | ● | ● | ● | | | | ● | ● | ● | ● | | ● | | |
| Hollenbeck Canyon | 10.36 | ● | ● | ● | ● | | | | ● | ● | ● | ● | | ● | | |
| Lyons Valley | 10.35 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | | |
| Cedar Canyon | 10.36 | ● | ● | ● | ● | | | | ● | ● | ● | ● | ● | ● | | ● |
| Little Cedar Canyon | 10.36 | ● | ● | ● | ● | | | | ● | ● | ● | ● | ● | ● | | |
| Jamul Creek | 10.31 | ● | ● | ● | ● | | | | ● | ● | | ● | | ● | ● | |
| *Lower Otay Reservoir* | 10.31 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| unnamed tributary | 10.31 | ● | ● | ● | ● | | | | ● | ● | ● | ● | | ● | ● | |
| *Upper Otay Reservoir* | 10.32 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| Proctor Valley | 10.32 | ● | ● | ● | ● | | | | ● | ● | ● | ● | | ● | | |

● Existing Beneficial Use

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **Otay River Watershed – continued** | | | | | | | | | | | | | | | | |
| Otay River | 10.20 | + | ● | ○ | | | | | ○ | ● | | ● | | ● | ● | |
| O'Neal Canyon | 10.20 | + | ● | ○ | | | | | ○ | ● | | ● | | ● | | |
| Salt Creek | 10.20 | + | ● | ○ | | | | | ○ | ● | | ● | | ● | | |
| Johnson Canyon | 10.20 | + | ● | ○ | | | | | ○ | ● | | ● | | ● | | |
| Wolf Canyon | 10.20 | + | ● | ○ | | | | | ○ | ● | | ● | | ● | | |
| Dennery Canyon | 10.20 | + | ● | ○ | | | | | ○ | ● | | ● | | ● | | |
| Poggi Canyon | 10.20 | + | ● | ○ | | | | | ○ | ● | | ● | | ● | | |
| **Tijuana River Watershed** | | | | | | | | | | | | | | | | |
| Tijuana River | 11.11 | + | | ○ | | | | | ○ | ● | ● | ● | | ● | ● | |
| Moody Canyon | 11.11 | + | | ○ | | | | | ○ | ● | | ● | | ● | | |
| Smugglers Gulch | 11.11 | + | | ○ | | | | | ○ | ● | | ● | | ● | | |
| Goat Canyon | 11.11 | + | | ○ | | | | | ○ | ● | | ● | | ● | | |
| *Tijuana River Estuary* | 11.11 | See Coastal Waters – Table 2-3 | | | | | | | | | | | | | | |
| Spring Canyon | 11.12 | + | ● | ○ | | | | | ○ | ● | | ● | | ● | | |
| Dillon Canyon | 11.12 | + | ● | ○ | | | | | ○ | ● | | ● | | ● | | |
| Finger Canyon | 11.12 | + | ● | ○ | | | | | ○ | ● | | ● | | ● | | |
| Wruck Canyon | 11.12 | + | ● | ○ | | | | | ○ | ● | | ● | | ● | | |

● Existing Beneficial Use

○ Potential Beneficial Use

\+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **Tijuana River Watershed - continued** | | | | | | | | | | | | | | | | |
| unnamed intermittent streams | 11.12 | + | ● | ○ | | | | | ○ | ● | | ● | | ● | | |
| unnamed intermittent streams | 11.21 | + | | | | | | | ● | ● | | ● | | ● | | |
| Tijuana River | 11.21 | + | | | | | | | ● | ● | | ● | | ● | | |
| Tecate Creek | 11.23 | + | | | | | | | ● | ● | | ● | | ● | | |
| Cottonwood Creek | 11.60 | ● | ● | ● | ● | | ● | | ○ | ● | | ● | ● | ● | ● | |
| Kitchen Creek | 11.60 | ● | ● | ● | ● | | ● | | ○ | ● | | ● | ● | ● | | ● |
| Long Canyon | 11.60 | ● | ● | ● | ● | | ● | | ○ | ● | | ● | ● | ● | | ● |
| Troy Canyon | 11.60 | ● | ● | ● | ● | | ● | | ○ | ● | | ● | ● | ● | | ● |
| Fred Canyon | 11.60 | ● | ● | ● | ● | | ● | | ○ | ● | | ● | ● | ● | | |
| Horse Canyon | 11.60 | ● | ● | ● | ● | | ● | | ○ | ● | | ● | ● | ● | | |
| La Posta Creek | 11.70 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Simmons Canyon | 11.70 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| La Posta Creek | 11.60 | ● | ● | ● | ● | | ● | | ○ | ● | | ● | ● | ● | | |
| *Morena Reservoir* | 11.50 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | |
| Morena Creek | 11.50 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | ● |
| Long Valley | 11.50 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Bear Valley | 11.50 | ● | ● | ● | ● | | ● | | ● | ● | | ● | | ● | | |

● Existing Beneficial Use

○ Potential Beneficial Use

\+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **Tijuana River Watershed - continued** | | | | | | | | | | | | | | | | | |
| Cottonwood Creek | 11.30 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | ● | ● |
| Hauser Creek | 11.30 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | ● |
| Salazar Canyon | 11.30 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| *Barrett Lake* | 11.30 | See Reservoirs & Lakes – Table 2-4 | | | | | | | | | | | | | | | |
| Boneyard Canyon | 11.30 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Skye Valley | 11.30 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Pine Valley Creek | 11.41 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | ● |
| Indian Creek | 11.41 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Lucas Creek | 11.41 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Noble Canyon | 11.41 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | ● |
| Los Rasalies Ravine | 11.42 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Paloma Ravine | 11.42 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Bonita Ravine | 11.42 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Chico Ravine | 11.42 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Madero Ravine | 11.42 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Los Gatos Ravine | 11.42 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Boiling Spring Ravine | 11.42 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |

● Existing Beneficial Use

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **Tijuana River Watershed - continued** | | | | | | | | | | | | | | | | |
| Agua Dulce Ravine | 11.42 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Escondido Ravine | 11.42 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Scove Canyon | 11.41 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Pine Valley Creek | 11.30 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | ● |
| Oak Valley | 11.30 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | ● |
| Nelson Canyon | 11.30 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Secret Canyon | 11.30 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Horsethief Canyon | 11.30 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Espinosa Creek | 11.30 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Wilson Creek | 11.30 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | ● |
| Pats Canyon | 11.30 | ● | ● | ● | ● | | ● | | ● | ● | | ● | ● | ● | | |
| Cottonwood Creek | 11.23 | + | | | | | | | ● | ● | | ● | | ● | | |
| Dry Valley | 11.23 | + | | | | | | | ● | ● | | ● | | ● | | |
| Bob Owens Canyon | 11.23 | + | | | | | | | ● | ● | | ● | | ● | | |
| McAlmond Canyon | 11.24 | + | | | | | | | ● | ● | | ● | | ● | | |
| McAlmond Canyon | 11.23 | + | | | | | | | ● | ● | | ● | | ● | | |

● Existing Beneficial Use

\+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-2. BENEFICIAL USES OF INLAND SURFACE WATERS

| Inland Surface Waters [1, 2] | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN |
| **Tijuana River Watershed - continued** | | | | | | | | | | | | | | | | |
| Rattlesnake Canyon | 11.23 | + | | | | | | | ● | ● | | ● | | ● | | |
| Potrero Creek | 11.25 | + | | | | | | | ● | ● | | ● | | ● | | |
| Little Potrero Creek | 11.25 | + | | | | | | | ● | ● | | ● | | ● | | |
| Potrero Creek | 11.23 | + | | | | | | | ● | ● | | ● | | ● | | |
| Grapevine Creek | 11.23 | + | | | | | | | ● | ● | | ● | | ● | | |
| Bee Canyon | 11.22 | + | | | | | | | ● | ● | | ● | | ● | | |
| Bee Creek | 11.23 | + | | | | | | | ● | ● | | ● | | ● | | |
| Mine Canyon | 11.21 | + | | | | | | | ● | ● | | ● | | ● | | |
| unnamed intermittent streams | 11.81 | + | | | | | | | ● | ● | | ● | | ● | | |
| unnamed intermittent streams | 11.82 | + | | | | | | | ● | ● | | ● | | ● | | |
| Campo Creek | 11.84 | + | | | | | | | ● | ● | | ● | ● | ● | | |
| Diablo Canyon | 11.84 | + | | | | | | | ● | ● | | ● | | ● | | |
| Campo Creek | 11.83 | + | | | | | | | ● | ● | | ● | | ● | | |
| Miller Creek | 11.83 | + | | | | | | | ● | ● | | ● | | ● | | |
| Campo Creek | 11.82 | + | | | | | | | ● | ● | | ● | | ● | | |
| Smith Canyon | 11.82 | + | | | | | | | ● | ● | | ● | | ● | | |
| unnamed intermittent streams | 11.85 | + | | | | | | | ● | ● | | ● | | ● | | |

● Existing Beneficial Use

\+ Excepted from MUN (See Text)

[1] Waterbodies are listed multiple times if they cross hydrologic area or sub area boundaries.

[2] Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.

# Table 2-3. BENEFICIAL USES OF COASTAL WATERS

| Coastal Waters | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | IND | NAV | REC1 | REC2 | COMM | BIOL | EST | WILD | RARE | MAR | AQUA | MIGR | SPWN | WARM | SHELL |
| Pacific Ocean[1] | | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● | ● | ● | | ● |
| Dana Point Harbor[2] | | ● | ● | ● | ● | ● | | | ● | ● | ● | | ● | ● | | ● |
| Del Mar Boat Basin | | ● | ● | ● | ● | ● | | | ● | ● | ● | | ● | ● | | ● |
| Mission Bay | | ● | | ● | ● | ● | | ● | ● | ● | ● | | ● | ● | | ● |
| Oceanside Harbor | | ● | ● | ● | ● | ● | | | ● | ● | ● | | ● | ● | | ● |
| San Diego Bay [3,4,5] | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | | ● |

[1] Certain Pacific Ocean shoreline segments of the following Hydrological Units, Areas, and Subareas are designated as water quality limited segments for indicator bacteria pursuant to Clean Water Act section 303(d): San Joaquin Hills HSA 901.11 and Laguna Beach HAS 901.12, Aliso Creek HSA 901.13, Dana Point HSA 901.14, Lower San Juan HSA 901.27, San Clemente HA 901.30, San Luis Rey HU 903.00, San Marcos HA 904.50, San Dieguito HU 905.00, Miramar Reservoir HA 906.10, Scripps HA 906.30, and Mission San Diego HSA 907.11 and Santee HSA 907.12. Total Maximum Daily Loads have been adopted to address these impairments. See Chapter 3, *Water Quality Objectives*, Bacteria - Total Coliform, Fecal Coliform, *E. Coli* and Enterococci, and Chapter 7, *Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)*.

[2] The shoreline segment along Baby Beach within Dana Point Harbor is designated as a water quality limited segment for indicator bacteria pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads have been adopted to address these impairments. See Chapter 7, *Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay*.

[3] Includes the tidal prisms of the Otay and Sweetwater Rivers.

[4] The Shelter Island Yacht Basin portion of San Diego Bay is designated as an impaired water body for dissolved copper pursuant to Clean Water Act section 303(d). A Total Maximum Daily Load (TMDL) has been adopted to address this impairment. See Chapter 3, Water Quality Objectives for Pesticides, Toxicity and Toxic Pollutants and Chapter 7, Total Maximum Daily Loads.

[5] The shoreline segment along Shelter Island Shoreline Park within San Diego Bay is designated as a water quality limited segment for indicator bacteria pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads have been adopted to address these impairments. See Chapter 7, *Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay*.

● Existing Beneficial Use

# Table 2-3. BENEFICIAL USES OF COASTAL WATERS

| Coastal Waters | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | IND | NAV | REC1 | REC2 | COMM | BIOL | EST | WILD | RARE | MAR | AQUA | MIGR | SPWN | WARM | SHELL |
| **Coastal Lagoons** | | | | | | | | | | | | | | | | |
| Tijuana River Estuary | 11.11 | | | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | | ● |
| Mouth of San Diego River[6] | 7.11 | | | ● | ● | ● | | ● | ● | ● | ● | | ● | ● | | ● |
| Famosa Slough and Channel | 7.11 | | | ● | ● | ● | | ● | ● | ● | ● | | ● | ● | | ● |
| Los Penasquitos Lagoon [7] | 6.10 | | | ● | ● | | ● | ● | ● | ● | ● | | ● | ● | | ● |
| San Dieguito Lagoon | 5.11 | | | ● | ● | | ● | ● | ● | ● | ● | | ● | ● | | |
| Batiquitos Lagoon | 4.51 | | | ● | ● | | ● | ● | ● | ● | ● | | ● | ● | | |
| San Elijo Lagoon | 4.61 | | | ● | ● | | ● | ● | ● | ● | ● | | ● | ● | | |
| Agua Hedionda Lagoon | 4.31 | ● | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | ● |

[6] The mouth of San Diego River is designated as a water quality limited segment for indicator bacteria pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads have been adopted to address these impairments. See Chapter 3, *Water Quality Objectives*, Bacteria - Total Coliform, Fecal Coliform, *E. Coli*, and Enterococci, and Chapter 7, *Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)*.

[7] Fishing from shore or boat permitted, but other water contact recreational (REC-1) uses are prohibited.

● Existing Beneficial Use

○ Potential Beneficial Use

# Table 2-3. BENEFICIAL USES OF COASTAL WATERS

| Coastal Waters | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | IND | NAV | REC1 | REC2 | COMM | BIOL | EST | WILD | RARE | MAR | AQUA | MIGR | SPWN | WARM | SHELL |
| **Coastal Lagoons – continued** | | | | | | | | | | | | | | | | |
| Buena Vista Lagoon[8] | 4.21 | | | ● | ● | | ● | ○ | ● | ● | ● | | | | ● | |
| Loma Alta Slough | 4.10 | | | ● | ● | | | ● | ● | ● | ● | | | | | |
| Mouth of San Luis Rey River[9] | 3.11 | | | ● | ● | | | | ● | ● | ● | | ● | | | |
| Santa Margarita Lagoon | 2.11 | | | ● | ● | | | ● | ● | ● | ● | | ● | ● | | |

[8] Fishing from shore or boat permitted, but other water contact recreational (REC-1) uses are prohibited.

[9] The mouth of San Luis Rey River is designated as a water quality limited segment for indicator bacteria pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads have been adopted to address these impairments. See Chapter 3, *Water Quality Objectives*, Bacteria - Total Coliform, Fecal Coliform, *E. Coli*, and Enterococci, and Chapter 7, *Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek).*

● Existing Beneficial Use

○ Potential Beneficial Use

# Table 2-3. BENEFICIAL USES OF COASTAL WATERS

| Coastal Waters | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | IND | NAV | REC1 | REC2 | COMM | BIOL | EST | WILD | RARE | MAR | AQUA | MIGR | SPWN | WARM | SHELL |
| **Coastal Lagoons – continued** | | | | | | | | | | | | | | | | |
| Aliso Creek Mouth[10] | 1.13 | | | ● | ● | | | | ● | ● | ● | | | | | |
| San Juan Creek Mouth[11] | 1.27 | | | ● | ● | | | | ● | ● | ● | | ● | | | ● |
| San Mateo Creek Mouth | 1.40 | | | ● | ● | | ● | | ● | ● | ● | | ● | ● | | |
| San Onofre Creek Mouth | 1.51 | | | ● | ● | | | | ● | ● | ● | | ● | ● | | |

[10] The mouth of Aliso Creek is designated as a water quality limited segment for indicator bacteria pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads have been adopted to address these impairments. See Chapter 3, *Water Quality Objectives*, Bacteria - Total Coliform, Fecal Coliform, *E. Coli*, and Enterococci, and Chapter 7, *Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek).*

[11] The mouth of San Juan Creek is designated as a water quality limited segment for indicator bacteria pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads have been adopted to address these impairments. See Chapter 3, *Water Quality Objectives*, Bacteria - Total Coliform, Fecal Coliform, *E. Coli*, and Enterococci, and Chapter 7, *Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek).*

● Existing Beneficial Use

○ Potential Beneficial Use

# Table 2-4. BENEFICIAL USES OF RESERVOIRS AND LAKES

| Reservoirs & Lakes | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | REC1 | REC2 | WARM | COLD | WILD | RARE | POW |
| O'Neill Lake | 2.13 | ● | ● | ● | ● | | | ● | ● | ● | ● | ● | ● | |
| Diamond Valley Lake | 2.35 & 2.36 | ● | ● | ● | ● | ● | | ●[1] | ● | ● | ● | ● | | ● |
| Lake Skinner | 2.42 | ● | ● | ● | ● | ○ | | ●[1] | ● | ● | | ● | | |
| Vail Lake | 2.81 | ● | ● | ● | ● | ● | | ●[1] | ● | ● | | ● | | |
| Turner Lake | 3.13 | ● | ● | ● | | | | ○ | ● | ● | | | | |
| Lake Henshaw | 3.31 | ● | ● | ● | ● | | ● | ●[1] | ● | ● | | ● | ● | ● |
| Olivenhain Reservoir | 5.21 | ● | | ● | | | | ●[1] | ● | ● | ● | ● | | ● |
| San Dieguito Reservoir | 5.21 | ● | ● | ○ | | | | ● | ● | ● | ● | ● | | |
| Lake Dixon | 4.62 | ● | ● | ○ | | | | ●[1] | ● | ● | ● | ● | | |
| Lake Wohlford | 4.63 | ● | ● | ○ | | | | ●[1] | ● | ● | ● | ● | | ● |
| Lake Hodges | 5.21 | ● | ● | ● | ● | | | ●[1] | ● | ● | ● | ● | ● | |
| Lake Poway | 5.52 | ● | ● | ● | ● | | | ●[1] | ● | ● | ● | ● | | |
| Sutherland Lake | 5.53 | ● | ● | ● | ● | | | ●[1] | ● | ● | ● | ● | ● | |
| Miramar Reservoir | 6.10 | ● | | ● | | | | ●[1] | ● | ● | | ● | | ● |
| Lake Murray | 7.11 | ● | | ● | | | | ●[1] | ● | ● | ● | ● | | ● |
| Lake Jennings | 7.12 | ● | | ● | | | | ● | ● | ● | ● | ● | | |

[1] Fishing from shore or boat permitted, but other water contact recreational (REC-1) uses are prohibited.

● Existing Beneficial Use

○ Potential Beneficial Use

# Table 2-4. BENEFICIAL USES OF RESERVOIRS AND LAKES

| Reservoirs & Lakes | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MUN | AGR | IND | PROC | GWR | FRSH | REC 1 | REC 2 | WARM | COLD | WILD | RARE | POW |
| San Vicente Reservoir | 7.21 | ● | ● | ● | ● | | | ●[1] | ● | ● | ● | ● | | |
| El Capitan Reservoir | 7.31 | ● | ● | ● | ● | | | ●[1] | ● | ● | ● | ● | ● | |
| Cuyamaca Reservoir | 7.43 | ● | ● | ● | ● | | | ●[1] | ● | ● | ● | ● | ● | |
| Sweetwater Reservoir | 9.21 | ● | ● | ● | ● | | | ● | ● | ● | | ● | | |
| Loveland Reservoir | 9.31 | ● | ● | ● | ● | | | ● | ● | ● | ● | ● | | |
| Lower Otay Reservoir | 10.31 | ● | ● | ● | ● | | | ●[1] | ● | ● | ● | ● | | |
| Upper Otay Reservoir | 10.32 | ● | ● | ● | ● | | | ● | ● | ● | ● | ● | | |
| Lake Barrett | 11.30 | ● | ● | ● | ● | | ● | ● | ● | ● | ● | ● | ● | |
| Morena Reservoir | 11.50 | ● | ● | ● | ● | | ● | ●[1] | ● | ● | ● | ● | ● | |

[1] Fishing from shore or boat permitted, but other water contact recreational (REC-1) uses are prohibited.

● Existing Beneficial Use

# Table 2-5. BENEFICIAL USES OF GROUND WATERS

| Ground Water | | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | PROC | FRSH | GWR |
| **SAN JUAN HYDROLOGIC UNIT** | | 1.00 | | | | | | |
| Laguna | HA | 1.10 | | | | | | |
| San Joaquin Hills | HSA [1] | 1.11 | ● | ● | | | | |
| Laguna Beach | HSA [1] | 1.12 | ● | ● | | | | |
| Aliso | HSA [2] | 1.13 | ● | ● | | | | |
| Dana Point | HSA [1] | 1.14 | + | ● | | | | |
| Mission Viejo | HA | 1.20 | | | | | | |
| Oso | HSA | 1.21 | ● | ● | ● | | | |
| Upper Trabuco | HSA | 1.22 | ● | ● | ● | | | |
| Middle Trabuco | HSA | 1.23 | ● | ● | ● | | | |
| Gobernadora | HSA | 1.24 | ● | ● | ● | | | |
| Upper San Juan | HSA | 1.25 | ● | ● | ● | | | |
| Middle San Juan | HSA | 1.26 | ● | ● | ● | | | |

1 These beneficial uses do not apply to all lands on the coastal side of the inland boundary of the right-of-way of Pacific Coast Highway 1, and this area is excepted from the sources of drinking water policy. The beneficial uses for the remainder of HA 1.10 are as shown.

2 These beneficial uses do not apply westerly of the right-of-way of Interstate 5 and this area is excepted from the sources of drinking water policy. The beneficial uses for the remainder of the hydrologic area are as shown.

● Existing Beneficial Use

+ Excepted from MUN (see text)

# Table 2-5. BENEFICIAL USES OF GROUND WATERS

| Ground Water | | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | PROC | FRSH | GWR |
| **SAN JUAN HYDROLOGIC UNIT - continued** | | 1.00 | | | | | | |
| Lower San Juan | HSA [3] | 1.27 | ● | ● | ● | | | |
| Ortega | HSA | 1.28 | ● | ● | ● | | | |
| San Clemente | HA | 1.30 | | | | | | |
| Prima Deshecha | HSA [2] | 1.31 | ● | ● | | | | |
| Segunda Deshecha | HSA | 1.32 | + | | | | | |
| San Mateo Canyon | HA [2] | 1.40 | ● | ● | ● | | | |
| San Onofre | HA [2] | 1.50 | ● | ● | | | | |

2 These beneficial uses do not apply westerly of the easterly boundary of the right-of-way of Interstate 5 and this area is excepted from the sources of drinking water policy. The beneficial uses for the remainder of the hydrologic area are as shown.

3 These beneficial uses do not apply to all lands on the coastal side of the inland boundary of the right-of-way of Pacific Coast Highway 1 west of the San Juan Creek channel and this area is excepted from the sources of drinking water policy. The beneficial uses for the remainder of HA 1.20 are as shown.

● Existing Beneficial Use

+ Excepted from MUN (see text)

# Table 2-5. BENEFICIAL USES OF GROUND WATERS

| Ground Water | | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | PROC | FRSH | GWR |
| **SANTA MARGARITA HYDROLOGIC UNIT** | | 2.00 | | | | | | |
| Ysidora | HA [2] | 2.10 | ● | ● | ● | ● | | |
| DeLuz | HA | 2.20 | ● | ● | ● | | | |
| Murrieta | HA | 2.30 | ● | ● | ● | ● | | |
| Auld | HA | 2.40 | ● | ● | ● | | | |
| Pechanga | HA | 2.50 | ● | ● | ● | | | |
| Wilson | HA | 2.60 | ● | ● | ○ | | | |
| Cave Rocks | HA | 2.70 | ● | ● | | | | |
| Aguanga | HA | 2.80 | ● | ● | ● | | | |
| Oakgrove | HA | 2.90 | ● | ● | | | | |

2 These beneficial uses do not apply westerly of the right-of-way of Interstate 5 and this area is excepted from the sources of drinking water policy. The beneficial uses for the remainder of the hydrologic area are as shown.

● Existing Beneficial Use

○ Potential Beneficial Use

# Table 2-5. BENEFICIAL USES OF GROUND WATERS

| Ground Water | | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | PROC | FRSH | GWR |
| **SAN LUIS REY HYDROLOGIC UNIT** | | 3.00 | | | | | | |
| Lower San Luis | HA [2] | 3.10 | ● | ● | ● | | | |
| Monserate | HA | 3.20 | | | | | | |
| Pala | HSA | 3.21 | ● | ● | ● | | | |
| Pauma | HSA | 3.22 | ● | ● | ● | | | |
| La Jolla Amago | HSA | 3.23 | ● | ● | ● | ● | | |
| Warner Valley | HA | 3.30 | | | | | | |
| Warner | HSA | 3.31 | ● | ● | ● | | ● | |
| Combs | HSA | 3.32 | ● | ● | ● | | | |

2 These beneficial uses do not apply westerly of the right-of-way of Interstate 5 and this area is excepted from the sources of drinking water policy. The beneficial uses for the remainder of the hydrologic area are as shown.

● Existing Beneficial Use

# Table 2-5. BENEFICIAL USES OF GROUND WATERS

| Ground Water | | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | PROC | FRSH | GWR |
| **CARLSBAD HYDROLOGIC UNIT** | | 4.00 | | | | | | |
| Loma Alta | HA [2] | 4.10 | + | | ● | | | |
| Buena Vista Creek | HA | 4.20 | | | | | | |
| El Salto | HSA [2] | 4.21 | ● | ● | ○ | | | |
| Vista | HSA | 4.22 | ● | ● | ● | | | |
| Agua Hedionda | HA | 4.30 | | | | | | |
| Los Monos | HSA [2] | 4.31 | ● | ● | ● | | | |
| Los Monos | HSA [5] | 4.31 | ○ | ○ | ○ | | | |
| Los Monos | HSA [6] | 4.31 | ○ | ● | ○ | | | |
| Buena | HSA | 4.32 | ● | ● | ● | | | |

2 These beneficial uses do not apply westerly of the easterly boundary of the right-of-way of Interstate 5 and this area is excepted from the sources of drinking water policy. The beneficial uses for the remainder of the hydrologic area are as shown.

5 These beneficial uses designations apply to the portion of HSA 4.31 bounded on the west by the easterly boundary of Interstate Highway 5 right-of-way; on the east by the easterly boundary of El Camino Real; and on the north by a line extending along the southerly edge of Agua Hedionda Lagoon to the easterly end of the lagoon, thence in an easterly direction to Evans Point, thence easterly to El Camino Real along the ridge lines separating Letterbox Canyon and the area draining to the Marcario Canyon.

6 These beneficial uses apply to the portion of HSA 4.31 tributary to Agua Hedionda Creek downstream from the El Camino Real crossing, except lands tributary to Marcario Canyon (located directly southerly of Evans Point, land directly south of Agua Hedionda Lagoon, and areas west of Interstate Highway 5.

● Existing Beneficial Use

○ Potential Beneficial Use

\+ Excepted from MUN (see text)

# Table 2-5. BENEFICIAL USES OF GROUND WATERS

| Ground Water | | | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MUN | AGR | IND | PROC | FRSH | GWR |
| **CARLSBAD HYDROLOGIC UNIT - continued** | | | 4.00 | | | | | | |
| Encinas | HA | | 4.40 | + | | | | | |
| San Marcos | HA | | 4.50 | | | | | | |
| Batiquitos | HSA | 2,7 | 4.51 | ● | ● | ● | | | |
| Batiquitos | HSA | 8 | 4.51 | ○ | ○ | ○ | | | |
| Richland | HSA | 2,7 | 4.52 | ● | ● | ● | | | |
| Twin Oaks | HSA | 2,7 | 4.53 | ● | ● | ● | | | |
| Escondido | HA | | 4.60 | | | | | | |
| San Elijo | HSA | 2 | 4.61 | ○ | ● | ● | | | |
| Escondido | HSA | | 4.62 | ● | ● | ● | | | |
| Lake Wohlford | HSA | | 4.63 | ● | ● | ● | | | |

2 These beneficial uses do not apply westerly of easterly boundary of the right-of-way of Interstate 5 and this area is excepted from the sources of drinking water policy. The beneficial uses for the remainder of the hydrologic area are as shown.

7 These beneficial uses do not apply to HSA 4.51 and HSA 4.52 between Highway 78 and El Camino Real and to all lands which drain to Moonlight Creek, Cottonwood Creek and to Encinitas Creek and this area is excepted from the sources of drinking water policy. The beneficial uses for the remainder of the subarea are as shown.

8 These beneficial uses apply to the portion of HSA 4.51 bounded on the south by the north shore of Batiquitos Lagoon, on the west by the easterly boundary of the Interstate Highway 5 right-of-way, on the north by the subarea boundary and on the east by the easterly boundary of El Camino Real.

● Existing Beneficial Use

○ Potential Beneficial Use

\+ Excepted from MUN (see text)

# Table 2-5. BENEFICIAL USES OF GROUND WATERS

| Ground Water | | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | PROC | FRSH | GWR |
| **SAN DIEGUITO HYDROLOGIC UNIT** | | 5.00 | | | | | | |
| Solana Beach | HA [2] | 5.10 | ● | ● | ● | | | |
| Hodges | HA | 5.20 | ● | ● | ● | | | |
| San Pasqual | HA | 5.30 | ● | ● | ● | | | |
| Santa Maria Valley | HA | 5.40 | | | | | | |
| Ramona | HSA | 5.41 | ● | ● | ● | ● | | |
| Lower Hatfield | HSA | 5.42 | ● | ● | ● | | | |
| Wash Hallow | HSA | 5.43 | ● | ● | ● | | | |
| Upper Hatfield | HSA | 5.44 | ● | ● | ● | | | |
| Ballena | HSA | 5.45 | ● | ● | ● | | | |
| East Santa Teresa | HSA | 5.46 | ● | ● | ● | | | |
| West Santa Teresa | HSA | 5.47 | ● | ● | ● | | | |
| Santa Ysabel | HA | 5.50 | ● | ● | | | | |

2 These beneficial uses do not apply westerly of the easterly boundary of the right-of-way of Interstate Highway 5 and this area is excepted from the sources of drinking water policy. The beneficial uses for the remainder of the hydrologic area are as shown.

● Existing Beneficial Use

# Table 2-5. BENEFICIAL USES OF GROUND WATERS

| Ground Water | | | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MUN | AGR | IND | PROC | FRSH | GWR |
| **PENASQUITOS HYDROLOGIC UNIT** | | | 6.00 | | | | | | |
| Miramar Reservoir | HA | 2, 9 | 6.10 | ● | ● | ● | | | |
| Poway | HA | | 6.20 | ● | ● | ○ | | | |
| Scripps | HA | | 6.30 | + | | | | | |
| Miramar | HA | 10 | 6.40 | + | | ○ | | | |
| Tecolote | HA | | 6.50 | + | | | | | |

2 These beneficial uses do not apply westerly of the easterly boundary of the right-of-way of Interstate Highway 5 and this area is excepted from the sources of drinking water policy. The beneficial uses for the remainder of the hydrologic area are as shown.

9 These beneficial uses do not apply to all lands which drain to Los Penasquitos Canyon from 1.5 miles west of Interstate Highway 15 and this area is excepted from the sources of drinking water policy. The beneficial uses for the remainder of the hydrologic area are as shown.

10 These beneficial uses do not apply west of Interstate Highway 15. The beneficial uses for the remainder of the hydrologic area are as shown.

● Existing Beneficial Use

○ Potential Beneficial Use

\+ Excepted from MUN (see text)

# Table 2-5. BENEFICIAL USES OF GROUND WATERS

| Ground Water | | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | PROC | FRSH | GWR |
| **SAN DIEGO HYDROLOGIC UNIT** | | 7.00 | | | | | | |
| Lower San Diego | HA | 7.10 | | | | | | |
| Mission San Diego | HSA [2] | 7.11 | ○ | ● | ● | ● | | |
| Santee | HSA | 7.12 | ● | ● | ● | ● | | |
| El Cajon | HSA | 7.13 | ● | ● | ○ | ○ | | |
| Coches | HSA | 7.14 | ● | ● | ● | ○ | | |
| El Monte | HSA | 7.15 | ● | ● | ● | ○ | | |
| San Vicente | HA | 7.20 | ● | ● | | | | |
| El Capitan | HA | 7.30 | ● | ● | | | | |
| Boulder Creek | HA | 7.40 | ● | ● | | | | |

2 These beneficial uses do not apply westerly of the easterly boundary of the right-of-way of Interstate 5 and this area is excepted from the sources of drinking water policy. The beneficial uses for the remainder of the hydrologic area are as shown.

● Existing Beneficial Use

○ Potential Beneficial Use

# Table 2-5. BENEFICIAL USES OF GROUND WATERS

| Ground Water | | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | PROC | FRSH | GWR |
| **PUEBLO SAN DIEGO HYDROLOGIC UNIT** | | 8.00 | | | | | | |
| Point Loma | HA | 8.10 | + | | | | | |
| San Diego Mesa | HA | 8.20 | + | | | | | |
| National City | HA [2] | 8.30 | ● | | | | | |
| **SWEETWATER HYDROLOGIC UNIT** | | 9.00 | | | | | | |
| Lower Sweetwater | HA | 9.10 | | | | | | |
| Telegraph | HSA | 9.11 | ○ | ● | ○ | | | |
| La Nacion | HSA | 9.12 | ● | ● | ● | | | |
| Middle Sweetwater | HA | 9.20 | ● | ● | ● | | | |
| Upper Sweetwater | HA | 9.30 | ● | ● | | | | |

2 These beneficial uses do not apply westerly of the easterly boundary of the right-of-way of Interstate 5 and this area is excepted from the sources of drinking water policy. The beneficial uses for the remainder of the hydrologic area are as shown.

● Existing Beneficial Use

○ Potential Beneficial Use

\+ Excepted from MUN (see text)

# Table 2-5. BENEFICIAL USES OF GROUND WATERS

| Ground Water | | | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MUN | AGR | IND | PROC | FRSH | GWR |
| **OTAY HYDROLOGIC UNIT** | | | 10.00 | | | | | | |
| Coronado | HA | | 10.10 | + | | | | | |
| Otay Valley | HA | | 10.20 | ● | ● | ● | | | |
| Otay Valley | HA | [11] | 10.20 | + | | ● | | | |
| Dulzura | HA | | 10.30 | ● | ● | ● | | | |

11 This beneficial use designation applies to the portion of Otay HA (10.20), limited to lands within and tributary to Salt Creek on the east and Poggi Canyon on the west and including the several smaller drainage courses between these tributaries of the Otay River.

● Existing Beneficial Use

\+ Excepted from MUN (see text)

# Table 2-5. BENEFICIAL USES OF GROUND WATERS

| Ground Water | | Hydrologic Unit Basin Number | BENEFICIAL USE | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | MUN | AGR | IND | PROC | FRSH | GWR |
| **TIJUANA HYDROLOGIC UNIT** | | 11.00 | | | | | | |
| Tijuana Valley | HA | 11.10 | | | | | | |
| San Ysidro | HSA [12] | 11.11 | ● | ● | ● | | | |
| Water Tanks | HSA | 11.12 | ○ | ○ | ○ | | | |
| Potrero | HA | 11.20 | ● | ● | ● | | | |
| Barrett Lake | HA | 11.30 | ● | ● | | | | |
| Monument | HA | 11.40 | ● | ● | | | | |
| Morena | HA | 11.50 | ● | ● | | | | |
| Cottonwood | HA | 11.60 | ● | ● | | | | |
| Cameron | HA | 11.70 | ● | ● | | | | |
| Campo | HA | 11.80 | ● | ● | ● | | | |

12 These beneficial uses do not apply west of Hollister Street and this area is excepted from the sources of drinking water policy. The beneficial uses for the remainder of the hydrologic area are as shown.

● Existing Beneficial Use

○ Potential Beneficial Use

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# CHAPTER 3

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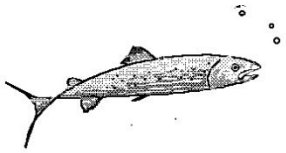
# 3. WATER QUALITY OBJECTIVES

## *INTRODUCTION*



The purpose of this chapter is to designate the water quality objectives for all surface and ground waters in the Region. These water quality objectives are necessary to protect the beneficial uses designated in Chapter 2.

California Water Code (Water Code) section 13050(h) defines "water quality objectives" as follows:

"*The limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area."*

By definition, water quality objectives must protect the most sensitive of the beneficial uses which have been designated for a water body. Water quality objectives may be numerical values for water quality constituents or narrative descriptions. Water quality objectives must be based upon sound scientific water quality criteria needed to protect the most sensitive of the beneficial uses which have been designated for a water body. Water quality objectives must be as stringent or more stringent than water quality criteria. Numerous key terms used throughout this chapter are defined in the Glossary which is included as Appendix A of this Basin Plan.

## *WATER QUALITY OBJECTIVES*

Like the designation of beneficial uses, the designation of water quality objectives must satisfy all of the applicable requirements of the Water Code, Division 7 (Porter-Cologne Act) and the Clean Water Act. Water Code section 13241 provides that each Regional Water Quality Control Board shall establish water quality objectives for the waters of the state (i.e. ground and surface waters) which, in the Regional Board's judgment, are necessary for the reasonable protection of beneficial uses and for the prevention of nuisance. The Clean Water Act section 303 requires that the State adopt water quality objectives (called water quality criteria) for surface waters. The requirements of both Acts applicable to the designation of water quality objectives are summarized below.

## *WATER QUALITY OBJECTIVE DESIGNATION UNDER THE PORTER-COLOGNE WATER QUALITY CONTROL ACT*

Significant points regarding the designation of water quality objectives for waters of the state under the Porter-Cologne Act are:

- Water quality objectives must ensure the reasonable protection of beneficial uses and the prevention of nuisance, recognizing that it may be possible for the quality of the water to be changed to some degree without unreasonably affecting beneficial uses. (Water Code section 13241)

- Protection of beneficial uses may not require that water quality objectives protect the existing quality of water. However, water quality objectives cannot be set at a level that would permit water quality to change to such a degree that the beneficial uses designated for protection are unreasonably affected. (Water Code section 13241)

- Water quality objectives must ensure that the water will be suitable for the beneficial uses which have been designated for protection. (Water Code section 13241)

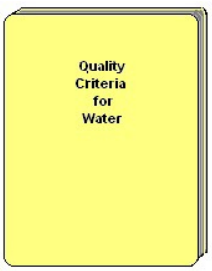
- In establishing water quality objectives, the Regional Board must provide for the reasonable protection of all beneficial uses which are designated for protection, taking into account existing water quality, environmental and economic considerations. Water Code section 13241 provides that the Regional Board shall consider, but is not limited to, the following factors in establishing water quality objectives:

- Past, present, and probable future beneficial uses of water;
- Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto;
- Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area;
- Economic considerations;
- The need for developing housing within the region; and
- The need to develop and use recycled water.

## *WATER QUALITY OBJECTIVE DESIGNATION UNDER THE CLEAN WATER ACT*

Section 303 of the Clean Water Act requires the State to submit to the U.S. Environmental Protection Agency (USEPA) for approval, all new or revised water quality standards which are established for surface and ocean waters. Under federal terminology, water quality standards consist of the beneficial uses enumerated in Chapter 2 and the water quality objectives contained in this chapter. Significant points regarding the designation of water quality objectives for surface waters pursuant to the Clean Water Act are:

- Water quality objectives are called water quality criteria in the Clean Water Act.
- Water quality criteria (i.e., water quality objectives) are defined as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular surface water use. Water quality criteria are qualitative or quantitative estimates of the concentration of a water constituent which, when not exceeded, will ensure water quality sufficient to protect a designated beneficial use. Water quality criteria should reflect the latest scientific knowledge on the identifiable effects of pollutants on public health and welfare, aquatic life, and recreation [40 CFR 131.3(b)].
- States must adopt water quality criteria (i.e., water quality objectives) that protect designated surface water beneficial uses. For surface waters with multiple beneficial use designations, the water quality criteria shall support the most sensitive beneficial use [40 CFR 131.11(a)(1)].
- States must adopt water quality criteria (i.e., water quality objectives) for surface waters which are based upon USEPA guidance documents or other scientifically defensible methods. Economics are not considered in the development of water quality criteria for surface waters under the Clean Water Act [40 CFR 131.11(b)].
- Water quality criteria (i.e., water quality objectives) for surface waters can be either numeric or narrative specifications for water quality based on physical, chemical and toxicological data, and scientific judgment. Where numerical specifications cannot be established, narrative criteria must be established based upon biomonitoring methods [40 CFR 131.11(b)].
- The term *"water quality criteria*" has two meanings under the federal Clean Water Act. In one context, water quality criteria is equivalent to water quality objectives. In other words, water quality criteria is the standard that a state must impose to protect a surface water beneficial use. In another context, the term *"water quality criteria*" refers to scientific information USEPA has developed on the relationship that the effect of a constituent concentration has on human health, aquatic life, or other uses of water. USEPA has published information in documents such as the "*Gold Book*" (USEPA, 1986) and in various individual criteria documents.



# *STATE AND FEDERAL ANTIDEGRADATION POLICIES*

Water quality objectives must also conform to USEPA regulations covering antidegradation [40 CFR section 131.12] and State Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*. Application of the antidegradation provisions to the standard setting process requires supporting documentation and appropriate findings whenever a standard (water quality objective or beneficial use) is made less restrictive to accommodate the discharge of pollutants or other activities of man

## *FEDERAL ANTIDEGRADATION POLICY*

**Elegant tern**

USEPA water quality standards regulations mandated under the Clean Water Act require that each state have an *"antidegradation*" policy for surface waters [40 CFR 131.6(d)]. Each state's policy must, at a minimum, be consistent with the following three principles (hereinafter referred to as the "*federal antidegradation policy*") set forth in 40 CFR 131.12(a):

(1) The first principle requires that all existing instream water uses shall be maintained and protected.

(2) The second principle protects waters whose quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water. For these waters, limited water quality degradation may be allowed if necessary to accommodate important economic or social development in the area in which the waters are located and if the water quality is adequate to protect existing uses fully.

(3) The third principle requires maintenance and protection of all high quality waters which constitute an outstanding national resource.

The federal antidegradation policy serves as a "*catchall*" water quality standard, to be applied where other water quality standards are not specific enough for a particular water body or where other water quality standards do not address a particular pollutant. The policy also serves to provide guidance for standard setting and for other regulatory decisions, to determine when additional control measures should be required to maintain instream beneficial uses or to maintain high quality surface waters. The federal antidegradation policy is not an absolute bar to reductions in surface water quality. Rather, the policy requires that reductions in water quality be justified as necessary to accommodate important social and economic development.

## *STATE ANTIDEGRADATION POLICY*

Water quality objectives for waters of the state must conform to State Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*. Under State Board Resolution No. 68-16, which applies to all waters of the State, the Regional Board and the State Board must have sufficient grounds to adopt findings which demonstrate that any water quality degradation will:

(1) Be consistent with the maximum benefit to the people of the State;

(2) Not unreasonably affect existing and potential beneficial uses of such water; and

(3) Not result in water quality less than described in the Basin Plan.

Resolution No. 68-16 establishes a general principle of nondegradation, with flexibility to allow some changes in water quality which is in the best interests of the State. Changes in water quality are allowed only where it is in the public interest and beneficial uses are not unreasonably affected. The State Board has interpreted Resolution No. 68-16 as incorporating the three part principles set forth in the federal antidegradation policy. The terms and conditions of Resolution No. 68-16 serve as a general narrative water quality objective in all state water quality control plans. A reprint of Resolution No. 68-16 is provided in the back of this Chapter on page 3-36.

# *DESIGNATED WATER QUALITY OBJECTIVES*

The water quality objectives designated for the waters of the San Diego Region are listed below. These water quality objectives are necessary to protect existing and potential beneficial uses described in Chapter 2 and to protect existing high quality waters of the State.

The water quality objectives will be achieved primarily through the establishment of waste discharge requirements, and through the implementation of this water quality control plan.

The Regional Board, in establishing waste discharge requirements, will consider potential effects on beneficial uses within the area of influence of the discharge, the existing quality of receiving waters, and the appropriate water quality objectives. The Regional Board will make a finding as to the beneficial uses to be protected within the area of influence of the discharge and establish waste discharge requirements to protect those uses and to meet water quality objectives.

The water quality objectives are stated in italics and arranged first by the water body type to which they apply (e.g., all waters; all ocean waters; and all inland surface, enclosed bay and estuaries, coastal lagoons, and ground waters). Within each water body type, the water quality objectives are alphabetized by constituent.

In most cases the water quality objective is preceded by a general description of the constituent limited by the objective. The objectives vary in applicability and scope, reflecting the variety of beneficial uses of water which have been identified. Where numerical limits are specified, they represent the maximum levels of constituents that will allow the beneficial use to continue unimpaired. In other cases, an objective may tolerate natural or "*background*" levels of certain substances or characteristics but no increases over those values, or may express a limit in terms of not adversely affecting beneficial uses. An adverse effect or impact on a beneficial use occurs where there is an actual or threatened loss or impairment of that beneficial use.

## *GENERAL ANTIDEGRADATION OBJECTIVE*

The following objective shall apply to all waters of the State within the Region.

### *General Antidegradation Water Quality Objective*

*Wherever the existing quality of water is better than the quality of water established herein as objectives, such existing quality shall be maintained unless otherwise provided by the provisions of the State Water Resources Control Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," including any revisions thereto, or the federal Antidegradation Policy, 40 CFR 131.12 (for surface waters only).*

The shoreline segment along Baby Beach within Dana Point Harbor is designated as a water quality limited segment for indicator bacteria pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads have been adopted to address these impairments. See Chapter 2, Table 2-3, *Beneficial Uses of Coastal Waters*, Footnote 2, and Chapter 7, *Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay*.

Certain Pacific Ocean shoreline segments of the following Hydrological Units, Areas, and Subareas are designated as water quality limited segments for indicator bacteria pursuant to Clean Water Act section 303(d): San Joaquin Hills HSA 901.11 and Laguna Beach HAS 901.12, Aliso Creek HSA 901.13, Dana Point HSA 901.14, Lower San Juan HSA 901.27, San Clemente HA 901.30, San Luis Rey HU 903.00, San Marcos HA 904.50, San Dieguito HU 905.00, Miramar Reservoir HA 906.10, Scripps HA 906.30, and Mission San Diego HSA 907.11 and Santee HSA 907.12. Total Maximum Daily Loads have been adopted to address these impairments. See Chapter 2, Table 2-3, *Beneficial uses of Coastal Waters*, Footnotes 1, 6, 9, 10, and 11, and Chapter 7, *Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek).*

### *Total Maximum Daily Load (TMDL) Implementation Provisions*

For the purposes of a TMDL, the water quality objectives for total coliform, fecal coliform, and/or enterococcus bacteria in ocean waters designated for contact recreation may be implemented using a reference system and antidegradation approach or natural sources exclusion approach.

See Chapter 4 (Implementation) for further discussion of this implementation provision.

## *DISSOLVED OXYGEN*

Adequate dissolved oxygen is vital for aquatic life. Depression of dissolved oxygen levels can lead to fish kills and odors resulting from anaerobic decomposition. Dissolved oxygen content in water is a function of water temperature and salinity.

### *Water Quality Objective for Dissolved Oxygen*

*The dissolved oxygen concentration in ocean waters shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.*

## *HYDROGEN ION CONCENTRATION (pH)*

The hydrogen ion concentration of water is called "*pH*". The acidity or alkalinity of water is measured by the pH factor. The pH scale ranges from 1 to 14, with 1 to 6.9 being acid, 7.1 to 14 being alkaline, and 7.0 being neutral. Ranges (pH) of 6.5 to 9.0 are considered harmless. A change of one point on this scale represents a ten-fold increase in acidity or alkalinity. Many pollutants can alter the pH, raising or lowering it excessively. In some cases even small changes in pH can harm aquatic biota. The pH changes can alter the chemical form of certain constituents, thereby increasing their bioavailability and toxicity. For example a decrease in pH can result in an increase in dissolved metal concentrations. Ammonia, which is a major component of sewage discharges, can be completely safe at pH 7.0 and extremely toxic to fish at pH 8.5 for the same total ammonia concentration.

### *Water Quality Objective for pH*

*The pH value shall not be changed at any time more than 0.2 pH units from that which occurs naturally.*

# *INLAND SURFACE WATERS, ENCLOSED BAYS AND ESTUARIES, COASTAL LAGOONS AND GROUND WATERS*

The following objectives apply to all inland surface waters, enclosed bays and estuaries, coastal lagoons, and ground waters of the Region as specified below.

## *THERMAL PLAN*

### *Thermal Plan Water Quality Objective*

*The terms and conditions of the State Board's "Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California" (Thermal Plan) and any revisions thereto are incorporated into this Basin Plan by reference. The terms and conditions of the Thermal Plan apply to the Inland Surface Waters, Enclosed Bays and Estuaries, and Coastal Lagoons within this Region.*

## *AGRICULTURAL SUPPLY BENEFICIAL USE*

### *Water Quality Objective for Agricultural Supply*

*Waters designated for use as agricultural supply (AGR) shall not contain concentrations of chemical constituents in amounts that adversely affect such beneficial use.*

## *AMMONIA, UN-IONIZED*

Ammonia is a pungent, colorless, gaseous alkaline compound of nitrogen and hydrogen that is highly soluble in water. Un-ionized ammonia ($NH_3$) is toxic to fish and other aquatic organisms. In water, $NH_3$ exists in equilibrium with ammonium ($NH_{4+}$) and hydroxide ($OH$-) ions. The proportions of each change as the temperature, pH, and salinity of the water change.

### *Water Quality Objective for Un-ionized Ammonia*

*The discharge of wastes shall not cause concentrations of un-ionized ammonia ($NH_3$) to exceed 0.025 mg/l (as N) in inland surface waters, enclosed bays and estuaries and coastal lagoons.*

## *BACTERIA - TOTAL COLIFORM, FECAL COLIFORM, E.COLI, AND ENTEROCOCCI*

Total coliform, fecal coliform, *Escherichia coli (E. coli*), and enterococci bacteria are used to indicate the likelihood of pathogens of fecal origin in surface waters. Fecal bacteria (e.g., fecal coliform, *E. coli*, and enterococci) are part of the intestinal biota of warm-blooded animals. Their presence in surface waters is an indicator of potential pollution. Total coliform numbers can include non-fecal bacteria, so additional testing is often done to confirm the presence and numbers of fecal bacteria. Water quality objectives for numbers of total coliform, fecal coliform, *E.coli*, and enterococci vary with the beneficial uses of the water, as described below. The water quality objectives for bacteria are expressed in units of organisms per 100 milliliters of water.

The shoreline segment along Shelter Island Shoreline Park within San Diego Bay is designated as a water quality limited segment for indicator bacteria pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads have been adopted to address these impairments. See Chapter 2, Table 2-3, *Beneficial Uses of Coastal Waters*, Footnote 5, and Chapter 7, *Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay*.

Aliso Creek, San Juan Creek, Tecolote Creek, Forrester Creek, San Diego River (lower), and Chollas Creek are designated as water quality limited segments for indicator bacteria pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads have been adopted to address these impairments. See Chapter 2, Table 2-2, *Beneficial Uses of Inland Surface Waters*, Footnote 3 and Chapter 7, *Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek).*

(1) Waters Designated for Contact Recreation (REC-1) Beneficial Use

### *Fecal Coliform Water Quality Objective for Contact Recreation*

*The fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 organisms per 100 ml.*

*In addition, the fecal coliform concentration shall not exceed 400 organisms per 100 ml for more than 10 percent of the total samples during any 30-day period.*

**Surfer at Ocean Beach, San Diego County**

### *Enterococci and E. Coli Water Quality Objectives for Contact Recreation*

*The USEPA published E. coli and enterococci bacteriological criteria applicable to waters designated for contact recreation (REC-1) in the Federal Register, Vol. 51, No. 45, Friday, March 7, 1986, 8012-8016.*

### *USEPA BACTERIOLOGICAL CRITERIA FOR WATER CONTACT RECREATION* [1,2]
**(in colonies per 100 ml)**

| | *Freshwater* | | *Saltwater* |
|---|---|---|---|
| | *Enterococci* | *E.coli* | *Enterococci* |
| ***Steady State*** | | | |
| *All Areas* | *33* | *126* | *35* |
| ***Maximum*** | | | |
| *Designated Beach* | *61* | *235* | *104* |
| *Moderately or Lightly Used Area* | *108* | *406* | *276* |
| *Infrequently Used Area* | *151* | *576* | *500* |

### *Total Coliform Water Quality Objective for Contact Recreation for Bays and Estuaries*

*In bays and estuaries, the most probable number of total coliform organisms in the upper 60 feet of the water column shall be less than 1,000 organisms per 100 ml (10 organisms per ml); provided that not more than 20 percent of the samples at any sampling station, in any 30-day period, may exceed 1,000 organisms per 100 ml (10 per ml); and provided further that no single sample as described below is exceeded.*

*The most probable number of total coliform organisms in the upper 60 feet of the water column in no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 organisms per 100 ml (100 organisms per ml).*

---

[1] *The criteria were published in the Federal Register, Vol. 51, No. 45/Friday, March 7, 1986/8012-8016. The criteria are based on:*

*Cabelli, V. J. 1983. Health Effects Criteria for Marine Recreational Waters. U.S. Environmental Protection Agency, EPA 600/1-80-031, Cincinnati, Ohio.*

*Dufour, A. P. 1984. Health Effects Criteria for Fresh Recreational Waters. U.S. Environmental Protection Agency, EPA 600/1-84-004, Cincinnati, Ohio.*

[2] *The EPA criteria apply to water contact recreation only. The criteria provide for a level of protection based on the frequency of usage of a given water contact recreation area. The criteria may be employed in special studies within this Region to differentiate between pollution sources or to supplement the current coliform objectives for water contact recreation.*

(2) Waters Designated for Non-Contact Recreation (REC-2) Beneficial Use

### *Fecal Coliform Water Quality Objective for Non-contact Recreation*

*In waters designated for non-contact recreation (REC-2) and not designated for contact recreation (REC-1), the average fecal coliform concentrations for any 30-day period, shall not exceed 2,000 organisms per 100 ml nor shall more than 10 percent of samples collected during any 30-day period exceed 4,000 organisms per 100 ml.*

(3) Waters Where Shellfish May Be Harvested for Human Consumption (SHELL and COMM) Beneficial Use

### *Total Coliform Water Quality Objective for Shellfish Harvesting*

*In waters where shellfish harvesting for human consumption, commercial or sports purposes is designated (SHELL and COMM), the median total coliform concentration throughout the water column for any 30-day period shall not exceed 70 organisms per 100 ml nor shall more than 10 percent of the samples collected during any 30-day period exceed 230 organisms per 100 ml for a five-tube decimal dilution test or 330 organisms per 100 ml when a three-tube decimal dilution test is used.*

(4) San Diego Bay Waters Used for Whole Fish Handling

### *E. Coli Water Quality Objective for Whole Fish Handling for San Diego Bay*

*In San Diego Bay where bay waters are used for whole fish handling, the density of E. coli shall not exceed 7 organisms per ml in more than 20 percent of any 20 daily consecutive samples of bay water.*

(5) Total Maximum Daily Load (TMDL) Implementation Provisions

For the purposes of a TMDL, the following provisions may be used to implement bacteria water quality objectives:

The water quality objectives for fecal coliform bacteria for contact recreation may be implemented using a reference system and antidegradation approach or natural sources exclusion approach.

The water quality objectives for enterococci and/or *E. coli* in freshwater and/or saltwater may be implemented using a reference system and antidegradation approach or natural sources exclusion approach.

The water quality objectives for coliform organisms in bays and estuaries may be implemented using a reference system and antidegradation approach or natural sources exclusion approach.

The water quality objectives for fecal coliform bacteria for non-contact recreation may be implemented using a reference system and antidegradation approach or natural sources exclusion approach.

See Chapter 4 (Implementation) for a further discussion of this implementation provision.

## *BIOSTIMULATORY SUBSTANCES*

Excessive growth of algae and/or other aquatic plants can degrade water quality. Algal blooms sometimes occur naturally; however, they are often the result of waste discharges or nonpoint source pollutants. Algal blooms depress the dissolved oxygen content of water and can result in fish kills. Algal blooms can also lead to problems with taste, odors, color, and increased turbidity. Floating algal scum and algal mats are also an aesthetically unpleasant nuisance. This general condition is known as eutrophication.

### *Water Quality Objectives for Biostimulatory Substances*

*Inland surface waters, bays and estuaries and coastal lagoon waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growths cause nuisance or adversely affect beneficial uses.*

*Concentrations of nitrogen and phosphorus, by themselves or in combination with other nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth. Threshold total phosphorus (P) concentrations shall not exceed 0.05 milligrams per liter (mg/l) in any stream at the point where it enters any standing body of water, nor 0.025 mg/l in any standing body of water. A desired goal in order to prevent plant nuisance in streams and other flowing waters appears to be 0.1 mg/l total P. These values are not to be exceeded more than 10% of the time unless studies of the specific water body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board. Analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of N:P = 10:1 , on a weight to weight basis shall be used.*

*Inland surface waters shall not contain biostimulatory substances in concentrations in excess of the numerical objectives described in Table 3-2.*

Rainbow Creek is designated as an impaired water body for total nitrogen and total phosphorus pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads (TMDLs) have been adopted to address these impairments. See Chapter 2, *Beneficial Uses* Table 2-2. *Beneficial Uses of Inland Surface Waters*, Santa Margarita River Watershed, Rainbow Creek, Hydrologic Unit Basin Numbers 2.23 and 2.22, Footnote 3 and Chapter 7*, Total Maximum Daily Loads*.

Note - Certain exceptions to the above water quality objectives are described in Chapter 4 in the sections titled *Discharges to Coastal Lagoons from Pilot Water Reclamation Projects* and *Discharges to Inland Surface Waters*.

## *BORON*

Boron occurs as sodium borate (borax) or as calcium borate (colemanite) in mineral deposits and natural waters of southern California. Boron is not considered harmful in drinking waters in concentrations up to 30 mg/l. Boron is an essential element for the growth of plants but there is no evidence that it is required by animals. Naturally occurring concentrations of boron should have no effect on aquatic life. Concentrations of boron in irrigation waters in excess of 0.75 mg/l may be deleterious to sensitive plants such as citrus. The maximum safe concentration of boron for even the most tolerant plants is about 4.0 mg/l. The United States Environmental Protection Agency (USEPA) has established a water quality criterion for boron of 0.75 mg/l for long term-term irrigation on sensitive crops. This criterion is found in *Quality Criteria for Water, 1986 - the "Gold Book".* Additional information regarding boron concentrations in irrigation waters is presented in Table 3-1.

**Oranges**

### *Water Quality Objectives for Boron*

*Inland surface waters shall not contain boron in concentrations in excess of the numerical objectives described in Table 3-2.*

*Ground waters shall not contain boron in concentrations in excess of the numerical objectives described in Table 3-3.*

## Table 3-1. Guidelines for Interpretation of Water Quality for Irrigation[a]

| Potential Irrigation Problem | Units | Degree or Restriction on use | | |
|---|---|---|---|---|
| | | None | Slight to Moderate | Severe |
| **Salinity** (affects crop water availability) | | | | |
| Electrical Conductivity ($EC_W$[b]) | ds/m or mmho/cm | < 0.7 | 0.7 - 3.0 | > 3.0 |
| TDS | mg/l | < 450 | 450 – 2,000 | > 2,000 |
| **Permeability** (affects infiltration rate of water into soil. Evaluate using $EC_W$ and Sodium Adsorption Ratio (SAR) together) [c, d] | | | | |
| **SAR =** | | | **and $EC_W$ =** | |
| 0 - 3 | | > 0.7 | 0.7 - 0.2 | < 0.2 |
| 3 - 6 | | > 1.2 | 1.2 - 0.3 | < 0.3 |
| 6 - 12 | | > 1.9 | 1.9 - 0.5 | < 0.5 |
| 12 - 20 | | > 2.9 | 2.9 - 1.3 | < 1.3 |
| 20 - 40 | | > 5.0 | 5.0 - 2.9 | < 2.9 |
| **Specified ion toxicity** (affects sensitive crops) | | | | |
| Sodium (Na) [e,f] | | | | |
| surface irrigation | SAR | < 3 | 3 - 9 | > 9 |
| sprinkler irrigation | mg/l | < 70 | > 70 | ----- |
| Chloride (Cl) [e,f] | | | | |
| surface irrigation | mg/l | < 140 | 140 - 350 | > 350 |
| sprinkler irrigation | mg/l | < 100 | > 100 | ----- |
| Boron (B) | mg/l | < 0.7 | 0.7 - 3.0 | > 3.0 |
| **Miscellaneous effects** (affects susceptible crops) | | | | |
| Nitrogen (Total-N) [g] | mg/l | < 5 | 5 - 30 | > 30 |
| Bicarbonate ($HCO_3$) overhead sprinkler only) | mg/l | < 90 | 90 - 500 | > 500 |
| pH | normal range | | 6.5 - 8.4 | |
| Residual chlorine (overhead sprinkler only) | mg/l | < 1.0 | 1.0 - 5.0 | > 5.0 |

## Endnotes for Table 3-1

a. Interpretations are based on possible effects of constituents on crops and/or soils. Guidelines are flexible and should be modified when warranted by local experience or special conditions of crop, soil, and method of irrigation. Table 3-1 is based on Table 3-4 contained in "*Irrigation with Reclaimed Municipal Wastewater, A Guidance Manual,*" California State Water Resources Control Board, Report Number 84-1, July 1984.

b. $EC_w$ means electrical conductivity of the irrigation water, reported in mmho/cm or ds/m. TDS means total dissolved solids, reported in mg/l.

c. SAR means sodium adsorption ratio. SAR is sometimes reported as $R_{Na}$. At a given SAR, infiltration rate increases as salinity ($EC_w$) increases. Evaluate the potential permeability problem by SAR and $EC_w$ in combination.

$$SAR = \frac{Na}{\sqrt{\frac{(Ca + Mg)}{2}}}$$

Where *Na, Ca,* and *Mg* are in milliequivalents per liter.

d. For wastewaters, it is recommended that the SAR be adjusted to include a more correct estimate of calcium in the soil water following an irrigation. The adjusted sodium adsorption ratio (adj RNa) calculated by this product is to be substituted for the SAR value.

$$SAR = \frac{Na}{\sqrt{\frac{(Ca_x + Mg)}{2}}}$$

Where *Na, Ca,* and *Mg* are in milliequivalents per liter.

$Ca_x$ is a modified Ca value calculated using Table 3-2, contained in "*Irrigation with Reclaimed Municipal Wastewater, A Guidance Manual.*"

e. Most tree crops and woody ornamentals are sensitive to sodium and chloride; use the values shown. Most annual crops are not sensitive; use the salinity tolerance tables. For boron sensitivity, refer to boron tolerance tables.

f. With overhead sprinkler irrigation and low humidity (<30%), sodium or chloride greater than 70 or 100 mg/l, respectively, have resulted in excessive leaf absorption and crop damage to sensitive crops.

g. Total nitrogen should include nitrate-nitrogen, ammonia-nitrogen, and organic-nitrogen. Although forms of nitrogen in wastewater vary, the plant responds to the total nitrogen.

## Table 3-2. Water Quality Objectives

Concentrations not to be exceeded more than 10% of the time during any one year period.

| Inland Surface Waters | | | Hydrologic Unit Basin Number | Constituent (mg/L or as noted) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | TDS | Cl | $SO_4$ | %Na | N&P | Fe | Mn | MBAS | B | ODOR | Turb NTU | Color Units | F |
| **SAN JUAN HYDROLOGIC UNIT** | | | **901.00** | | | | | | | | | | | | | |
| Laguna | HA | | 1.10 | 1,000 | 400 | 500 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Mission Viejo | HA | | 1.20 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| San Clemente | HA | | 1.30 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| San Mateo Canyon | HA | | 1.40 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| San Onofre | HA | | 1.50 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| **SANTA MARGARITA HYDROLOGIC UNIT** | | | **902.00** | | | | | | | | | | | | | |
| Ysidora | HA | | 2.10 | 750 | 300 | 300 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Deluz | HA | | 2.20 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Deluz Creek | HSA | b | 2.21 | 750 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Gavilan | HSA | b | 2.22 | 750 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Murrieta | HA | | 2.30 | 750 | 300 | 300 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Auld | HA | | 2.40 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Pechanga | HA | | 2.50 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Wolf | HSA | b | 2.52 | 750 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Wilson | HA | | 2.60 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Cave Rocks | HA | | 2.70 | 750 | 300 | 300 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Aguanga | HA | | 2.80 | 750 | 300 | 300 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Oakgrove | HA | | 2.90 | 750 | 300 | 300 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |

HA - Hydrologic Area
HAS - Hydrologic Sub-Area (Lower case letters indicate endnotes following the table)

## Table 3-2. Water Quality Objectives (continued)

Concentrations not to be exceeded more than 10% of the time during any one year period.

| Inland Surface Waters | | Hydrologic Unit Basin Number | Constituent (mg/L or as noted) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TDS | Cl | $SO_4$ | %Na | N&P | Fe | Mn | MBAS | B | ODOR | Turb NTU | Color Units | F |
| **SAN LUIS REY HYDROLOGIC UNIT** | | **903.00** | | | | | | | | | | | | | |
| Lower San Luis | HA | 3.10 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Monserat | HA | 3.20 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Warner Valley | HA | 3.30 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| **CARLSBAD HYDROLOGIC UNIT** | | **904.00** | | | | | | | | | | | | | |
| Loma Alta | HA | 4.10 | - | - | - | - | - | - | - | - | - | none | 20 | 20 | 1.0 |
| Buena Vista Creek | HA | 4.20 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Agua Hedionda | HA | 4.30 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Encinas | HA | 4.40 | - | - | - | - | - | - | - | - | - | none | 20 | 20 | 1.0 |
| San Marcos | HA | 4.50 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Escondido Creek | HA | 4.60 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| **SAN DIEGUITO HYDROLOGIC UNIT** | | **905.00** | | | | | | | | | | | | | |
| Solana Beach | HA | 5.10 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Hodges | HA | 5.20 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| San Pasqual | HA | 5.30 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Santa Maria Valley | HA | 5.40 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Santa Ysabel | HA | 5.50 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |

HA - Hydrologic Area
HAS - Hydrologic Sub-Area (Lower case letters indicate endnotes following the table)

## Table 3-2. Water Quality Objectives (continued)

Concentrations not to be exceeded more than 10% of the time during any one year period.

| Inland Surface Waters | | Hydrologic Unit Basin Number | Constituent (mg/L or as noted) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TDS | Cl | $SO_4$ | %Na | N&P | Fe | Mn | MBAS | B | ODOR | Turb NTU | Color Units | F |
| **PENASQUITOS HYDROLOGIC UNIT** | | **906.00** | | | | | | | | | | | | | |
| Miramar Reservoir | HA | 6.10 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Poway | HA | 6.20 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Scripps | HA | 6.30 | - | - | - | - | a | - | - | - | - | none | 20 | 20 | - |
| Miramar | HA | 6.40 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Tecolote | HA | 6.50 | - | - | - | - | a | - | - | - | - | none | 20 | 20 | - |
| **SAN DIEGO HYDROLOGIC UNIT** | | **907.00** | | | | | | | | | | | | | |
| Lower San Diego | HA | 7.10 | 1,000 | 400 | 500 | 60 | a | 0.3 | 0.05 | 0.5 | 1.0 | none | 20 | 20 | - |
| Mission San Diego | HSA | 7.11 | 1,500 | 400 | 500 | 60 | a | 1.0 | 1.00 | 0.5 | 1.0 | none | 20 | 20 | - |
| Santee | HSA c, | 7.12 | 1,000 | 400 | 500 | 60 | a | 1.0 | 1.00 | 0.5 | 1.0 | none | 20 | 20 | - |
| Santee | HSA d | 7.12 | 1,500 | 400 | 500 | 60 | a | 1.0 | 1.00 | 0.5 | 1.0 | none | 20 | 20 | - |
| San Vicente | HA | 7.20 | 300 | 50 | 65 | 60 | a | 0.3 | 0.05 | 0.5 | 1.0 | none | 20 | 20 | 1.0 |
| El Capitan | HA | 7.30 | 300 | 50 | 65 | 60 | a | 0.3 | 0.05 | 0.5 | 1.0 | none | 20 | 20 | 1.0 |
| Boulder Creek | HA | 7.40 | 300 | 50 | 65 | 60 | a | 0.3 | 0.05 | 0.5 | 1.0 | none | 20 | 20 | 1.0 |
| **PUEBLO SAN DIEGO HYDROLOGIC UNIT** | | **908.00** | | | | | | | | | | | | | |
| Point Loma | HA | 8.10 | - | - | - | - | - | - | - | - | - | none | 20 | 20 | - |
| San Diego Mesa | HA | 8.20 | - | - | - | - | - | - | - | - | - | none | 20 | 20 | - |
| National City | HA | 8.30 | - | - | - | - | - | - | - | - | - | none | 20 | 20 | - |

HA - Hydrologic Area
HAS - Hydrologic Sub-Area (Lower case letters indicate endnotes following the table)

## Table 3-2. Water Quality Objectives (continued)

Concentrations not to be exceeded more than 10% of the time during any one year period.

| Inland Surface Waters | | | Hydrologic Unit Basin Number | Constituent (mg/L or as noted) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | TDS | Cl | $SO_4$ | %Na | N&P | Fe | Mn | MBAS | B | ODOR | Turb NTU | Color Units | F |
| **SWEETWATER HYDROLOGIC UNIT** | | | **909.00** | | | | | | | | | | | | | |
| Lower Sweetwater | HA | | 9.10 | 1,500 | 500 | 500 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | - |
| Middle Sweetwater | HA | | 9.20 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Upper Sweetwater | HA | | 9.30 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| **OTAY HYDROLOGIC UNIT** | | | **910.00** | | | | | | | | | | | | | |
| Coronado | HA | | 10.10 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Otay Valley | HA | | 10.20 | 1,000 | 400 | 500 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| Dulzura | HA | | 10.30 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 0.75 | none | 20 | 20 | 1.0 |
| **TIJUANA HYDROLOGIC UNIT** | | | **911.00** | | | | | | | | | | | | | |
| Tijuana Valley | HA | | 11.10 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| San Ysidro | HSA | | 11.11 | 2,100 | - | - | - | a | - | - | - | - | none | 20 | 20 | - |
| Potrero | HA | | 11.20 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 1.0 | none | 20 | 20 | 1.0 |
| Barrett Lake | HA | | 11.30 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 1.0 | none | 20 | 20 | 1.0 |
| Monument | HA | | 11.40 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 1.0 | none | 20 | 20 | 1.0 |
| Morena | HA | | 11.50 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 1.0 | none | 20 | 20 | 1.0 |
| Cottonwood | HA | | 11.60 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 1.0 | none | 20 | 20 | 1.0 |
| Cameron | HA | | 11.70 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 1.0 | none | 20 | 20 | 1.0 |
| Campo | HA | | 11.80 | 500 | 250 | 250 | 60 | a | 0.3 | 0.05 | 0.5 | 1.0 | none | 20 | 20 | 1.0 |

HA - Hydrologic Area
HAS - Hydrologic Sub-Area (Lower case letters indicate endnotes following the table)

## Endnotes for Table 3-2

a. Concentrations of nitrogen and phosphorus, by themselves or in combination with other nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth. Threshold total Phosphorus (P) concentrations shall not exceed 0.05 mg/l in any stream at the point where it enters any standing body of water, nor 0.025 mg/l in any standing body of water. A desired goal in order to prevent plant nuisances in streams and other flowing waters appears to be 0.1 mg/l total P. These values are not to be exceeded more than 10% of the time unless studies of the specific body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board. Analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of N: P=10:1 shall be used. Note - Certain exceptions to the above water quality objectives are described in Chapter 4 in the sections titled Discharges to Coastal Lagoons from Pilot Water Reclamation Projects and Discharges to Surface Waters.

b. These objectives apply to the lower portion of Murrieta Creek in the Wolf HSA (2.52) and the Santa Margarita River from it's beginning at the confluence of Murrieta and Temecula Creeks, through the Gavilan HSA (2.22) and DeLuz HSA (2.21), to where it enters the Upper Ysidora HSA (2.13).

c. Sycamore Canyon Subarea, a portion of the Santee Hydrologic Subarea, includes the watersheds of the following north-south trending canyons: Oak Creek, Spring Canyon, Little Sycamore Canyon, Quail Canyon, and Sycamore Canyon. The Sycamore Canyon subarea extends eastward from the Mission San Diego HSA to the confluence of the San Diego River and Forester Creek, immediately south of the Santee Lakes.

d. These objectives apply to the Lower Sycamore Canyon portion of the Santee Hydrologic Subarea described as all of the Sycamore Canyon watershed except that part which drains north of the boundary between sections 28 and 33, Township 14 South, Range 1 West.

## Table 3-3. Water Quality Objectives

Concentrations not to be exceeded more than 10% of the time during any one year period.

| Ground Water | | Hydrologic Basin Unit Number | Constituent (mg/L or as noted) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TDS | Cl | $SO_4$ | %Na | $NO_3$ | Fe | Mn | MBAS | B | ODOR | Turb NTU | Color Units | F |
| **SAN JUAN HYDROLOGIC UNIT** | | **901.00** | | | | | | | | | | | | | |
| Laguna | HA | 1.10 | | | | | | | | | | | | | |
| San Joaquin Hills | HSA | 1.11 | 1,200 | 400 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Laguna Beach | HSA | 1.12 | 1,200 | 400 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Aliso | HSA | 1.13 | 1,200 | 400 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Dana Point | HSA | 1.14 | 1,200 | 400 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Mission Viejo | HA | 1.20 | | | | | | | | | | | | | |
| Oso | HSA | 1.21 | 1,200 | 400 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Upper Trabuco | HSA | 1.22 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Middle Trabuco | HSA | 1.23 | 750 | 375 | 375 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Gobernadora | HSA | 1.24 | 1,200 | 400 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Upper San Juan | HSA | 1.25 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Middle San Juan | HSA | 1.26 | 750 | 375 | 375 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Lower San Juan | HSA | 1.27 | 1,200 | 400 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Ortega | HSA | 1.28 | 1,100 | 375 | 450 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| San Clemente | HA | 1.30 | | | | | | | | | | | | | |
| Prima Deshecha | HSA | 1.31 | 1,200 | 400 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Segunda Deshecha | HSA | 1.32 | 1,200 | 400 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| San Mateo Canyon | HA [a] | 1.40 | 500 [b] | 250 | 250 [b] | 60 | 45 [b] | 0.3 [b] | 0.05 [b] | 0.5 | 0.75 [b] | none | 5 | 15 | 1.0 |
| San Onofre | HA [a] | 1.50 | 500 [b] | 250 | 250 [b] | 60 | 45 [b] | 0.3 [b] | 0.05 [b] | 0.5 | 0.75 [b] | none | 5 | 15 | 1.0 |

HA - Hydrologic Area
HAS - Hydrologic Sub-Area (Lower case letters indicate endnotes following the table)

## Table 3-3. Water Quality Objectives (continued)

Concentrations not to be exceeded more than 10% of the time during any one year period.

| Ground Water | | | Hydrologic Basin Unit Number | Constituent (mg/L or as noted) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | TDS | Cl | SO4 | %Na | NO3 | Fe | Mn | MBAS | B | ODOR | Turb NTU | Color Units | F |
| **SANTA MARGARITA HYDROLOGIC UNIT** | | | **902.00** | | | | | | | | | | | | | |
| Ysidora | HA | a | 2.10 | 750 [c] | 300 [c] | 300 [c] | 60 | 45 [c] | 0.3 [c] | 0.05 [c] | 0.5 | 0.75 [c] | none | 5 | 15 | 1.0 |
| Deluz | HA | | 2.20 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Deluz Creek | HSA | m | 2.21 | 750 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Gavilan | HSA | m | 2.22 | 750 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Murrieta | HA | | 2.30 | 750 [c] | 300 [c] | 300 [c] | 60 | 45 [c] | 0.3 [c] | 0.05 [c] | 0.5 | 0.75 [c] | none | 5 | 15 | 1.0 |
| Domenigoni | HSA | | 2.35 | 2,000 | - | - | - | | - | - | - | - | - | - | - | - |
| Auld | HA | | 2.40 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Pechanga | HA | | 2.50 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Pauba | HSA | o | 2.51 | 750 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Wolf | HSA | p | 2.52 | 750 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Wilson | HA | | 2.60 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Cave Rocks | HA | | 2.70 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Aguanga | HA | | 2.80 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Oakgrove | HA | | 2.90 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| **SAN LUIS REY HYDROLOGIC UNIT** | | | **903.00** | | | | | | | | | | | | | |
| Lower San Luis | HA | | 3.10 | 800 [r] | 300 | 400 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Mission | HSA | a | 3.11 | 1,500 [cd] | 500 [cd] | 500 [cd] | 60 | 45 [cd] | 0.85 [cd] | 0.15 [cd] | 0.5 [d] | 0.75 [cd] | none | 5 | 15 [d] | 1.0 [d] |
| Bonsall | HSA | | 3.12 | 1,500 [cd] | 500 [cd] | 500 [cd] | 60 | 45 [cd] | 0.85 [cd] | 0.15 [cd] | 0.5 [d] | 0.75 [cd] | none | 5 | 15 [d] | 1.0 [d] |
| Moosa | HSA | | 3.13 | 1,200 [r] | 300 | 400 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Valley Center | HSA | | 3.14 | 1,100 [r] | 300 | 400 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |

HA - Hydrologic Area
HAS - Hydrologic Sub-Area (Lower case letters indicate endnotes following the table)

## Table 3-3. Water Quality Objectives (continued)

Concentrations not to be exceeded more than 10% of the time during any one year period.

| Ground Water | | Hydrologic Basin Unit Number | Constituent (mg/L or as noted) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TDS | Cl | $SO_4$ | %Na | $NO_3$ | Fe | Mn | MBAS | B | ODOR | Turb NTU | Color Units | F |
| **SAN LUIS REY HYDROLOGIC UNIT (continued)** | | **903.00** | | | | | | | | | | | | | |
| Monserate | HA | 3.20 | | | | | | | | | | | | | |
| Pala | HSA | 3.21 | 900 [c] | 300 [c] | 500 [c] | 60 | 45 [c] | 0.3 [c] | 0.05 [c] | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Pauma | HSA | 3.22 | 800 [c] | 300 [c] | 400 [c] | 60 | 45 [c] | 0.3 [c] | 0.05 [c] | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| La Jolla Amago | HSA | 3.23 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Warner Valley | HA | 3.30 | 500 | 250 | 250 | 60 | 5 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| **CARLSBAD HYDROLOGIC UNIT** | | **904.00** | | | | | | | | | | | | | |
| Loma Alta | HA | 4.10 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Buena Vista Creek | HA | 4.20 | | | | | | | | | | | | | |
| El Salto | HSA [a] | 4.21 | 3,500 | 800 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 2.0 | none | 5 | 15 | 1.0 |
| Vista | HSA [a] | 4.22 | 1,000 [b] | 400 [b] | 500 [b] | 60 | 45 [b] | 0.3 [b] | 0.05 [b] | 0.5 | 0.75 [b] | none | 5 | 15 | 1.0 |
| Agua Hedionda | HA [a] | 4.30 | 1,200 | 500 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Los Monos | HSA [a j] | 4.31 | 3,500 | 800 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 2.0 | none | 5 | 15 | 1.0 |
| Encinas | HA [a] | 4.40 | 3,500 [b] | 800 [b] | 500 [b] | 60 | 45 [b] | 0.3 [b] | 0.05 [b] | 0.5 | 2.0 [b] | none | 5 | 15 | 1.0 |
| San Marcos | HA [a e] | 4.50 | 1,000 | 400 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Batiquitos | HSA [a e k] | 4.51 | 3,500 | 800 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 2.0 | none | 5 | 15 | 1.0 |
| Escondido Creek | HA [a] | 4.60 | 750 | 300 | 300 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| San Elijo | HSA [a] | 4.61 | 2,800 | 700 | 600 | 60 | 45 | 0.3 | 0.05 | 0.5 | 1.0 | none | 5 | 15 | 1.0 |
| Escondido | HSA | 4.62 | 1,000 | 300 | 400 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |

HA - Hydrologic Area
HAS - Hydrologic Sub-Area (Lower case letters indicate endnotes following the table)

## Table 3-3. Water Quality Objectives (continued)

Concentrations not to be exceeded more than 10% of the time during any one year period.

| Ground Water | | | Hydrologic Basin Unit Number | Constituent (mg/L or as noted) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | TDS | Cl | $SO_4$ | %Na | $NO_3$ | Fe | Mn | MBAS | B | ODOR | Turb NTU | Color Units | F |
| **SAN DIEGUITO HYDROLOGIC UNIT** | | | **905.00** | | | | | | | | | | | | | |
| Solana Beach | HA | a | 5.10 | 1,500 b | 500 b | 500 b | 60 | 45 b | 0.85 b | 0.15 b | 0.5 | 0.75 b | none | 5 | 15 | 1.0 |
| Hodges | HA | | 5.20 | 1,000 b | 400 b | 500 b | 60 | 45 b | 0.3 b | 0.05 b | 0.5 | 0.75 b | none | 5 | 15 | 1.0 |
| San Pasqual | HA | | 5.30 | 1,000 b | 400 b | 500 b | 60 | 45 b | 0.3 b | 0.05 b | 0.5 | 0.75 b | none | 5 | 15 | 1.0 |
| Santa Maria Valley | HA | | 5.40 | 1,000 | 400 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Santa Ysabel | HA | | 5.50 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| **PENASQUITOS HYDROLOGIC UNIT** | | | **906.00** | | | | | | | | | | | | | |
| Miramar Reservoir | HA | a f | 6.10 | 1,200 | 500 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Poway | HA | | 6.20 | 750 q | 300 | 300 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Scripps | HA | | 6.30 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Miramar | HA | g | 6.40 | 750 | 300 | 300 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Tecolote | HA | | 6.50 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **SAN DIEGO HYDROLOGIC UNIT** | | | **907.00** | | | | | | | | | | | | | |
| Lower San Diego | HA | | 7.10 | | | | | | | | | | | | | |
| Mission San Diego | HSA | a | 7.11 | 3,000 b | 800 b | 600 b | 60 | 45 b | 0.3 b | 0.05 b | 0.5 | 2.0 b | none | 5 | 15 | 1.0 |
| Santee | HSA | | 7.12 | 1,000 b | 400 b | 500 b | 60 | 45 b | 0.3 b | 0.05 b | 0.5 | 0.75 b | none | 5 | 15 | 1.0 |
| Santee (alluvial aquifer for lower Sycamore Canyon) | HSA | n | 7.12 | 2,000 b | 800 b | 600 b | 60 | 45 b | 0.3 b | 0.05 b | 0.5 | 2.0 b | none | 5 | 15 | 1.0 |
| El Cajon | HSA | | 7.13 | 1,200 b | 250 b | 500 b | 60 | 45 b | 0.3 b | 0.05 b | 0.5 | 0.75 b | none | 5 | 15 | 1.0 |
| Coches | HSA | | 7.14 | 600 b | 250 b | 250 b | 60 | 45 b | 0.3 b | 0.05 b | 0.5 | 0.75 b | none | 5 | 15 | 1.0 |
| El Monte | HSA | | 7.15 | 600 b | 250 b | 250 b | 60 | 45 b | 0.3 b | 0.05 b | 0.5 | 0.75 b | none | 5 | 15 | 1.0 |

HA - Hydrologic Area
HAS - Hydrologic Sub-Area (Lower case letters indicate endnotes following the table)

## Table 3-3. Water Quality Objectives (continued)

Concentrations not to be exceeded more than 10% of the time during any one year period.

| Ground Water | | Hydrologic Basin Unit Number | Constituent (mg/L or as noted) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TDS | Cl | $SO_4$ | %Na | $NO_3$ | Fe | Mn | MBAS | B | ODOR | Turb NTU | Color Units | F |
| **SAN DIEGO HYDROLOGIC UNIT (continued)** | | **907.00** | | | | | | | | | | | | | |
| San Vicente | HA | 7.20 | 600 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| El Capitan | HA | 7.30 | 1,000 | 400 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Conejos Creek | HSA | 7.31 | 350 | 60 | 60 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Boulder Creek | HA | 7.40 | 350 | 60 | 60 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| **PUEBLO SAN DIEGO HYDROLOGIC UNIT** | | **908.0** | | | | | | | | | | | | | |
| Point Loma | HA [i] | 8.10 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| San Diego Mesa | HA [i] | 8.20 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| National City | HA [i] | 8.30 | 750 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| **SWEETWATER HYDROLOGIC UNIT** | | **909.00** | | | | | | | | | | | | | |
| Lower Sweetwater | HA | 9.10 | | | | | | | | | | | | | |
| Telegraph | HSA | 9.11 | 3,000 [b] | 750 [b] | 500 [b] | 60 | 45 [b] | 0.3 [b] | 0.05 [b] | 0.5 | 2.0 [b] | none | 5 | 15 | 1.0 |
| La Nacion | HSA | 9.12 | 1,500 [b] | 500 [b] | 500 [b] | 60 | 45 [b] | 0.3 [b] | 0.15 [b] | 0.5 | 0.75 [b] | none | 5 | 15 | 1.0 |
| Middle Sweetwater | HA | 9.20 | 1,000 | 400 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| Upper Sweetwater | HA | 9.30 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |
| **OTAY HYDROLOGIC UNIT** | | **910.00** | | | | | | | | | | | | | |
| Coronado | HA | 10.10 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Otay Valley | HA | 10.20 | 1,500 [b] | 500 [b] | 500 [b] | 60 | 45 [b] | 0.3 [b] | 0.05 [b] | 0.5 | 0.75 [b] | none | 5 | 15 | 1.0 |
| Otay Valley | HA [l] | 10.20 | - | - | - | - | - | - | - | - | - | none | - | - | - |
| Dulzura | HA | 10.30 | 1,000 | 400 | 500 | 60 | 45 | 0.3 | 0.05 | 0.5 | 0.75 | none | 5 | 15 | 1.0 |

HA - Hydrologic Area
HAS - Hydrologic Sub-Area (Lower case letters indicate endnotes following the table)

## Table 3-3. Water Quality Objectives (continued)

Concentrations not to be exceeded more than 10% of the time during any one year period.

| Ground Water | | Hydrologic Basin Unit Number | Constituent (mg/L or as noted) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TDS | Cl | $SO_4$ | %Na | $NO_3$ | Fe | Mn | MBAS | B | ODOR | Turb NTU | Color Units | F |
| **TIJUANA HYDROLOGIC UNIT** | | **911.00** | | | | | | | | | | | | | |
| Tijuana Valley | HA [h] | 11.10 | 2,500 [b] | 550 [b] | 900 [b] | 70 | - | - | - | - | 2.0 [b] | none | - | - | - |
| Potrero | HA | 11.20 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 1.0 | none | 5 | 15 | 1.0 |
| Barrett Lake | HA | 11.30 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 1.0 | none | 5 | 15 | 1.0 |
| Monument | HA | 11.40 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 1.0 | none | 5 | 15 | 1.0 |
| Morena | HA | 11.50 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 1.0 | none | 5 | 15 | 1.0 |
| Cottonwood | HA | 11.60 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 1.0 | none | 5 | 15 | 1.0 |
| Cameron | HA | 11.70 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 1.0 | none | 5 | 15 | 1.0 |
| Campo | HA | 11.80 | 500 | 250 | 250 | 60 | 45 | 0.3 | 0.05 | 0.5 | 1.0 | none | 5 | 15 | 1.0 |

HA - Hydrologic Area
HAS - Hydrologic Sub-Area (Lower case letters indicate endnotes following the table)

## Endnotes for Table 3-3

a. The water quality objectives do not apply westerly of the easterly boundary of Interstate Highway 5. The objectives for the remainder of the Hydrologic Area (Subarea) are as shown.

b. Detailed salt balance studies are recommended for this area to determine limiting mineral concentration levels for discharge. On the basis on existing data, the tabulated objectives would probably be maintained in most areas. Upon completion of the salt balance studies, significant water quality objective revisions may be necessary. In the interim period of time, projects of ground water recharge with water quality inferior to the tabulated numerical values may be permitted following individual review and approval by the Regional Board if such projects do not degrade existing ground water quality to the aquifers affected by the recharge.

c. The recommended plan would allow for measurable degradation of ground water in this basin to permit continued agricultural land use. Point sources, however, would be controlled to achieve effluent quality corresponding to the tabulated numerical values. In future years demineralization may be used to treat ground water to the desired quality prior to use.

## Endnotes for Table 3-3 (continued)

d. A portion of the Upper Mission Basin is being considered as an underground potable water storage reservoir for treated imported water. The area is located north of Highway 76 an the boundary of hydrologic subareas 3.11 and 3.12. If this program is adopted, local objectives approaching the quality of the imported water would be set and rigorously pursued.

e. The water quality objectives do not apply to hydrologic subareas 4.51 and 4.52 between Highway 78 and El Camino Real and to all lands which drain to Moonlight Creek, Cottonwood Creek and Encinitas Creek. The objectives for the remainder of the Hydrologic Area are as shown.

f. The water quality objectives do not apply to all lands which drain to Los Penasquitos Canyon from 1.5 miles west of Interstate Highway 15. The objectives for the remainder of the Hydrologic Area are as shown.

g. The water quality objectives do not apply west of Interstate Highway 15. The objectives for the remainder of the Hydrologic Area are as shown.

h. The water quality objectives do not apply west of Hollister Street. The objectives for the remainder of the Hydrologic Area are as shown.

i. No significant amount of ground water in this unit.

j. The water quality objectives apply to the portion of Subarea 4.31 bounded on the west by the easterly boundary of the Interstate 5 right-of-way and on the east by the easterly boundary of El Camino Real.

k. The water quality objectives apply to the portion of Subarea 4.51 bounded on the south by the north shore of Batiquitos Lagoon, on the west by the easterly boundary of the Interstate 5 right-of-way and on the east by the easterly boundary of El Camino Real.

l. The water quality objectives apply to the portion of the Otay HA 10.20 limited to lands within and tributary to Salt Creek on the east and Poggi Canyon on the west and including the several smaller drainage courses between these tributaries of the Otay River.

m. These objectives apply to the alluvial ground water beneath the Santa Margarita River from the confluence of Murrieta and Temecula Creeks through the Gavilan and DeLuz HSAs to a depth of 100 feet and a lateral distance equal to the area of the floodplain covered by a 10 year flood event. These objectives do not apply to ground water in any of the basins beneath DeLuz, Sandia, and Rainbow Creeks and other unnamed creeks, which are tributaries of the Santa Margarita River.

n. These objectives apply for only the alluvial aquifer in the Lower Sycamore Canyon portion of the Santee Hydrologic Subarea described as all of the Sycamore Canyon watershed except that part which drains north of the boundary between sections 28 and 33, Township 14 South, Range 1 West.

## Endnotes for Table 3-3 (continued)

o. These objectives apply to ground waters within 250 feet of the surface for the most downstream 4,200 acres of the Pauba HSA (2.51) which drain directly to the most downstream 2.7 mile segment of Temecula Creek. Excluded from this area are all lands upgradient from a point 0.5 miles east of the intersection of Butterfield Stage Road and Highway 79.

p. These objectives apply to ground waters within 250 feet of the surface for the most downstream 2,800 acres of the Wolf HSA (2.52) including those portions of the HSA which drain directly to the most downstream 1.5 mile segment of Pechanga Creek. Excluded from this area are all lands of HSA 2.52 which are upgradient of the intersection of Pala Road and Via Eduardo.

q. These objectives apply to ground waters of the Poway HSA (6.2) that lie east of the San Diego County Water Authority's (SDCWA) First Aqueduct. Ground water quality objectives west of the SDCWA First Aqueduct are 1,000 mg/l.

r. The total dissolved solids (TDS) objective for the alluvial aquifer in the Moosa Hydrologic Subarea (903.13) is 1,200 mg/l. The TDS objective for the alluvial aquifer in the Valley Center Hydrologic Subarea (903.14) is 1,100 mg/l.

## *CHLORIDES*

Most waters contain chlorides because they are present in many rock types and are very soluble in water. Chlorides may be of natural mineral origin or derived from (a) seawater intrusion of ground water supplies, (b) salts spread on fields for agricultural purposes, (c) human or animal sewage or (d) industrial wastes. Chlorides may impart a salty taste to drinking water in concentrations between 100-700 mg/l. The secondary drinking water standard for chlorides is 500 mg/l. Elevated chloride concentrations in waters used for industrial process and supply can significantly increase the corrosion rate of steel and aluminum. High chloride concentrations can be toxic to plant life. A safe concentration of chloride for irrigation water is considered to be in the range of 100-140 mg/l. Irrigation with water containing 140-350 mg/l of chloride may cause slight to moderate plant injury. Additional information regarding chloride concentrations in irrigation waters is presented in Table 3-1.

### *Water Quality Objectives for Chlorides*

*Inland surface waters shall not contain chlorides in concentrations in excess of the numerical objectives described in Table 3-2.*

*Ground waters shall not contain chlorides in concentrations in excess of the numerical objectives described in Table 3-3.*

## *COLOR*

Color in water may arise naturally, such as from minerals, plant matter, or algae, or may be caused by industrial pollutants. Color is primarily an aesthetic consideration, although it can discolor clothes and food. The secondary drinking water standard for color is 15 color units.

### *Water Quality Objectives for Color*

*Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses.*

*The natural color of fish, shellfish or other resources in inland surface waters, coastal lagoon or bay and estuary shall not be impaired.*

*Inland surface waters shall not contain color in concentrations in excess of the numerical objectives described in Table 3-2.*

*Ground waters shall not contain color in concentrations in excess of the numerical objectives described in Table 3-3.*

## *DISSOLVED OXYGEN*

Adequate dissolved oxygen levels are vital for aquatic life. Depression of dissolved oxygen levels can lead to fish kills and odors resulting from anaerobic decomposition. Dissolved oxygen content in water is a function of water temperature and salinity.

### *Water Quality Objective for Dissolved Oxygen*

*Dissolved oxygen levels shall not be less than 5.0 mg/l in inland surface waters with designated MAR or WARM beneficial uses or less than 6.0 mg/l in waters with designated COLD beneficial uses. The annual mean dissolved oxygen concentration shall not be less than 7 mg/l more than 10% of the time.*

## *FLOATING MATERIAL*

Floating material is an aesthetic nuisance as well as a substrate for algae and insect vectors.

### *Water Quality Objective for Floating Material*

*Waters shall not contain floating material, including solids, liquids, foams, and scum in concentrations which cause nuisance or adversely affect beneficial uses.*

## *FLUORIDE*

Fluoride does not naturally occur in high concentrations in surface waters, but may occur in detrimental concentrations in ground waters. Fluoride, in sufficient quantities, can adversely affect waters used as industrial process or supply in food, beverages, and pharmaceutical industries. The presence of optimal concentrations of fluoride in drinking water supplies can reduce dental decay, especially among children.

### *Water Quality Objectives for Fluoride*

*Inland surface waters shall not contain fluoride in concentrations in excess of the numerical objectives described in Table 3-2.*

*Ground waters shall not contain fluoride in concentrations in excess of the numerical objectives described in Table 3-3.*

## *HYDROGEN ION CONCENTRATION (pH)*

The hydrogen ion concentration of water is called "pH". The acidity or alkalinity of water is measured by the pH factor. The pH scale ranges from 1 to 14, with 1 to 6.9 being acid, 7.1 to 14 being alkaline, and 7.0 being neutral. Ranges (pH) of 6.5 to 9.0 are considered harmless. A change of one point on this scale represents a ten-fold increase in acidity or alkalinity. Many pollutants can alter the pH, raising or lowering it excessively. In some cases even small changes in pH can harm aquatic biota. The pH changes can alter the chemical form of certain constituents, thereby increasing their bioavailability and toxicity. For example, a decrease in pH can result in an increase in dissolved metal concentrations. Ammonia, which is a major component of sewage discharges, can be completely safe at pH 7.0 and extremely toxic to fish at pH 8.5 for the same total ammonia concentration.

### *Water Quality Objectives for pH*

*Changes in normal ambient pH levels shall not exceed 0.2 units in waters with designated marine (MAR), or estuarine (EST), or saline (SAL) beneficial uses. Changes in normal ambient pH levels shall not exceed 0.5 units in fresh waters with designated cold freshwater habitat (COLD) or warm freshwater habitat (WARM) beneficial uses.*

*In bays and estuaries the pH shall not be depressed below 7.0 nor raised above 9.0.*

*In inland surface waters the pH shall not be depressed below 6.5 nor raised above 8.5.*

## *INORGANIC CHEMICALS - PRIMARY STANDARDS*

### *Water Quality Objective for Domestic or Municipal Supply*

*Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of inorganic chemicals in excess of the maximum contaminant levels set forth in California Code of Regulations, Title 22, Table 64431-A of section 64431 (Inorganic Chemicals) which is incorporated by reference into this plan. This incorporation by reference is prospective including future changes to the incorporated provisions as the changes take effect. (See Table 3-4).*

**Table 3-4. Maximum Contaminant Levels for Inorganic Chemicals specified in Table 64431-A of section 64431 of Title 22 of the California Code of Regulations as amended June 12, 2003.**

| Chemical | Maximum Contaminant Level, mg/l |
|---|---|
| Aluminum | 1. |
| Antimony | 0.006 |
| Arsenic | 0.05 |
| Asbestos | 7 MFL* |
| Barium | 1. |
| Beryllium | 0.004 |
| Cadmium | 0.005 |
| Chromium | 0.05 |
| Cyanide | 0.15 |
| Fluoride | 2.0 |
| Mercury | 0.002 |
| Nickel | 0.1 |
| Nitrate (as $NO_3$) | 45. |
| Nitrate + Nitrite (sum as nitrogen) | 10. |
| Nitrite (as nitrogen) | 1. |
| Selenium | 0.05 |
| Thallium | 0.002 |

*MFL = million fibers per liter, MCL for fibers exceeding 10 um in length.

## *IRON*

Iron may be present in water due to natural origin, corrosion of metallic iron and its alloys by water in the presence of oxygen, and industrial waste discharges containing iron. Iron is undesirable in domestic water supplies because it causes unpleasant tastes, deposits on food during cooking, stains and discolors laundry and plumbing fixtures. The secondary drinking water standard for iron is 0.3 mg/l.

### *Water Quality Objectives for Iron*

*Inland surface waters shall not contain iron in concentrations in excess of the numerical objectives described in Table 3-2.*

*Ground waters shall not contain iron in concentrations in excess of the numerical objectives described in Table 3-3.*

## *MANGANESE*

Manganese is undesirable in domestic water supplies because it causes unpleasant tastes, deposits on food during cooking, stains and discolors laundry and plumbing fixtures, and fosters the growth of some microorganisms in reservoirs, filters, and distribution systems. The secondary drinking water standard for manganese is 0.05 mg/l.

### *Water Quality Objectives for Manganese*

*Inland surface waters shall not contain manganese in concentrations in excess of the numerical objectives described in Table 3-2.*

*Ground waters shall not contain manganese in concentrations in excess of the numerical objectives described in Table 3-3.*

## *METHYLENE BLUE - ACTIVATED SUBSTANCES (MBAS)*

The methylene blue-activated substances (MBAS) test measures the presence of anionic surfactant (commercial detergent) in water. Positive test results can be used to indicate the presence of domestic wastewater. The secondary drinking water standard for MBAS is 0.5 mg/l.

### *Water Quality Objectives for MBAS*

*Inland surface waters shall not contain MBAS in concentrations in excess of the numerical objectives described in Table 3-2.*

*Ground waters shall not contain MBAS in concentrations in excess of the numerical objectives described in Table 3-3.*

## *NITRATE*

High nitrate ($NO_3$) concentrations in domestic water supplies can be toxic to human life. Infants are particularly susceptible and may develop methemoglobinemia (blue baby syndrome). The primary drinking water standard for nitrate as $NO_3$ is 45 mg/l.

### *Water Quality Objectives for Nitrate*

*Inland surface waters shall not contain nitrate (as $NO_3$) in concentrations in excess of the numerical objectives described in Table 3-2.*

*Ground waters shall not contain nitrate (as $NO_3$) in concentrations in excess of the numerical objectives described in Table 3-3.*

## *OIL AND GREASE*

Oil and grease can be present in water as a result of the discharge of treated wastes and the accidental or intentional dumping of wastes into sinks and storm drains. Oils and related materials have a high surface tension and are not soluble in water, therefore forming a film on the water's surface. This film can result in nuisance conditions because of offensive odors and visual impacts. Oil and grease can coat birds and aquatic organisms, adversely affecting respiration and/or thermoregulation.

### *Water Quality Objective for Oils, Grease, Waxes or other Materials*

*Waters shall not contain oils, greases, waxes, or other materials in concentrations which result in a visible film or coating on the surface of the water or on objects in the water, or which cause nuisance or which otherwise adversely affect beneficial uses.*

## *ORGANIC CHEMICALS - PRIMARY STANDARDS*

### *Water Quality Objectives:*

[illegible]

**Table 3-5. Maximum Contaminant Levels for Organic Chemicals specified in Table 64444-A of section 64444 of Title 22 of the California Code of Regulations as amended June 12, 2003.**

| Chemical | Maximum Contaminant Level, mg/l |
|---|---|
| **(a) Volatile Organic Chemicals (VOCs)** | |
| Benzene | 0.001 |
| Carbon Tetrachloride | 0.0005 |
| 1,2-Dichlorobenzene | 0.6 |
| 1,4-Dichlorobenzene | 0.005 |
| 1,1-Dichloroethane | 0.005 |
| 1,2-Dichloroethane | 0.0005 |
| 1,1-Dichloroethylne | 0.006 |
| cis-1,2-Dichloroethylene | 0.006 |
| trans-1,2-Dichloroethylene | 0.01 |
| Dichloromethane | 0.005 |
| 1,2-Dichloropropane | 0.005 |
| 1,3-Dichloropropene | 0.0005 |
| Ethylbenzene | 0.3 |
| Methyl-*tert*-butyl ether | 0.013 |
| Monochlorobenzene | 0.07 |
| Styrene | 0.1 |
| 1,1,2,2-Tetrachloroethane | 0.001 |
| Tetrachloroethylene | 0.005 |
| Toluene | 0.15 |
| 1,2,4-Trichlorobenzene | 0.005 |
| 1,1,1-Trichloroethane | 0.200 |
| 1,1,2-Trichloroethane | 0.005 |
| Trichloroethylene | 0.005 |
| Trichlorofluoromethane | 0.15 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 1.2 |
| Vinyl Chloride | 0.0005 |
| Xylenes | 1.750* |
| **(b) Non-Volatile Synthetic Organic Chemicals (SOCs)** | |
| Alachlor | 0.002 |
| Atrazine | 0.001 |
| Bentazon | 0.018 |
| Benzo(a)pyrene | 0.0002 |
| Carbofuran | 0.018 |
| Chlordane | 0.0001 |
| 2,4-D | 0.07 |
| Dalapon | 0.2 |
| Dibromochloropropane | 0.0002 |
| Di(2-ethylhexyl)adipate | 0.4 |
| Di(2-ethylhexyl)phthalate | 0.004 |
| Dinoseb | 0.007 |
| Diquat | 0.02 |
| Endothall | 0.1 |
| Endrin | 0.002 |
| Ethylene Dibromide | 0.00005 |
| Glyphosate | 0.7 |
| Heptachlor | 0.00001 |
| Heptachlor Epoxide | 0.00001 |
| Hexachlorobenezene | 0.001 |
| Hexachlorocyclopentadiene | 0.05 |
| Lindane | 0.0002 |
| Methoxychlor | 0.03 |
| Molinate | 0.02 |
| Oxamyl | 0.05 |
| Pentachlorophenol | 0.001 |
| Picloram | 0.5 |
| Polychlorinated Biphenyls | 0.0005 |
| Simazine | 0.004 |
| Thiobencarb | 0.07 |
| Toxaphene | 0.003 |
| 2,3,7,8-TCDD (Dioxin) | $3 \times 10^{-8}$ |
| 2,3,5-TP (Silvex) | 0.05 |

* MCL is for either a single isomer or the sum of the isomers.

## *PERCENT SODIUM AND ADJUSTED SODIUM ADSORPTION RATIO*

Excess concentrations of sodium in irrigation water reduce soil permeability to water and air. The deterioration of sodium in irrigation water is cumulative and is accelerated by poor drainage.

Table 3-1 shows concentration guidelines for sodium, boron, chloride and other chemical constituents present in irrigation waters.

The specific water quality objective for sodium in the Basin Plan is expressed as percent sodium. Percent sodium is calculated as follows:

$$\%\, Na = \frac{Na}{Na + Ca + Mg + K} \text{ x } 100\ \%$$

where sodium (*Na*), Calcium (*Ca*), Magnesium (*Mg*), and Potassium (*K*) are expressed in milliequivalent per liter (me/l).

The percent sodium objective was developed for the protection of agricultural uses from the potential hazard due to sodium in irrigation waters. The value of 60% sodium is based upon *Water Quality Criteria*, by McKee and Wolf, 1963.

McKee and Wolf note that because of all the variables involved, the classification of waters for irrigation use must be somewhat arbitrary and the limits set cannot be too rigid. The three general classifications of irrigation waters are:

| CLASS | %SODIUM | DESCRIPTION |
|---|---|---|
| **I** | <30 - 60% | Excellent to good, or suitable for most plants under most conditions. |
| **II** | 30 - 75% | Good to injurious, harmful to some plants under conditions of soil, climate and practices. |
| **III** | 70 - 75% | Injurious to unsatisfactory, unsuitable under most conditions. |

Since the publication of the percent sodium criteria, technical research has resulted in the development of more applicable criteria for addressing the potential sodium hazard in irrigation water.

The sodium adsorption ratio (*SAR*) and adjusted sodium adsorption ratios (*Adj. SAR*) are measures of the potential hazard in soils due to sodium. *SAR* and *Adj. SAR* are similar to percent sodium in that their calculated values provide an indication of a soil's potential for permeability and potential aeration problems. However, by taking into consideration the soil's sodicity and the exchange phases between *Ca*, *Na* and *Mg*, the *SAR* and *Adj. SAR* predict potential sodium build up in soils. The *Adj. SAR* calculation further takes into account the effects of carbonate and bicarbonate ion concentrations of a soil. *Adj. SAR* is the most common method for determining sodium hazard in irrigation water at the present time.

The calculation for *SAR* is as follows:

$$SAR = \frac{Na}{\sqrt{\frac{(Ca + Mg)}{2}}}$$

where *Na*, *Ca* and *Mg* are in me/l. The calculation for *Adj. SAR* is as follows:

$$Adj.\, SAR = \frac{Na}{\sqrt{\frac{(Ca_x + Mg)}{2}}}$$

where *Na* and *Mg* are in me/l.

$Ca_x$ is a modified *Ca* value, calculated using the Suarez table (Table 3-3, contained in *Irrigation with Reclaimed Municipal Wastewater, A Guidance Manual,* California State Water Resources Control Board, Report Number 84-1, July 1984). $Ca_x$ takes into account salinity ($EC_w$), the $HCO_3/CO_3$ ratio (me/l) and the estimated partial pressure of $CO_2$ in the top few millimeters of the soil ($P_{CO_2} = 0.0007$ atmospheres).

### *Water Quality Objectives for Sodium*

*Inland surface waters shall not contain percent sodium in excess of the numerical objectives described in Table 3-2.*

*Ground waters shall not contain percent sodium in excess of the numerical objectives described in Table 3-3.*

*In some cases, adjusted sodium adsorption ratio may be a better indicator of the potential sodium hazard in irrigation water than percent sodium. The Regional Board Executive Officer may authorize the use of adjusted sodium absorption ratio instead of percent sodium to indicate the potential sodium hazard. In such cases, the adjusted sodium adsorption ratio shall not exceed the slight to moderate range of values referenced in Table 3-1 "Guidelines for Interpretation of Water Quality for Irrigation".*

## *PESTICIDES*

Pesticides can enter surface and ground waters directly through industrial process discharges, agricultural discharge, spillage and illegal dumping. Pesticides can also enter surface and ground waters indirectly by drifting away from areas where pesticides are being sprayed, through surface runoff from treated fields, and by leaching or return flows from irrigation. Pesticides can concentrate in plant or animal tissues and many are considered to be carcinogenic to humans. Although many pesticides are designed to deteriorate rapidly when exposed to sunlight and air, they may persist for months or years in water.

California Code of Regulations, Title 22, Table 64444-A of section 64444 (Organic Chemicals) establishes maximum contaminant levels for pesticides in drinking water. (See water quality objective for Organic Chemicals).

### *Water Quality Objectives for Pesticides*

*No individual pesticide or combination of pesticides shall be present in the water column, sediments or biota at concentration(s) that adversely affect beneficial uses. Pesticides shall not be present at levels which will bioaccumulate in aquatic organisms to levels which are harmful to human health, wildlife or aquatic organisms.*

*Water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the maximum contaminant levels specified in California Code of Regulations, Title 22, Table 64444-A of section 64444 (Organic Chemicals) which is incorporated by reference into this plan. This incorporation by reference is prospective including future changes to the incorporated provisions as the changes take effect. (See Table 3-5).*

The Shelter Island Yacht Basin portion of San Diego Bay is designated as an impaired water body for dissolved copper pursuant to Clean Water Act section 303(d). A Total Maximum Daily Load (TMDL) has been adopted to address this impairment. See Chapters 2, Table 2-3, Beneficial Uses of Coastal Waters, San Diego Bay, footnote 3 and Chapter 7, Total Maximum Daily Loads.

## *PHENOLIC COMPOUNDS*

Phenolic compounds are in widespread use as industrial and agricultural chemical intermediates for the preparation of other chemicals. These organic compounds are byproducts of petroleum refining, tanning, and textile, dye, and resin manufacturing. Low concentrations cause taste and odor problems in water, higher concentrations can kill aquatic life and humans. Phenol is occasionally referred to as "carbolic acid".

### *Water Quality Objectives for Phenolic Compounds*

*Water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of phenolics in excess of 1.0 ug/l.*

Should there be any conflict between this limit and those described under the Organic Chemicals objective the more stringent standards shall apply at all times.

## *RADIOACTIVITY*

### *Water Quality Objective for Radioactivity*

*Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life.*

### *Water Quality Objective for Radionuclides*

*Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of radionuclides in excess of the levels specified in section 64441 of Title 22 of the California Code of Regulations (Natural Radioactivity) which is incorporated by reference into this plan. This incorporation by reference is prospective including future changes to the incorporated provisions as the changes take effect.*

## *SECONDARY DRINKING WATER STANDARDS*

### *Water Quality Objective for Domestic or Municipal Supply Water*

*Water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels specified in Table 64449-A of section 64449 of Title 22 of the California Code of Regulations (Secondary Maximum Contaminant Levels, Consumer Acceptance Limits) which is incorporated by reference into this plan. This incorporation by reference is prospective including future changes to the incorporated provisions as the changes take effect. (See Table 3-6).*

**Table 3-6. Secondary Maximum Contaminant Levels for Consumer Acceptance Limits specified in Table 64449-A of section 64449 of Title 22 of the California Code of Regulations as amended January 7, 1999.**

| Constituent | Maximum Contaminant Levels |
|---|---|
| Aluminum | 0.2 mg/l |
| Color | 15 units |
| Copper | 1.0 mg/l |
| Corrosivity | Noncorrosive |
| Foaming Agents (MBAS) | 0.5 mg/l |
| Iron | 0.3 mg/l |
| Manganese | 0.05 mg/l |
| Methyl-*tert*-butyl ether (MTBE) | 0.005 mg/l |
| Odor Threshold | 3 units |
| Silver | 0.1 mg/l |
| Thiobencarb | 0.001 mg/l |
| Turbidity | 5 units |
| Zinc | 5.0 mg/l |

## *SEDIMENT*

Suspended sediment in surface waters can cause harm to aquatic organisms by abrasion of surface membranes, interference with respiration, and sensory perception in aquatic fauna. Suspended sediment can reduce photosynthesis in and survival of aquatic flora by limiting the transmittance of light.

### *Water Quality Objective for Sediment*

*The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.*

## *SUSPENDED AND SETTLEABLE SOLIDS*

Suspended and settleable solids are deleterious to benthic organisms and may cause the formation of anaerobic conditions. They can clog fish gills and interfere with respiration in aquatic fauna. They also screen out light, hindering photosynthesis and normal aquatic plant growth and development.

### *Water Quality Objective for Suspended and Settleable Solids*

*Waters shall not contain suspended and settleable solids in concentrations of solids that cause nuisance or adversely affect beneficial uses.*

## *SULFATE*

The most important sources of sulfate in native waters of the San Diego Region are the gypsiferous deposits and sulfide minerals associated with crystalline rocks. Excessive sulfate concentrations in drinking water can cause laxative effects to new users of the water supply. The recommended secondary drinking water standard for sulfate is 250 mg/l with a upper limit of 500 mg/l.

### *Water Quality Objectives for Sulfate*

*Inland surface waters shall not contain sulfate in concentrations in excess of the numerical objectives described in Table 3-2.*

*Ground waters shall not contain sulfate in concentrations in excess of the numerical objectives described in Table 3-3.*

## *TASTES AND ODORS*

Undesirable tastes and odors in water may be a nuisance and may indicate the presence of pollutants. The secondary drinking water standard for odor (threshold) is 3 odor units.

### *Water Quality Objectives for Taste and Odor*

*Waters shall not contain taste or odor producing substances at concentrations which cause a nuisance or adversely affect beneficial uses.*

*The natural taste and odor of fish, shellfish or other Regional water resources used for human consumption shall not be impaired in inland surface waters and bays and estuaries.*

*Inland surface waters shall not contain odors in concentrations in excess of the numerical objectives described in Table 3-2.*

*Ground waters shall not contain odors in concentrations in excess of the numerical objectives described in Table 3-3.*

## *TEMPERATURE*

Waste discharges can cause temperature changes in the receiving waters which adversely affect the aquatic biota. Discharges most likely to cause these temperature effects are cooling water discharges from power plants.

### *Water Quality Objectives for Temperature*

*The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses.*

*At no time or place shall the temperature of any COLD water be increased more than 5°F above the natural receiving water temperature.*

## *TOTAL DISSOLVED SOLIDS*

Dissolved solids in natural waters may consist of carbonates, bicarbonates, chlorides, sulfates, phosphates, nitrates, magnesium, sodium, iron, manganese and other substances. The recommended secondary drinking water standard for total dissolved solids is 500 mg/l with a upper limit of 1000 mg/l due to taste considerations. High total dissolved solids concentrations in irrigation waters can be deleterious to plants directly, or indirectly through adverse effects on soil permeability. A classification of irrigation waters with respect to total dissolved solids concentration is described in Table 3-1.

### *Water Quality Objectives for Total Dissolved Solids*

*Inland surface waters shall not contain total dissolved solids in concentrations in excess of the numerical objectives described in Table 3-2.*

*Ground waters shall not contain total dissolved solids in concentrations in excess of the numerical objectives described in Table 3-3.*

## *TOXICITY*

Toxicity is the adverse response of organisms to chemicals or physical agents.

### *Water Quality Objectives for Toxicity*

*All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the Regional Board.*

*The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge or, when necessary, for other control water that is consistent with requirements specified in USEPA, State Water Resources Control Board or other protocol authorized by the Regional Board. As a minimum, compliance with this objective as stated in the previous sentence shall be evaluated with a 96-hour acute bioassay.*

*In addition, effluent limits based upon acute bioassays of effluents will be prescribed where appropriate, additional numerical receiving water objectives for specific toxicants will be established as sufficient data become available, and source control of toxic substances will be encouraged.*

The Shelter Island Yacht Basin portion of San Diego Bay is designated as an impaired water body for dissolved copper pursuant to Clean Water Act section 303(d). A Total Maximum Daily Load (TMDL) has been adopted to address this impairment. See Chapters 2, Table 2-3, Beneficial Uses of Coastal Waters, San Diego Bay, footnote 3 and Chapter 7, Total Maximum Daily Loads.

Chollas Creek is designated as a water quality limited segment for dissolved copper, lead, and zinc pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads have been adopted to address these impairments. See Chapters 2, Table 2-2, Beneficial Uses of Inland Surface Waters, Footnote 3 and Chapter 7, Total Maximum Daily Loads.

## *TOXIC POLLUTANTS*

The USEPA promulgated a final rule prescribing water quality criteria for toxic pollutants in inland surface waters, enclosed bays, and estuaries in California on May 18, 2000 (The California Toxics Rule or “CTR;” [40 CFR 131.38]). CTR criteria constitute applicable water quality criteria in California. In addition to the CTR, certain criteria for toxic pollutants in the National Toxics Rule [40 CFR 131.36] constitute applicable water quality criteria in California as well.

The Shelter Island Yacht Basin portion of San Diego Bay is designated as an impaired water body for dissolved copper pursuant to Clean Water Act section 303(d). A Total Maximum Daily Load (TMDL) has been adopted to address this impairment. See Chapters 2, Table 2-3, Beneficial Uses of Coastal Waters, San Diego Bay, footnote 3 and Chapter 7, Total Maximum Daily Loads.

Chollas Creek is designated as a water quality limited segment for dissolved copper, lead, and zinc pursuant to Clean Water Act section 303(d). Total Maximum Daily Loads have been adopted to address these impairments. See Chapters 2, Table 2-2, Beneficial Uses of Inland Surface Waters, Footnote 3 and Chapter 7, Total Maximum Daily Loads.

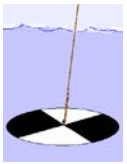
## *TRIHALOMETHANES*

Chlorine is the dominant chemical agent used to disinfect treated water and wastewater. Trihalomethanes are formed when chlorine reacts with aquatic organic material found in water and wastewater. Trihalomethanes are a group of light weight chlorinated hydrocarbons which are suspected carcinogens. The USEPA has established a maximum contaminant level for total trihalomethanes of 0.1 mg/l in Title 40, Code of Federal Regulations, Part 141.12, (40 CFR 141.12), EPA National Primary Drinking Water Regulations (§141.12 revised at 57 FR 31838, July 17, 1992). Total trihalomethanes are the sum of the concentrations of bromodichloromethane, dibromochloromethane, tribromomethane (bromoform) and trichloromethane (chloroform). The federal regulations on trihalomethanes are incorporated by reference into CCR, Title 22, Chapter 15, Articles 4.5, sections 64439.

### *Water Quality Objective for Trihalomethanes*

*Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of trihalomethanes in excess of the criteria set forth in California Code of Regulations, Title 22, section 64439 which is incorporated by reference into this plan. This incorporation by reference is prospective including future changes to section 64439 as the changes take effect.*

## *TURBIDITY*



The turbidity of water is attributable to suspended and colloidal matter, the effect of which is to disturb clearness and diminish the penetration of light. High turbidity levels can adversely affect the use of water for drinking. By interfering with the penetration of light, turbidity can adversely affect photosynthesis which aquatic organisms depend upon for survival. High concentrations of particulate matter that produce turbidity can be directly lethal to aquatic life.

### *Water Quality Objectives for Turbidity*

*Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.*

*Inland surface waters shall not contain turbidity in excess of the numerical objectives described in Table 3-2.*

*Ground waters shall not contain turbidity in excess of the numerical objectives described in Table 3-3.*

*The transparency of waters in lagoons and estuaries shall not be less than 50% of the depth at locations where measurement is made by means of a standard Secchi disk, except where lesser transparency is caused by rainfall runoff from undisturbed natural areas and dredging projects conducted in conformance with waste discharge requirements of the Regional Board. With these two exceptions, increases in turbidity attributable to controllable water quality factors shall not exceed the following limits:*

| Natural Turbidity | Maximum Increase |
|---|---|
| 0-50 NTU | 20% over natural turbidity level |
| 50-100 NTU | 10 NTU |
| Greater than 100 NTU | 10% over natural turbidity level |

*In addition, within San Diego Bay, the transparency of bay waters, insofar as it may be influenced by any controllable factor, either directly or through induced conditions, shall not be less than 8 feet in more than 20 percent of the readings in any zone, as measured by a standard Secchi disk. Wherever the water is less than 10 feet deep, the Secchi disk reading shall not be less than 80 percent of the depth in more than 20 percent of the readings in any zone.*

## *WATER QUALITY OBJECTIVES OF INLAND SURFACE WATERS*

Specific numerical water quality objectives for inland surface waters are presented by hydrologic area and subarea and watershed in Table 3-2.

The water quality objectives for inland surface water designations described in this table correspond with the beneficial use designations previously described in Chapter 2. Water Quality Objective variations occur in some of the hydrologic areas, subareas and stream reaches. Water quality variations from the objectives may also occur within a given hydrologic area subarea or stream reach. Such local variations will be evaluated when waste discharge requirements, NPDES permits, Cleanup and Abatement Orders, and Cease and Desist Orders are being developed for a given discharger.

The omission of mineral objectives for some areas corresponds to the lack of beneficial uses (AGR, MUN, IND) requiring such objectives.

## *WATER QUALITY OBJECTIVES OF GROUND WATERS*

Specific numerical water quality objectives for ground waters are presented by hydrologic area and subarea in Table 3-3.

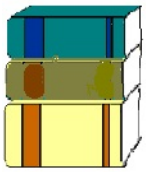
A footnote for some ground water basins is listed to show that some water quality objectives are considered tentative until detailed salt balance studies are conducted.

In 1978 the Regional Board, in Resolution No. 78-6, deleted water quality objectives and beneficial uses for certain portions of basins 1.10, 1.20, 1.30, 1.40, 1.50, 2.10, 3.10, 4.10, 4.20, 4.30, 4.40, 4.50, 4.60, 5.10, 6.10, 7.10, and 11.10. Table footnotes are included to identify these basins. The Regional Board elected to delete beneficial uses in portions of these basins, where the uses of ground water were marginal or nonexistent, to promote wastewater reclamation by sewage treatment plants. The deletion of beneficial uses in these areas was based upon a determination that the loss of ground water supplies was outweighed by the long-term increase in wastewater reclamation made possible by allowing reclaimed water discharges which are high in total dissolved solids. It is the Regional Board's intent to protect the water quality in these basins under the terms of State Board Resolution No. 68-16.

For purposes of intrusion barrier formation or ground water recharge, the water quality objective qualifications footnoted in Table 3-3 allow, with approval of the Regional Board, discharge of reclaimed water in areas of equal or poorer ground water quality. Relatively poor quality water could also be used for intrusion barrier formation along the coast.

## *WATER QUALITY CRITERIA*

The literature contains many different water quality criteria designed to protect specific beneficial uses of water. A summary of the specific numerical water quality criteria considered by the Regional Board for designation as water quality objectives is described in Appendix C. The water quality criteria described in Appendix C are not enforceable water quality objectives. The purpose of presenting the information summarized in these tables is to allow interested persons to compare available water quality criteria to the specific water quality objectives designated by the Regional Board described earlier in this Chapter.



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# *REPRINT OF RESOLUTION NO. 68-16*

## STATE WATER RESOURCES CONTROL BOARD
## RESOLUTION NO. 68-16

## STATEMENT OF POLICY WITH RESPECT TO MAINTAINING HIGH QUALITY OF WATERS IN CALIFORNIA

WHEREAS the California Legislature has declared that it is the policy of the State that the granting of permits and licenses for unappropriated water and the disposal of wastes into the waters of the State shall be so regulated as to achieve highest water quality consistent with maximum benefit to the people of the State and shall be controlled so as to promote the peace, health, safety and welfare of the people of the State; and

WHEREAS water quality control policies have been and are being adopted for waters of the State; and

WHEREAS the quality of some waters of the State is higher than that established by the adopted policies and it is the intent and purpose of this Board that such higher quality shall be maintained to the maximum extent possible consistent with the declaration of the Legislature;

NOW, THEREFORE, BE IT RESOLVED:

1. Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.

2. Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

3. In implementing this policy, the Secretary of the Interior will be kept advised and will be provided with such information as he will need to discharge his responsibilities under the Federal Water Pollution Control Act.

BE IT FURTHER RESOLVED that a copy of this resolution be forwarded to the Secretary of the Interior as part of California's water quality control policy submission.

CERTIFICATION

The undersigned, Executive Officer of the State Water Resources Control Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on October 24, 1968.

Dated: October 28, 1968
Original signed by
Kerry W. Mulligan, Executive Officer
State Water Resources Control Board

# CHAPTER 4

# IMPLEMENTATION

# FIGURES



# TABLES

# PHOTOS

# 4. IMPLEMENTATION

# *INTRODUCTION*

**Elegant tern**

The purpose of this chapter is to describe actions that are necessary to protect the beneficial uses described in Chapter 2 and achieve the water quality objectives specified in Chapter 3. One of the elements in a Water Quality Control Plan as defined in California Water Code (Water Code) section 13050(j) is the implementation program for achieving water quality objectives. This chapter describes the Regional Board's implementation program.

Water Code section 13242 requires that the implementation program have the following elements:

- A description of the actions which are necessary to achieve water quality objectives. (This may include recommendations for appropriate action directed to any entity, public or private);
- A time schedule for the actions to be taken; and
- A description of surveillance to be undertaken to determine compliance with the water quality objectives.

The Regional Board's mission is to achieve and maintain water quality objectives that are necessary to protect all beneficial uses of the waters in the Region. Depending on the nature of the water quality problem, several different strategies, as outlined below, are employed to accomplish this mission.

This Chapter is divided into four sections, Control of Point Source Pollutants, Control of Nonpoint Source Pollutants, Remediation of Pollution, and Other Programs as shown below. Areas of overlap between the point and nonpoint source categories are described later in this Chapter.

### ★ *Control of Point Source Pollutants*

Pollutants from point sources are discharged to waterbodies from discrete conveyance systems (e.g., pipes and channels) in controlled flows at well-defined locations. Examples of point sources include waste discharges from municipal and industrial wastewater treatment facilities.

Programs that protect water quality from point source pollutants are primarily regulatory in nature. Waste discharge permitting programs such as California's Waste Discharge Requirements (WDRs) and the federal National Pollutant Discharge Elimination System (NPDES) are examples of key regulatory point source control programs. Significant progress toward the control of point source pollutants has been made through these permitting programs.

### ★ *Control of Nonpoint Source Pollutants*

Pollutants from nonpoint sources are diffuse, both in terms of their origin and mode of transport to surface and ground waters. Unlike pollutants from point sources, nonpoint source pollutants often enter waters in sudden episodic surges and large quantities. This occurs as rain, irrigation, and other types of runoff mobilizes and transports contaminants into surface and ground waters. Nationwide, pollutants from nonpoint sources represent the greatest threat to water quality. Examples of nonpoint sources in southern California include lawn and garden chemicals transported by storm water or water from irrigation sprinklers; household and automotive care products dumped or drained on streets and into storm drains; fertilizers and pesticides washed from agricultural fields by rain or irrigation waters; sediment that erodes from construction sites; and various pollutants deposited by atmospheric deposition.

Nonpoint source pollutants are more difficult to control than point source pollutants, and require different control strategies. For example, traditional permitting programs are neither a practical nor effective means of water quality protection from lawn and garden chemicals. Accordingly, the Regional Board integrates non-regulatory programs with

regulatory programs in order to control pollutants from nonpoint sources. Through public outreach (an example of a non-regulatory program), residents are informed of threats to the quality of the waters in their communities and are encouraged to voluntarily implement Best Management Practices (BMPs) that eliminate or reduce nonpoint sources of pollution. Emphasis is placed on pollution prevention though careful management of resources, as opposed to cleaning up the waterbody after the fact. Local governments play a key role in the control of nonpoint sources by adopting and enforcing ordinances and by supplementing the Regional Board's public outreach efforts. This flexible approach can be an effective means of controlling pollutants from many nonpoint sources.

### ★ *Remediation of Pollution*

The Regional Board oversees remediation of both ground and surface waters through the investigation of polluted waters and enforcement of corrective actions needed to restore water quality. These activities are managed through the following programs, namely: Underground Storage Tanks; Site Cleanup Program (which includes above ground petroleum storage tanks); NPDES Program; Land Disposal and Waste Discharge Requirements (WDR) Regulatory Programs; and U.S. Department of Defense (DOD) and Department of Energy (DOE) Sites.

These programs are designed to return polluted sites to productive use by identifying and eliminating the sources of pollutants, preventing the spread of pollution, and restoring water quality.

### ★ *Other Programs*

The Regional Board is involved with the investigation, assessment and protection of water quality through other programs which are discussed in this Basin Plan. These include California's Clean Water Act section 303(d) process and California's water quality assessment program.

# *CONTROL OF POINT SOURCE POLLUTANTS*

## *DEFINITION OF POINT SOURCE*

Waste loads from point sources are those that are generally associated with pollutant discharges from an identifiable location to waters of the state. A point source is any discernable, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. Point source wastes can be generated by residential, commercial, industrial, agricultural, certain recreational and solid waste disposal activities and/or practices. Other wastes are considered under the category of nonpoint source waste loads and are discussed in appropriate sections of this chapter. Many of the water quality problems in the San Diego region have been attributable to point source discharges.

The Regional Board regulates most point source discharges of waste through the issuance of waste discharge requirements and NPDES permits. Certain surface water discharges of waste described in 40 Code of Federal Regulations (CFR) 122.3 do not require NPDES permits. The need to obtain waste discharge requirements for certain categories of waste discharges to land may be waived by the Regional Board where such waiver is not against the public interest. The waste discharge requirements and the NPDES permits establish terms and conditions such as effluent limitations to ensure that point source waste discharges comply with applicable water quality objectives and ensure protection of beneficial uses.

## *EFFLUENT LIMITATIONS*

Effluent limitations for discharge of treated point source wastes are developed for individual point sources and are included in the waste discharge requirements or NPDES permits. The effluent limitations are placed on the quality and quantity of the waste discharge or effluent and can be either numeric and/or narrative limitations. Effluent limitations are based on applicable water quality objectives, United States Environmental Protection Agency (USEPA) effluent guidelines and standards, beneficial uses for the area of effluent disposal, and applicable state and federal regulations and policies.

## *POINT SOURCE CONTROL CATEGORIES*

Waste discharge requirements for waste discharges to land are issued for reclaimed water discharges, sanitary landfills, subsurface waste disposal by septic tank systems, dredge spoil disposal projects, sewage treatment plants and a variety of other activities which can affect ground water quality. NPDES permits are issued for waste discharges to surface waters from facilities such as power plants, sewage treatment plants, shipyards, boatyards, dewatering operations, ground water cleanups and a variety of other activities which can affect surface water quality.

Table 4-1(a) contains a summary listing of facility types regulated under NPDES permits as of July 1994. Table 4-1(b) contains a summary listing of facility types regulated under waste discharge requirements as of November 2014.

Table 4-2 contains examples of pollutants found in industrial and municipal point source discharges to surface and ground waters.

## *REGIONAL BOARD PERMITTING PROGRAMS*

The Regional Board's primary means of protecting the Region's water resources is through the issuance of WDRs, Water Reclamation Requirements (WRRs), and Master Reclamation Permits (MRPs) for each individual discharger. The WDRs impose conditions which protect water quality, implement the Water Quality Control Plan, and when the discharge is to waters of the United States, meet the requirements of the Clean Water Act. The WDRs impose limits on the quality and quantity of waste discharges and specify conditions to be maintained in the receiving waters. WRRs impose conditions for all reuses of treated wastewater. In addition, because the USEPA has delegated responsibility to the State and regional boards for implementation of the federal NPDES program, WDRs for discharges to surface waters also serve as NPDES permits. These programs are the legal means to regulate controllable discharges. It is illegal to discharge wastes into any waters of the State and to reuse treated wastewater without obtaining appropriate WDRs, WRRs, or NPDES permits.

Any person who discharges or proposes to discharge wastes to waters in the Region (other than into a community sanitary sewage system) must describe the quantity and nature of the proposed discharge in a report of waste discharge (RWD) or an NPDES permit application. The RWD must contain information required by the Regional Board. The filing of the RWD with the Regional Board is mandatory unless waived by the Board on the grounds that the waiver is not against the public interest. Such waivers are conditional and can be revoked by the Regional Board at any time. Upon review of the RWD or NPDES permit application and all other pertinent information (including comments received at a public hearing), the Regional Board will hold a public hearing to consider issuance of WDRs containing appropriate measures and limitations to protect public health and water quality. The basic elements of WDRs or NPDES permits include:

**Table 4-1(a). National Pollutant Discharge Elimination System Permitted Facilities In the San Diego Region (as of July 28, 1994)[1]**

| Facility Type | Number Regulated |
|---|---|
| Above Ground Tanks | 2 |
| Boatyards | 7 |
| Ground Water Cleanup | 7 |
| Ground Water Dewatering | 9 |
| Industrial | 8 |
| Military | 13 |
| Power Plants | 7 |
| Sewage Treatment Plants | 24 |
| Shipyards | 4 |
| Storm Water (Construction) | 542 |
| Storm Water (Industrial) | 619 |
| Storm Water (Municipal) | 34 |
| Water Softener / Brine Treatment | 6 |
| **Total** | **1283** |

**Table 4-1(b). Waste Discharge Requirement Permitted Facilities in the San Diego Region (as of November 2014)[2]**

| Facility Type | Number Regulated |
|---|---|
| Campgrounds | 59 |
| Dairy | 4 |
| Dredging | 5 |
| Ground Water Cleanup | 3 |
| Industrial | 4 |
| Landfills | 51 |
| Miscellaneous | 5 |
| Nursery | 1 |
| Private Sewage Treatment Plants | 7 |
| Sand and Gravel | 14 |
| Sewage Treatment Plants | 42 |
| Sludge Treatment | 1 |
| Water Reclamation Requirements | 22 |
| Water Softener / Brine Treatment | 1 |
| Winery | 3 |
| **Total** | **227** |

[1] The list of regulated facilities under NPDES permits is updated periodically and is available at the Regional Board office.
[2] The list of regulated facilities under WDR permits is updated periodically and is available at the Regional Board office.

**Table 4-2. Examples of Industrial and Municipal Point Source Discharges to Surface and Ground Waters.**

| Discrete Discharge | Examples of Pollutants | Examples of Affected Waterbodies |
|---|---|---|
| Municipal wastewater treatment plants | Biological oxygen demand (BOD), chemical oxygen demand (COD), TDS, chlorides, sulfates, nutrients, ammonia ($NH_{3)}$, residual chlorine, metals, organic chemicals | Most inland waters, Pacific Ocean, various ground water basins |
| Power generation plants | Temperature, chemical additives, minerals | San Diego Bay, Pacific Ocean |
| Waste water discharge from remediation or construction de-watering projects | TDS; chlorides; sulfates; volatile organic chemicals (VOCs); BTEX (e.g., benzene, toulene, ethylbenzene, xylene) and other petroleum hydrocarbons | Surface waters region-wide |
| Underground Storage Tanks | TDS; chlorides; sulfates; VOC's; BTEX and other petroleum hydrocarbons | Ground waters region-wide |
| Shipyard, boatyard wastes | Oil and grease, metals [lead (Pb), chromium (Cr), copper (Cu) and zinc (Zn)], suspended solids, settleable solids, tributyltin (TBT), temperature, chemical additives | San Diego Bay, Mission Bay, Dana Point, Oceanside Harbor |
| Sand and gravel | TDS, turbidity, sedimentation | San Diego River, Otay River, San Luis Rey River, Temecula Creek, San Dieguito River, Aliso Creek, San Clemente Canyon Creek, San Vicente Creek, Trabuco Canyon Creek, El Toro Creek, Carroll Canyon Creek or their tributaries. |
| Dairies | BOD, TDS, bacteria, nutrients | Various ground water basins |
| Dredging | Suspended solids, turbidity | San Diego Bay, Mission Bay, Oceanside Harbor, Dana Point |
| Landfills | Metals; TDS; chlorides; sulfates; VOC's; BTEX and other petroleum hydrocarbons | Various ground water basins |
| Recreational Vehicle (RV) Campgrounds | Formaldehyde, phenols, zinc, chlorides, aluminum sulfates | Various ground water basins |

- Effluent limitations on the quality and quantity of the waste discharge. The effluent standards or limitations are designed to implement water quality control plans, protect beneficial uses, and prevent nuisance;

- Standard terms and conditions and discharge prohibitions to ensure compliance with applicable provisions of state and federal law; and

- A monitoring and reporting program requiring the discharger to collect and analyze samples and submit monitoring reports to the Regional Board on a prescribed schedule.

Water Code section 13263 provides that in prescribing WDRs the Regional Board need not authorize the utilization of the waste assimilation capacities of the receiving waters. No discharge of waste into waters of the state creates a vested right to continue the discharge. All discharges of waste into waters of the state are privileges, not rights.

Waste discharges are categorized according to their threat to water quality and operational complexity (Table 4-3). Additionally, discharges to surface waters are categorized as major or minor discharges. Filing and annual fees are based on these categories. WDRs or WRRs do not have an expiration date but are reviewed periodically on a schedule based on the level of threat to water quality. NPDES permits are adopted for a five-year period.

Most WDRs and NPDES permits establish conditions tailored to specific discharges. In some cases, discharges can be regulated under general WDRs or NPDES permits (General Permits) which simplify the permit process for certain types of discharges. These General Permits are issued administratively to the discharger after a completed Notice of Intent or appropriate application has been filed and, if necessary, the Regional Board Executive Officer has determined that the discharger meets the conditions specified in the General Permit. The Regional Board plans to increase the use of General Permits for regulating similar categories of waste discharges in the future. The use of General Permits is a step towards permit streamlining and the reduction of permitting delays. The Regional Board will use the following principles in issuing or reviewing General Permits:

- The General Permit will have a streamlined process for obtaining coverage with adequate protective measures to assure compliance.

- The General Permit will focus on constituents of environmental concern for which there is a reasonable likelihood the constituent is, or may be, present in the discharge.

- The General Permits should be flexible to the extent practicable, and should allow for different testing, monitoring, and reporting requirements recognizing various significance levels of discharges.

- Duration, volume, and dilution of discharge should be considered in determining the significance of a discharge.

## *WASTE DISCHARGE REQUIREMENTS*

WDRs are permits for waste discharges to land which could primarily affect ground water quality and beneficial uses. All waste discharges, whether to land or water, are subject to Water Code section 13263. Furthermore unless exempt, discharges to land (e.g., landfills) are also subject to requirements of California Code of Regulations (CCR) Title 27 and Title 23, Chapter 15. Examples of such waste discharges include:

- Sewage treatment plants with discharges to land;

- On-site wastewater treatment systems, or “OWTS” (septic tanks and advanced treatment systems);

- Class III (nonhazardous waste) and Class I (hazardous waste) landfills;

- Industrial discharges;

- Land treatment units (bioremediation);

**Table 4-3. "Threat to Water Quality" and "Complexity" Definition.**

| CATEGORY & THREAT TO WATER QUALITY | DEFINITION | EXAMPLE |
|---|---|---|
| Category I (Major threat) | Those discharges which could cause the long-term loss of a designated beneficial use of the receiving water, render unusable a ground water or surface water resource used as a significant drinking water supply, require closure to an area used for contact recreation, result in long-term deleterious effects on shellfish spawning or growth areas of aquatic resources, or directly expose the public to toxic substances. | Loss of a drinking water supply |
| Category II (Moderate threat) | Those discharges of waste which could cause short-term violations of water quality objective, cause secondary drinking water standards to be violated, or cause a nuisance. The discharge could have a major adverse impact on receiving biota, cause aesthetic impairment to a significant human population, or render unusable a potential domestic or municipal supply. | Aesthetic impairment from nuisance from a waste treatment facility. |
| Category III (Minor threat) | Those discharges of waste which could degrade water quality without violating water quality objectives, or cause a minor impairment of designated beneficial uses compared with Category I and Category II. | Small pulses of water from low volume discharges. |
| **COMPLEXITY** | | |
| Category "a" | Any major NPDES discharger, and any discharge of toxic wastes; any small volume discharge containing toxic waste or having numerous discharge points or ground water monitoring; any Class I waste management unit. | Small volume complex discharger with numerous discharge points, leak detection systems or ground water monitoring wells. |
| Category "b" | Any discharger not include above which has a physical, chemical, or biological treatment system (except for septic systems with subsurface disposal), or any Class II or Class III waste management unit. | Marinas with petroleum products, solid wastes or sewage pump-out facilities. |
| Category "c" | Any discharger for whom WDRs have been or would be prescribed pursuant to section 13263 of the Water Code not included as a Category "a" or Category "b" as described above. | Discharges having no waste treatment systems or that must comply with BMPs, discharges having passive treatment and disposal systems, or discharges having waste storage system with land disposal such as dairy waste ponds. |
| **NPDES** | | |
| Major | Publicly owned treatment works with a yearly average flow of over 0.5 million gallons per day (MGD) or an industrial source with a yearly average flow of over 0.1 MGD and those with lesser flows but with acute or potential adverse environmental impacts. | |
| Minor | All other dischargers that are not categorized as a major. | |

- Dairies; and
- A variety of other activities which can affect ground water quality.

Some types of dedicated land disposal WDRs such as may also protect surface waters in those instances where surfacing ground water may adversely affect surface water quality or beneficial uses. As discussed in the following subsection, operations that contribute nitrate loading to ground water are of particular concern for interconnected surface water. This is because the water quality objective for nitrate in ground water is an order of magnitude higher than the biostimulatory substances water quality objective for total nitrogen in surface water.

A standard WDR permit typically includes the following elements:

**Findings**
Official description of the facility, processes, type and quantity of wastes, existing WDRs, enforcement actions, public notice and applicable Water Quality Control Plans, beneficial uses and water quality objectives;

**Effluent Limitations**
Narrative and numerical limits for effluent and discharge prohibitions;

**Receiving Water Limitations**
Narrative and numerical objectives for the receiving waters;

**Provisions**
Standard provisions required by the Regional Board and by state and federal law;

**Compliance Schedules**
Time schedules for completion of activities to achieve compliance with permit conditions;

**Sludge Requirements**
Sludge monitoring and control requirements, if necessary; and a

**Monitoring and Reporting Program**
Specific locations of monitoring stations and sampling frequency for all constituents limited in the permit, including flow, and other constituents that may be required by the Board.

Any person proposing to discharge waste, other than to a community sanitary sewage system, must file a report of waste discharge (application) to obtain WDRs at least 120-days prior to commencing the discharge.

The Water Code, Division 7, Chapter 4, Article 4 authorizes the Regional Board to issue WDRs, review self-monitoring reports submitted by the discharger, and perform independent compliance checking. The Regional Board is authorized to take a variety of enforcement actions to obtain compliance with WDRs. Enforcement of WDRs is done through the issuance of cleanup and abatement orders, cease and desist orders, administrative civil liability orders and court action. The Regional Board is also authorized to update and review WDRs periodically.

## *NITROGEN IN INTERCONNECTED GROUND WATERS AND SURFACE WATERS*

Ground water and surface waters interact with one another, thus, discharges to one may result in impacts to the other (USGS, 1998). Understanding this interaction is important in establishing appropriate discharge specifications for total nitrogen in WDRs because ground water can be a significant source of the total nitrogen load in interconnected surface water bodies. High total nitrogen loads in surface water bodies can cause nuisance algal blooms and low dissolved oxygen leading to fish kills.

Nitrogen is not present in waste streams in its elemental form. It typically occurs in one or more of the following compounds: nitrate ($NO_3$), nitrite ($NO_2$), ammonia ($NH_3$), ammonium ($NH_4$), and organic nitrogen.

The term “total nitrogen” refers to the sum of all forms of nitrogen compounds. The majority of the total nitrogen load in both surface waters and ground waters is in the form of nitrate ($NO_3$).

The USGS (2010) concluded that, nationwide 66 percent of streams evaluated had more than 37 percent of their total nitrate load contributed by base flow from ground water seepage (Figure 4-1). The USGS report also stated that the proportion of the nitrate load in streams attributed to nitrate in base flow was significantly higher in areas with permeable soils or bedrock similar to conditions found in the San Diego Region.

For discharges of waste with significant total nitrogen loads, the biostimulatory substances surface water quality objective may limit the discharge specification for total nitrogen in WDRs for projects or facilities that discharge to land near surface water bodies. Discharges with significant total nitrogen loads include:

- Discharges to land from Onsite Wastewater Treatment Systems (OWTS) and wastewater treatment plants.

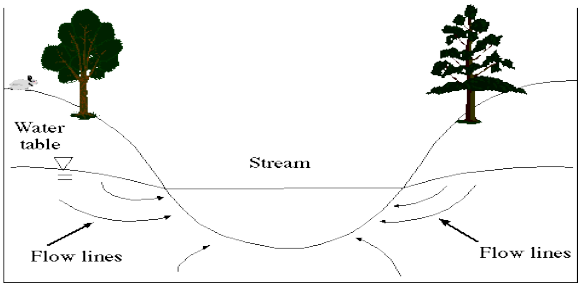
- Deep percolation of rainfall or irrigation water from agricultural and nursery operations where nitrogen fertilizers have been applied.

- Deep percolation of rainfall or irrigation water from urban landscapes where nitrogen fertilizers have been applied.

- Deep percolation of recycled water applied for irrigation of agricultural and nursery lands, and urban landscapes.

Natural processes, including physical, chemical, and biological, can affect nitrogen exchanges between ground water and surface water bodies. Total nitrogen concentrations in effluent plumes discharged from OWTS will lose strength through dispersion and dilution as the plumes migrate along ground-water flow paths through an aquifer. In stream settings containing organic-rich sediments and low dissolved-oxygen concentrations, bacteria convert dissolved nitrate in ground water to innocuous nitrogen gas through the process of denitrification and reduce the total nitrogen load entering the stream. Nitrate can also be removed from the ground water as it moves through streamside riparian zones. Nitrate can be removed from stream water that flows through sediments in the streambed. Vegetation in riparian buffer zones can also take up nitrate. All of these processes could be very effective at reducing total nitrogen concentrations in some settings and not in others.

**Figure 4-1. Interconnected Surface and Groundwater**




Loading of nitrogen through the groundwater pathway includes transport through the unsaturated (or vadose) zone, into a shallow water table and through a deeper saturated zone, which may include confined and unconfined aquifer systems.

Discharges of wastes with significant total nitrogen loads to ground waters that are located in proximity to surface waters, or where ground water is connected to surface waters require additional evaluation to ensure the protection of water quality and beneficial uses.

Where potential discharges of total nitrogen to surface waters are determined to exist via the ground water pathway, the Regional Board may and most likely will adopt WDRs that require a reduced concentration in the proposed discharge effluents, reduction in total nitrogen loads, and or compliance with more stringent water quality objectives in receiving surface waters for the protection of beneficial uses of water resources.

### *Discharges to Land from Wastewater Treatment Systems*

Discharges from wastewater treatment systems that are located in ground water basins interconnected with surface waters could adversely affect surface water quality. The State *Water Quality Control Policy for Siting, Design, and Maintenance of Onsite Wastewater Treatment Systems* (OWTS Policy) includes a waiver of WDRs for smaller systems that meet design and siting conditions specified in the Policy. The OWTS Policy includes setback distances that are to be maintained from various types of surface water bodies. Setbacks allow for diffusion, dilution, and dispersion of an effluent plume before the affected ground water discharges to a surface stream. Denitrification of the effluent plume can also occur along the flow path between the wastewater treatment system disposal area to the surface-water body. Denitrification can occur due to site specific processes including: plant uptake of nutrients within the dispersal area, denitrification in the soil column as the effluent percolates to the water table, and denitrification in the riparian zone bordering the surface-water body.

Systems that do not qualify for the waiver must be regulated with WDRs. These systems are typically located at rural parks, schools, campgrounds, mobile home parks, roadside rest stops, small commercial or residential subdivisions, restaurants, resort hotels/lodges, small correctional facilities, temporary fire-fighting camps, and recreational vehicle (RV) dump locations, including RV parks. WDRs for these systems require some combination of setbacks from surface waters, higher levels of treatment, or dispersal systems with nitrogen uptake to protect interconnected surface water quality.

For systems that pose a potential threat to surface water quality due to their size or proximity to a surface water body, the Regional Board can and most likely will require the Report of Waste Discharge (RWD) to include a nitrate study. The purpose of the nitrate study is to provide the Regional Board with the information needed to establish discharge specifications for total nitrogen in effluent that will not cause the water quality objective for total nitrogen to be exceeded in any surface water body interconnected with receiving ground water. The nitrate study must utilize an acceptable mass balance method to evaluate if the proposed discharge will cause the water quality objectives for nitrate to be exceeded in ground water, and determine if the proposed discharge will adversely affect surface water quality. The nitrate study may also include, but not be limited to, an evaluation of following nitrogen fate and transport factors.

- Nitrogen uptake, if any, in the discharge area.
- Denitrification in the soil column of the discharge area.
- Concentration of nitrogen in the effluent when it reaches the ground water table.
- Effects of dilution of the effluent along the flow path to the surface water body.
- Effects of diffusion of the effluent along the flow path to the surface water body.
- Effects of nitrogen uptake/reduction by vegetation (e.g., within the root zone and by riparian vegetation) along the flow path to the surface water body.
- Travel time and distance from the point of discharge to the surface water body and riparian zone.
- Assimilative capacity, if any, in the ground water and surface water body.

### *Discharges to Ground Water from Agricultural and Nursery Operations*

Use of fertilizer at agricultural operations can be a significant contributor of total nitrogen to surface waters via both shallow and deep groundwater pathways. The State Water Board convened an Agricultural Expert Panel to assess agricultural nitrate control programs and develop recommendations for its Irrigated Lands Regulatory Program to ensure protection of ground water quality. The Agricultural Expert Panel proposed a comprehensive regulatory program that focuses on minimizing loads of nitrates to ground water (ITRC, 2014). Key elements of the Agricultural Expert Panel's recommendations include: creation and

- Develop and implement an effective irrigation water and nitrogen management plan that includes: an estimate of nitrogen required, agronomic rate of fertilizer application considering soil properties and crops nutrient requirements, estimate of nitrogen uptake/removal, the distribution and uniformity of the irrigation system, volume of water infiltration in a field, and actions taken to periodically assess and improve performance of the system. Increasing the water use efficiency will typically reduce the discharge volume and the total pollutant discharge loading to ground water. Discharges need to regularly inspect irrigation systems for leaks to ensure that excessive infiltration of runoff is not occurring.

- Convert paved or bare soil areas to vegetation that will retard runoff and increase storm water infiltration (wherever possible). The increased infiltration will help dilute total nitrogen concentrations in ground water.

- Group plants with similar water needs together to improve irrigation efficiency.

- Establish plant buffer zones between production areas and surface water bodies to effectively reduce nitrate in interconnected surface water.

- Install and use moisture sensors and automatic sprinklers for more accurate scheduling of irrigation.

- Improve efficiency of irrigation return flow conveyance systems and prevent leaks.

- Train employees on management measures, stormwater discharge prohibitions, WDR requirements, and appropriate irrigation and fertilizer application practices.

### *Discharges to Ground Water from Animal Feeding Operations*

Discharges from animal feeding operations contain nitrogen compounds and other pollutants that can percolate to ground water and affect interconnected surface waters. Discharges from animal feeding operations may include wash water and waste from animal activities, and storm water runoff which can also transport pollutants from animal operations to ground water.

There are statewide minimum standards for discharges of animal wastes established in the California Code of Regulations[3]. These minimum standards are included in waivers and WDRs for animal feeding operation. If needed, the Regional Board will also prescribe more stringent requirements in individual WDRs for discharges from animal feeding operations that potentially pose a higher threat to surface water quality.

### *Landscape Irrigation with Recycled Water*

Irrigating landscapes with recycled water is critical to developing a local, sustainable water supply for the Region. Recycled water that percolates past the landscape root zone, however, can be a source of nitrate to ground water and interconnected surface water. Applying recycled water and fertilizer in amounts and at rates needed by the landscape in end use areas will protect groundwater and interconnected surface water from excessive nitrogen loading.

Permits issued by the Regional Board for projects that include landscape irrigation with recycled water typically require the recycled water producer to develop rules and

[3] Title 27, Division 2, Subdivision 1, Chapter 7, Subchapter 2, Article 1.

- Monitor nutrient levels in recycled water supplies and notify end users of the nutrient value of recycled water.

- Use fertilizers appropriately taking into account the nutrient levels in the recycled water.

- Avoid overwatering of landscapes and runoff.

- Educate and train site supervisors on how to (1) minimize the potential for runoff or over-irrigation; and (2) take into account the nutrient value of the recycled water.

- Conduct periodic inspections of end use areas.

## *NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM*

Waste Discharge Requirements that implement federal National Pollutant Discharge Elimination System (NPDES) regulations ("NPDES requirements" or "NPDES permits") are issued to regulate discharges of "pollutants" from point sources to "waters of the United States" to ensure that the quality and quantity of such discharges does not adversely affect surface water quality or beneficial uses. The phrase "waters of the United States" is defined in Title 40, CFR, Parts 122.2, 230.3 and 232.3. The definition of "waters of the United States" emphasizes protection of a broad range of surface waters, including interstate and intrastate lakes, creeks, streams, wetlands, rivers, bays, and ocean waters. Ephemeral creeks, and streams are considered to be "waters of the United States" for the purpose of issuing NPDES permits. In this Basin Plan the term "waters of the United States" is used interchangeably with the term "surface waters".

NPDES permits are authorized by section 402 of the Clean Water Act and section 13370 of the Water Code. Permit conditions and the issuance process are described in Title 40, CFR, Part 122 (40 CFR 122) and CCR, Title 23, Chapters 3 and 4. The responsibility for issuing NPDES permits in California has been delegated to the regional boards, subject to review and approval by the Regional Administrator (USEPA Region IX, San Francisco). NPDES permits issued by the Regional Board are also "waste discharge requirements" issued under the authority of the Water Code, Chapter 5.5.

A standard NPDES permit typically includes the following elements:

**Findings**
Official description of the facility, processes, type and quantity of wastes, existing NPDES permits, enforcement actions, public notice and applicable USEPA effluent guidelines and standards, Water Quality Control Plans, beneficial uses and water quality objectives;

**Effluent Limitations**
Narrative and numerical limits for effluent and discharge prohibitions;

**Receiving Water Limitations**
Narrative and numerical objectives for the receiving waters;

**Provisions**
Standard provisions required by the Regional Board and by state and federal law, expiration date of permit;

**Compliance Schedules**
Time schedules for completion of activities to achieve compliance with permit conditions;

**Pretreatment Requirements**
Standard pretreatment requirements for municipal facilities (see below);

**Sludge Requirements**
Sludge monitoring and control requirements, if necessary; and a

**Monitoring and Reporting Program**
Specific locations of monitoring stations and sampling frequency for all constituents limited in the permit, including flow, and other constituents that may be required by the Regional Board.

The NPDES permit regulates discharges of wastes for the purpose of limiting the quantity of pollutants and volume of waste discharged to surface waters. NPDES permits contain prerequisite conditions which must be met by dischargers to ensure protection of beneficial uses of the receiving water as described in the Regional Board's Water Quality Control Plan, Statewide Water Quality Control Plans, and other water quality control policies.

Any person proposing to discharge pollutants into surface waters must submit a report of waste discharge in application for an NPDES permit at least 180-days in advance of the date on which it is desired to commence the proposed discharge. Certain discharges do not require an NPDES permit. The following discharges are exempt from the requirements for NPDES coverage pursuant to 40 CFR 122.3:

- Any discharge of sewage from vessels, effluent from properly functioning marine engines, laundry, shower, and galley sink wastes, or any other discharge incidental to the normal operation of a vessel;

- Discharges of dredged or fill material into waters of the United States which are regulated under the Clean Water Act, section 404;

- The introduction of sewage, industrial wastes, or other pollutants into publicly owned treatment, any discharge in compliance with the instructions of an On-Scene Coordinator pursuant to 40 CFR 300 (The National Oil and Hazardous Substances Pollution Contingency Plan) or 33 CFR 153.10(e) (Pollution by Oil and Hazardous Substances);

- Any introduction of pollutants from nonpoint source agricultural and silvicultural activities, including storm water runoff from orchards, cultivated crops, pastures, range lands, and forest lands;

- Return flows from irrigated agriculture; and

- Discharges into a privately owned treatment works.

NPDES permits are issued for a term of five years or less. The terms and conditions of the permit are regularly updated as necessary. NPDES permits can be revoked for cause by the Regional Board.

The Water Code, Division 7, Chapter 5.5, Article 6 authorizes the Regional Board to issue NPDES permits, review self-monitoring reports submitted by the discharger, and perform independent compliance checking. The Regional Board is authorized to take a variety of enforcement actions to obtain compliance with an NPDES permit. Enforcement of NPDES permits is done through the issuance of cleanup and abatement orders, cease and desist orders, administrative civil liability orders, and court action.

The Regional Board will consider the establishment of mixing zones for inland surface waters and enclosed bays and estuaries on a case-by-case basis. Criteria to be established for mixing zones will be specified in the waste discharge requirements established for the discharge.

In addition to regulating discharges of wastewater to surface waters, NPDES permits also require municipal sewage treatment plants having a design capacity greater than 5 MGD to conduct pretreatment programs. Smaller municipal treatment systems may be required to conduct pretreatment programs if there are significant industrial users of their systems. Pretreatment is discussed in more detail later in this chapter.

## *COMPLIANCE TIME SCHEDULES*

The Regional Board may establish compliance time schedules in NPDES requirements where the Regional Board determines that, for an existing discharger[4], achieving immediate compliance in a discharge with new or more stringent water quality based effluent limitations or receiving water limitations that implement new, revised, or newly interpreted water quality objectives[5], and/or that resulted from new knowledge on the characteristics and impacts of the discharge is infeasible[6]. New knowledge about the characteristics and impacts of the discharge that can result in new or more stringent WQBELs or receiving water limitations include, but are not limited to, the following situations:

- Pollutants previously unregulated in an existing discharge are newly regulated because the new information indicates a reasonable potential for the discharge to exceed an applicable water quality objective in the receiving water;

- Pollutants are newly detected in an existing discharge due to improved analytical techniques;

- The point of compliance for a receiving water limitation is changed; and

- The dilution allowance for an existing discharge is changed.

Compliance time schedules are authorized by this provision only for new or more stringent effluent and/or receiving water limitations that implement water quality objectives issued, revised, or newly interpreted after November 9, 2005, or that resulted from new knowledge on the characteristics and impacts of the discharge for any pollutant for which a water quality objective was issued, revised, or newly interpreted after July 1, 1977.

The compliance time schedule shall include a time schedule for completing or achieving specific actions (including interim effluent limitations) that demonstrate reasonable progress toward compliance with water quality based effluent limitations or receiving water limitations and, thereby, attainment of water quality objectives. The compliance time schedule shall contain a final compliance date, based on the shortest practicable time (determined by the Regional Board at a public hearing after considering the factors identified below) required to achieve compliance. In addition, in all cases, the findings of the NPDES requirements shall specify the final effluent limitations.

Compliance time schedules in NPDES requirements shall be as short as practicable but in no case exceed five years from the date of order issuance, reissuance, or modification. The Regional Board may grant an additional extension of up to five years, but only where the discharger has demonstrated satisfactory progress toward achieving compliance with applicable water quality based effluent limitations and receiving water limitations and the Regional Board concurs with the demonstration. In no case, shall a compliance time schedule for these discharges exceed ten years from the date of adoption, revision, or interpretation of the applicable water quality objective, whichever is the shorter period of time.

Nothing in this provision limits the Regional Board's authority (1) to develop alternate implementation provisions for water quality objectives adopted or revised in the future, or (2) to rely on alternate implementation provisions authorized pursuant to State Board policies for water quality control, State

[4] "Existing discharger" means any discharger that is not a new discharger. An existing discharger includes an increasing discharger (i.e., an existing facility with treatment systems in place for its current discharge that is or will be expanding, upgrading, or modifying its existing permitted discharge after a new, revised, or newly interpreted water quality objective becomes applicable). A "new discharger" is defined as any building, structure, facility or installation from which there is or may be a "discharge of pollutants" (as defined in 40 CFR section 122.2) to surface water of the San Diego Region, the construction of which commences after a new, revised, or newly interpreted water quality objective becomes applicable.

[5] "New, revised, or newly interpreted water quality objectives" means objectives as defined in section 13050(h) of Porter-Cologne, issued, revised or newly interpreted after November 9, 2005. Objectives may be narrative or numeric.

[6] "Infeasible" means that discharger compliance cannot be accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.

regulations, or federal regulations. Compliance time schedules to meet WQBELs and receiving water limitations that implement California Toxics Rule criteria will be limited by the provisions of the State Board "*Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*."

To document the need for and justify the duration of any such compliance time schedule, a discharger must submit the following information, at a minimum: (1) the results of a diligent effort to quantify pollutant levels in the discharge and the sources of the pollutant(s) in the waste stream; (2) identification of the sources of the pollutant in the waste stream, documentation of source control efforts currently underway or completed, including compliance with any pollution prevention programs that have been established, and a proposed schedule for additional source control measures or waste treatment needed to meet the WQBELs and/or receiving water limitations; (3) evidence that the discharge quality is the highest that can reasonably be achieved until final compliance is attained; and (4) a demonstration that the proposed schedule is as short as practicable, taking into account economic, technical and other relevant factors. The need for additional information and analyses will be determined by the Regional Board on a case-by-case basis. The need for and justification of the duration of any such compliance time schedule will be subject to Regional Board review and approval.

## *CONDITIONAL WAIVERS OF WASTE DISCHARGE REQUIREMENTS*

The Regional Board may waive issuance of waste discharge requirements and/or the requirement to file reports of waste discharge for a specific discharge or specific types of discharge pursuant to Water Code section 13269 if such waiver is determined to be consistent with the Basin Plan and in the public interest.

The waiver of adoption of waste discharge requirements is not applicable to discharges subject to federal NPDES regulations. The federal Clean Water Act does not provide for a waiver of the need to obtain an NPDES permit for point source discharges of pollutants to surface waters.

Amendments to Water Code section 13269, effective January 1, 2003 provided that waivers may not exceed five years duration and must be conditional. Under these amendments the Regional Boards were required to:

- Renew waivers every five years;
- Review the terms, conditions, and effectiveness of each waiver at a public hearing;
- Determine if general or individual waste discharge requirements should be issued for ongoing discharges where waivers have been terminated; and
- Require compliance with waiver conditions.

A waiver of waste discharge requirements is conditional and may be terminated at any time by the Regional Board for any specific discharge or any specific type of discharge. A conditional waiver is not required to be used by the Regional Board. Even if a discharger complies with all the conditions of a conditional waiver, the Regional Board may still choose to regulate any specific discharge with waste discharge requirements.

The Regional Board has determined that a waiver of adoption of waste discharge requirements for a specific type of discharge would not be against the public interest under one or more of the following circumstances:

- The type of discharge is effectively regulated by other public agencies; or
- The type of discharge does not adversely affect the quality or the beneficial uses of the waters of the state; or

- The type of discharge is not readily amenable to regulation through adoption of waste discharge requirements but warrants Regional Board oversight to insure compliance with mandated conditions.

The Regional Board conditionally waives the adoption of waste discharge requirements for certain specific types of discharges through the issuance of an Order. The Waiver Order describes the specific types of discharges subject to a waiver, and the conditions the discharge must meet to be eligible for the waiver. The Regional Board's current Waiver Order may be viewed or downloaded by visiting the conditional waiver website (http://www.waterboards.ca.gov/sandiego/), or contacting Regional Board Staff.

In general the discharges eligible for a waiver must comply with the following conditions:

- The discharge shall not create a nuisance or pollution as defined in the Water Code; and

- The discharge shall not cause a violation of any applicable water quality standard for the receiving waters adopted by the Regional Board, or the State Water Resources Control Board, as required by the Clean Water Act; and

- The discharge of any substance in concentrations toxic to animal or plant life is prohibited.

In addition, the discharges must satisfy the general and specific conditions described in each conditional waiver.

## *WATER RECLAMATION REQUIREMENTS*

Reclaimed water is water that, as a result of treatment, is suitable for a direct beneficial use or a controlled use that would otherwise not occur. Reclaimed water uses in the Region include, but are not limited to, landscape irrigation, crop irrigation, freeway landscape irrigation, ground water recharge, soil compaction at construction sites, and for recreational lakes.

The Regional Board may prescribe water reclamation requirements to reclaimed water producers and those governing the use of reclaimed water, which the Regional Board has determined are necessary to protect public health, safety, and welfare pursuant to Water Code, Division 7, Chapter 7, sections 13500-13556 "Water Reclamation Law". Water Reclamation Law provides that no person shall reclaim water or use reclaimed water for any purpose subject to Title 22 criteria until water reclamation requirements have been established or the Regional Board determines no requirements are necessary. The Regional Board may not deny issuance of water reclamation requirements to a project which violates only a salinity standard in the Basin Plan.

In lieu of issuing water reclamation requirements pursuant to Water Code, section 13523, for each user of reclaimed water, the Regional Board establishes master reclamation requirements as part of the waste discharge requirements which are issued to a supplier or distributor, or both, of reclaimed water. Reclamation requirements must include the following components:

- A requirement that the permittee comply with the uniform statewide reclamation criteria established pursuant to section 13521. Permit conditions for a use of reclaimed water not addressed by the uniform statewide reclamation criteria shall be considered on a case-by-case basis;

- A requirement that the permittee establish and enforce rules or regulations for reclaimed water users, governing the design and construction of reclaimed water use facilities and the use of reclaimed water, in accordance with the uniform statewide reclamation criteria established pursuant to section 13521;

- A requirement that the permittee submit a quarterly report summarizing reclaimed water use, including the total amount of reclaimed water supplied, the total number of reclaimed water use sites, and the locations of those sites, including the names of the hydrologic areas underlying the reclaimed water use sites;

- A requirement that the permittee conduct periodic inspections of the facilities of the reclaimed water users to monitor compliance by users with the uniform statewide reclamation criteria and the requirements of the master reclamation permit; and

- Any other requirements determined to be appropriate by the Regional Board.

The "Rules and Regulations for Reclaimed Water Users" that must be issued and enforced by the permittee govern the design and construction of reclaimed water use facilities and the use of reclaimed water. The rules and regulations must have the following elements:

- Provisions implementing Title 22, Division 4, Chapter 3, Wastewater Reclamation Criteria; and Title 17, Division 1, Chapter 5, Group 4, Articles 1 & 2, of the CCR;

- Provisions implementing the State Board Division of Drinking Water (State Board DDW) "Guidelines For Use of Reclaimed Water and Guidelines for Use of Reclaimed Water for Construction Purposes" and measures that are deemed necessary for protection of public health, such as the "American Water Works Association (AWWA) California/Nevada Section, Guidelines for the Distribution of Non-Potable Water" or alternate measures, acceptable to State Board DDW, providing equivalent protection of public health;

- Provisions authorizing the Regional Board, the discharger/producer, or an authorized representative of these parties, upon presentation of proper credentials, to inspect the facilities of any reclaimed water user to ascertain whether the user is complying with the discharger/producer's rules and regulations;

- Provision for written notification, in a timely manner, to the discharger/producer by the reclaimed water user of any material change or proposed change in the character of the use of reclaimed water;

- Provision for submission of a preconstruction report to the discharger/producer by the reclaimed water user in order to enable the discharger/producer to determine whether the user will be in compliance with the discharger/producer's rules and regulations;

- Provision requiring reclaimed water users to designate a reclaimed water supervisor responsible for the reclaimed water system at each use area under the user's control. Reclaimed water supervisors should be responsible for the installation, operation, and maintenance of the irrigation system, enforcement of the discharger/producer's reclaimed water user rules and regulations, prevention of potential hazards, and maintenance of the reclaimed water distribution system plans in "as built" form;

- Provision authorizing the discharger/producer to cease supplying reclaimed water to any person who uses, transports, or stores such water in violation of the discharger/producer's rules and regulations;

- Provision requiring notification and concurrence of the State Board DDW and the local county health department for new reclaimed water users. The notification of the county health department shall include a site distribution plan for new and retrofit facilities and a cross-connection control inspection plan for sites containing both potable and reclaimed water distribution lines;

- Provision requiring all windblown spray and surface runoff of reclaimed water applied for irrigation onto property not owned or controlled by the discharger or reclaimed water user to be prevented by implementation of BMPs;

- Provision requiring all reclaimed water storage facilities owned and/or operated by reclaimed water users to be protected against erosion, overland runoff, and other impacts resulting from a 100-year frequency storm, 24 hour storm. This requirement may be waived if the discharger submits information demonstrating that releases from the storage facilities caused by storm events of less than 100-year frequency will not cause violation of the Basin Plan water quality standards;

- Provision requiring all reclaimed water storage facilities owned and/or operated by reclaimed water users to be protected against 100-year frequency peak stream flows as defined by the local flood control agency. However, if information is made available to the Regional Board which shows that a reclaimed water storage facility presents no potential impairment to the beneficial uses, the Regional Board may exempt requirements for 100-year flood protection on a case-by-case basis;

- Provision for notification to reclaimed water users that the Regional Board may initiate enforcement action against any reclaimed water user who discharges reclaimed water in violation of any applicable discharge prohibitions prescribed by the Regional Board or in a manner which creates, or threatens to create conditions of pollution, contamination, or nuisance, as defined in Water Code section 13050; and

- Provision for notification to reclaimed water users that the Regional Board may initiate enforcement action against the discharger/producer, which may result in the termination of the reclaimed water supply, if any person uses, transports, or stores such water in violation of the discharger/ producer's rules and regulations or in a manner which creates, or threatens to create conditions of pollution, contamination, or nuisance, as defined in Water Code section 13050.

## *WASTE DISCHARGE PROHIBITIONS*

Water Code section 13243 provides that a Regional Board, in a water quality control plan, may specify certain conditions or areas where the discharge of waste, or certain types of waste is not permitted. The following discharge prohibitions are applicable to any person, as defined by section 13050(c) of the Water Code, who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the state within the boundaries of the San Diego Region.

(1) The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in Water Code section 13050, is prohibited.

(2) The discharge of waste to land, except as authorized by WDRs or the terms described in Water Code section 13264 is prohibited.

(3) The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by an NPDES permit or a dredged or fill material permit (subject to the exemption described in Water Code section 13376) is prohibited.

(4) Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless this Regional Board issues a NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State Board DDW and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.

(5) The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the Regional Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.

(6) The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the Regional Board.

(7) The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the Regional Board.

(8) Any discharge to a storm water conveyance system that is not composed entirely of "storm water" is prohibited unless authorized by the Regional Board. [The federal regulations, 40 CFR 122.26 (b) (13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26 (b) (2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities.] [Section 122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].

(9) The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.

(10) The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in Water Code section 13264, is prohibited.

(11) The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the state is prohibited.

(12) The discharge of any radiological, chemical, or biological warfare agent into waters of the state is prohibited.

(13) The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the Regional Board.

(14) The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.

(15) The discharge of treated or untreated sewage from vessels to Mission Bay, Oceanside Harbor, Dana Point Harbor, or other small boat harbors is prohibited.

(16) The discharge of untreated sewage from vessels to San Diego Bay is prohibited.

(17) The discharge of treated sewage from vessels to portions of San Diego Bay that are less than 30 feet deep at MLLW is prohibited.

(18) The discharge of treated sewage from vessels, which do not have a properly functioning USCG certified Type I or Type II marine sanitation device, to portions of San Diego Bay that are greater than 30 feet deep at MLLW is prohibited.

## *WATER QUALITY CERTIFICATION (SECTION 401)*

In addition to the issuance of NPDES permits or WDRs, the Regional Board acts to protect the quality of surface waters through water quality certification pursuant to section 401 of the Clean Water Act. Section 401 requires that any person applying for a federal permit or license which may result in a discharge of pollutants into waters of the United States, must obtain a state water quality certification that the activity complies with all applicable water quality standards, limitations, and restrictions.

No license or permit may be issued by a federal agency until certification required by section 401 has been granted or waived by the state. Further, no license or permit may be issued if certification has been denied by the state. The activity must also meet the requirements of the Coastal Nonpoint Pollution Control Program required under the Coastal Zone Act Reauthorization Amendments (CZARA).

The following permits or licenses are subject to section 401 of the Clean Water Act:

- NPDES permits issued by the USEPA under section 402 of the Clean Water Act;
- Clean Water Act, section 404 permits issued by the United States Army Corps of Engineers (USACOE);
- Permits issued under sections 9 and 10 of the Rivers and Harbors Act (for activities which may affect navigation);
- Licenses for hydroelectric power plants issued by the federal Energy Regulatory Commission under the Federal Power Act; and
- Licenses issued by the Nuclear Regulatory Commission.

The Regional Board's water quality certification activities have focused on applications for permits for the discharge of dredged or fill material to surface waters. These permits are issued by the USACOE (Clean Water Act, section 404 permits) subject to any conditions imposed by the Regional Board pursuant to section 401.

The section 404 program is administered at the federal level by the USACOE and the USEPA. The US Fish and Wildlife Service and the National Marine Fisheries Service have important advisory roles. The USACOE has the primary responsibility for the permit program and is authorized, after notice and opportunity for a public hearing, to issue permits for the discharge of dredged or fill material. USEPA develops the regulations under which permits may be granted.

The Regional Board evaluates the projects for which section 404 permits are requested and determines whether to deny water quality certification, issue a certification with or without conditions, or waive the certification pursuant to regulations in Article 4, Title 23. Regional Board certification is dependent upon assurance that the project will not reduce water quality below applicable standards as defined in the Clean Water Act (i.e., the water quality objectives established and the beneficial uses which have been designated for the surface waters). A certification is usually denied if the proposed activity does not meet water quality standards. If the activity may violate standards, a conditional certification is given. If the activity does not violate any standards, a section 401 waiver may be given. The Executive Director of the State Board may issue a water quality certification after review of the application, all relevant data, and taking into consideration any recommendations from the Regional Board.

## *SELF MONITORING, COMPLIANCE MONITORING, AND INSPECTIONS*

Compliance with NPDES permits and WDRs is generally self-monitored by each individual discharger, with oversight by the Regional Board. Dischargers are required to report and take necessary corrective actions when they discover that they are not in compliance with the permit effluent limits. The Regional Board conducts periodic inspections and compliance monitoring and, as necessary, will take enforcement actions to ensure compliance.

### *Self Monitoring Program*

WDRs and NPDES permits issued by the Regional Board include requirements for the discharger to collect samples of the waste discharge. In some cases, the receiving waters must also be monitored by the dischargers. The results of the "self monitoring" programs are reported to the Board and are used to determine compliance with the WDRs. (Additional information on this topic is presented in Chapter 6, Surveillance and Monitoring).

### *Compliance Monitoring and Inspections*

Regional Board staff can conduct unannounced inspections (including collection of samples) to determine the status of compliance with NPDES permit or WDRs / WRRs requirements. All major dischargers are inspected at least once a year. (Additional information on this topic is presented in Chapter 6, Surveillance and Monitoring).

## *ENFORCEMENT*

The Regional Board is committed to the maintenance of a strong and uniform enforcement program. Appropriate and timely response to instances of noncompliance with Regional Board NPDES permits, WDRs, waste discharge prohibitions and enforcement orders is necessary to ensure protection of the quality of surface and ground waters in the Region.

Regional Board response to noncompliance incidents include the establishment of a specific time frame for compliance and or correction. All dischargers are expected to correct violations in the shortest time frame possible. With the exception of special circumstances, failure to terminate, comply, or complete corrective actions on a noncompliance incident in a specified time frame will result in the escalation of the matter to a higher level enforcement action.

Regional Board responses to instances of violation correspond to the following enforcement action level sequence, unless circumstances warrant a more expeditious escalation to a higher level.

### *LEVEL A ENFORCEMENT ACTION*

In this action level the Regional Board staff requests the discharger, by telephone or letter, to correct the problem and prevent recurrence. Regional Board staff may also request the discharger to correct the problem during routine compliance inspections.

### *LEVEL B ENFORCEMENT ACTION*

In this action level the Regional Board Executive Officer issues a notice of violation to the discharger for failure to comply with a compliance schedule for corrective action.

## *LEVEL C ENFORCEMENT ACTION*

In this action level the Regional Board may take a variety of formal higher level enforcement actions. The Water Code provides the Regional Board with a number of enforcement remedies for violations of requirements. These remedies include time schedules, cease and desist orders, cleanup and abatement orders, and administrative civil liability orders.

### *Time Schedule Orders*

When a discharge is taking place or threatening to occur that will cause a violation of a Regional or State Board requirement, a discharger may be required to submit a detailed list of specific actions the discharger will take to correct or prevent the violation. (Water Code section 13300). These schedules may also be required when the waste collection, treatment, or disposal facility of a discharger are approaching capacity. Time schedule orders are adopted by the Board after a public hearing or issued by the Executive Officer pursuant to authority delegated by the Regional Board.

### *Cleanup and Abatement Orders*

The Regional Board may issue a cleanup and abatement order to any person who has discharged, is discharging or is threatening to discharge wastes that will result in a violation of WDRs or other order or prohibition of the State or Regional Board. The Regional Board may also issue a cleanup and abatement order to any person who discharges or has discharged waste to waters of the state and causes, or threatens to cause, a condition of pollution or nuisance. The cleanup and abatement order may require the waste discharger(s) to cleanup and abate the effects of the discharge or to take other appropriate remedial action (Water Code section 13304). A cleanup and abatement order is issued if a pollutant can actually be cleaned up or the pollutant effects abated. The Regional Board has delegated issuance of these orders to the Executive Officer. Cleanup and abatement orders do not require Board adoption, but may be brought before the Regional Board for consideration at the request of the discharger.

### *Cease and Desist Orders*

If discharge prohibitions or requirements of the State Board or Regional Board are violated or threatened, the Regional Board may adopt a cease and desist order (Water Code section 13301) requiring the discharger to comply forthwith, to comply in accordance with a time schedule, or if the violation is threatened, to take appropriate remedial or preventive action. Cease and desist orders may restrict or prohibit the volume, type or concentration of waste added to community sewer systems, if existing or threatened violations of waste discharge requirements occur. Cease and desist orders may specify interim time schedules as well as limitations that must be complied with until full compliance is achieved. Cease and desist orders are adopted by the Regional Board after a public hearing.

### *Administrative Civil Liability*

Administrative civil liability complaints and orders may be issued by the Regional Board for certain categories of violations. In this process the Regional Board may impose monetary penalties on dischargers. The Regional Board (or the Executive Officer) may issue Administrative Civil Liability complaints (ACLs) to persons who intentionally or negligently violate enforcement orders of the Board, or who intentionally or negligently discharge wastes in violation of any order, prohibition, or requirement of the Board where the discharge causes conditions of pollution or nuisance (Water Code section 13350). ACLs may also be issued in cases where a person fails to submit reports requested by the Board (Water Code sections 13261 and 13268) or when a person discharges waste without first having filed the appropriate RWD (Water Code section 13265). ACLs may be issued pursuant to Water Code section 13385 for violations of any Regional Board prohibition or requirement implementing specified sections of the Clean Water Act, or any requirement in an approved pretreatment program. Amounts of administrative civil liability that the Board can impose range up to $10,000 per day of violation. The Water Code also provides that a superior court may impose civil liability assessments in substantially higher amounts. The Regional Board may conduct a hearing if a discharger contests the imposition of the Administrative Civil Liability.

## *LEVEL D ENFORCEMENT ACTION*

### *Referral to the Attorney General or District Attorney*

**Judicial Civil Liability**
The Water Code provides that a Regional Board may request the State Attorney General to petition a superior court to enforce orders and complaints issued by the Board and impose civil monetary remedies. The monetary remedies may be in excess of the administrative civil liability penalties that the Regional Board is authorized to impose. The court imposed fines and or imprisonment vary depending upon the seriousness of the violation.

**Injunctive Relief**
The Regional Board may also request that the Attorney General seek injunctive relief in specific situations, such as violations of cease and desist orders or discharges which cause or threaten to cause a nuisance or pollution that could result in a public health emergency (Water Code section 13331 and section 13340).

**Criminal Penalties**
The Regional Board may also refer violations to the District Attorney to seek criminal penalties by judicial action in the county where the discharge occurred. The court imposed fines and or imprisonment vary depending upon the seriousness of the violation.

## *SELECTION OF APPROPRIATE ENFORCEMENT ACTION*

The following criteria are considered by the Regional Board in selecting the appropriate enforcement action in response to an incident of noncompliance:

- Degree of water quality impairment and/or threat to the public health including the degree of toxicity of the discharge;
- Past history of discharge violations;
- Degree of cooperation or recalcitrance shown by the discharger;
- Culpability of the discharger;
- Financial resources of the discharger;
- Whether the circumstances leading to the noncompliance have been corrected;
- Whether the discharge violations are likely to continue in the future;
- Whether the discharge can be cleaned up;
- The need to take immediate cleanup action;
- Any economic benefit realized by the discharger as a result of the noncompliance; and
- Other actions as justice may require.

## *STATE WATER RESOURCES CONTROL BOARD PLANS AND POLICIES*

The State Water Resources Control Board (State Board) has adopted a number of plans and policies for statewide water quality management. The Regional Board implements these plans through WDRs, NPDES permits, and any necessary enforcement actions. These policies are explained in more detail in Chapter 5, Plans and Policies.

## *HAZARDOUS WASTE SOURCE REDUCTION*

The Department of Toxic Substance Control (DTSC) has adopted regulations regarding hazardous waste source reduction pursuant to the Hazardous Waste Source Reduction and Management Review Act of 1989 (Article 11.9, starting with section 25244.12 of the Health and Safety Code). These regulations are contained in sections 67100.1 through sections 67100.14 of Title 22 of the CCR. These regulations require that each generator of hazardous or extremely hazardous waste within the limits set by the regulations conduct a source reduction evaluation review and plan, plan summary, hazardous waste management performance report, and report summary on or before September 1, 1991 and every four

years thereafter. Every generator is required to retain a copy of the current review and plan, plan summary, report, report summary, progress report, and compliance checklist at each site, at a public library, or at a local governmental agency. The Regional Board supports these efforts of hazardous waste source reduction because any successes achieved will mean less hazardous waste which could pollute California's waters.

## *MUNICIPAL AND DOMESTIC WASTEWATER*

Municipal wastewater in the San Diego Region consists primarily of domestic sewage and minor quantities of industrial wastes in some of the more highly urbanized and industrialized areas. Facilities to control municipal wastewater include wastewater collection systems, pumping stations, transport pipelines, treatment plants, storage ponds and ocean outfalls. These facilities are sometimes collectively referred to by the term Publicly Owned Treatment Works (POTW).

Municipal wastewater treatment in the San Diego Region is generally at the secondary treatment level. Secondary treatment results in the removal of more than 85 percent of the biochemical oxygen demand and suspended solids found in municipal wastewater. Tertiary (advanced) wastewater treatment is used at some treatment plants for additional removal of pollutants to reclaim wastewater for beneficial reuse. Effluent from the wastewater treatment plants is disposed of by various means including:

- Discharge to the Pacific Ocean via long deep ocean outfalls;
- Percolation into the soil; and
- Reclamation and reuse in conformance with uniform reclamation criteria (CCR, Title 22, Division 4, Chapter 3).

Sludge disposal at most major municipal wastewater treatment plants in the Region consists of aerobic or anaerobic digestion and land disposal. Dried sludge is either disposed of at landfills or made available to the public as a soil conditioner. Some treatment plants, located upstream of major regional wastewater treatment plants discharge sludge to the sewage collection system for treatment at a "downstream" regional wastewater plant. The term municipal sewage treatment plant and Publicly Owned Treatment Works are used interchangeably in the Basin Plan.

The Regional Board regulates wastewater discharges from municipal wastewater treatment plants through either the issuance of NPDES permits where the discharge is to surface waters or through WDRs where the discharge is to land.

Discharges of wastewater to surface water must meet the effluent limitations prescribed in the NPDES permit issued by the Regional Board. Effluent limitations are based on the following criteria:

- Secondary treatment effluent limitations defined by USEPA contained in 40 CFR 133, unless a waiver to the secondary treatment standards is obtained (more stringent effluent limitations than secondary treatment may be imposed by the Regional Board if necessary);
- Applicable water quality objectives and beneficial uses contained in the Basin Plan and State Board Water Quality Control Plans;
- Applicable public health protection standards for total and fecal coliform;
- Assimilative capacity of the receiving water;
- The terms and conditions of the federal Antidegradation Policy (40 CFR 131.12) and the State Antidegradation Policy (Resolution No. 68-16) (See Chapter 3);
- Anti-backsliding provisions described in Clean Water Act section 404; and
- Land disposal or recycling of sludge as a soil amendment.

Discharges of wastewater onto land must meet the effluent limitations in the waste discharge requirements prescribed by the Regional Board through the issuance of WDRs. The WDRs contain effluent limitations based on the following criteria:

- The treatment capability of the treatment process employed by the dischargers;
- Applicable water quality objectives and beneficial uses contained in the Basin Plan;
- Applicable public health protection standards for total and fecal coliform;
- Assimilative capacity of the receiving water;
- The terms and conditions of the State Antidegradation Policy - Resolution No. 68-16 (See Chapter 3); and
- Land disposal or recycling of sludge as a soil amendment.

## *CLEAN WATER GRANTS AND LOANS*

From 1972 until 1988 the State Board assisted the USEPA in administering the multibillion dollar Clean Water Grants Program in California to finance the construction of municipal wastewater treatment facilities. This program ended in 1988. The Clean Water Act provides for the creation of a State Revolving Fund (SRF) Loan Program capitalized in part by federal funds. The Clean Water Act authorizes loan funding for construction of Publicly Owned Treatment Works (POTWs), for implementation of a nonpoint source pollution control management program, and for the development and implementation of an estuary conservation and management program. The State Board converted the Clean Water Grant Program to a Grants and Loans program on October 1, 1988, and ultimately replaced this completely with the State Revolving Fund Loan Program on June 30, 1989.

## *ONSITE WASTEWATER TREATMENT SYSTEMS*

Some areas in the Region rely on onsite wastewater treatment systems (OWTS) for subsurface disposal of domestic sewage. OWTS are used to treat domestic wastewater from residences and commercial and industrial establishments that are not connected to community sewer systems or municipal wastewater treatment plants. Although, OWTS typically serve individual residences, larger systems are suitable for commercial facilities or communities. When properly designed, sited, operated, and maintained, OWTS treat domestic wastewater to reduce its polluting impacts on the environment and to protect public health. The most common type of OWTS is the septic tank-leach field disposal system. Seepage pits are sometimes used when site conditions are not suitable for leachfields.

The purpose of a septic tank system is to treat household wastes so that the treated effluent will readily percolate into the soil for final treatment. Treatment of the waste is initially achieved by the removal of solids through settling and decomposition of some of the soluble organic chemicals in the tank portion of the system. Further treatment of organic chemicals, nutrients, and bacteria occurs as the effluent released from the tank percolates through the soil. Proper construction of septic systems is imperative. Poorly designed and constructed septic systems will not function properly and can result in pollution of surface or ground waters. Septic tank systems used in undersized lots or unsuitable soils are subject to failure, and can lead to untreated or poorly treated sewage surfacing into yards, roadside ditches, and surface waters, or seeping into ground water, thus creating a public nuisance and health hazard. Even well-functioning septic systems can pollute ground water under adverse conditions.

Conventional septic tank-leach field or seepage pit systems may be infeasible in some sites due to unfavorable site-specific soil or ground water conditions, such as, shallow soils, high ground water elevation, steep slopes, rocky soils, etc. In such instances, advanced or alternative OWTS may be appropriate. Examples of advanced or

alternative OWTS include mound systems, evapotranspiration systems, evapotranspiration/infiltration systems, small in-house package treatment facilities, media filters, aerobic treatment units, disinfection units, and other innovative approaches.

Advanced or alternative OWTS provide additional removal of pollutants such as pathogens, organics, suspended solids, oil and grease, and nitrogen found in wastewater. Several of these treatment systems have been certified by the National Science Foundation as being able to achieve federal treatment standards for removal of biodegradable organics and total suspended solids. Some have also been certified to achieve at least a fifty percent removal rate for nitrogen. Subsurface drip dispersal systems are often used for dispersal of effluent from advanced or alternative OWTS. Subsurface drip dispersal systems are a pressure-dosed method of effluent dispersal capable of delivering small, precise volumes of wastewater effluent to the soil. The drip lines are normally flexible polyethylene tubes that are about one-half inch in diameter. The drip lines are typically installed in shallow trenches about 2 feet apart and buried 6-12 inches beneath the soil. Because of the unique construction of subsurface drip dispersal systems, they may cause less site disruption during installation, and are adaptable to irregularly shaped lots, or lots with other difficult site constraints. Subsurface drip dispersal systems apply wastewater at the root zone of the soil, which allows for maximum uptake of nutrients in the treated wastewater by vegetation in the disposal area.

Nitrogen compounds, which are typically present in treated effluent from septic systems, are highly soluble and stable in aqueous environments. When not denitrified by bacteria or assimilated into organic growth in the unsaturated zone, these nitrogen compounds are easily transported to ground water. Although there is controversy about the possible health effects of nitrate on adults, it has been shown that high levels of nitrate cause methemoglobinemia (blue-baby syndrome) in infants. Both the federal drinking water standard of 10 mg/l nitrogen (or nitrate + nitrite) and the equivalent state drinking water standard of 45 mg/l nitrate (expressed as $NO_3$) is based on this relationship.

### *Management Principles for OWTS*

The following management principles are designed to ensure that the goals of the Basin Plan are implemented.

- OWTS must be designed, constructed, and installed so as to be capable of preventing pollution or contamination of the waters of the State or creating nuisance for the duration of the development.

- OWTS must be operated, maintained and monitored so as to continually prevent pollution or contamination of the waters of the State and the creation of a nuisance.

- The responsibility for both of the above must be clearly and legally assumed by an entity with the financial and legal capability to assure that the system provides protection to the quality of the waters of the State for the duration of the development.

### *Guidelines for New or Replacement OWTS*

The purpose of the guidelines below is to provide guidance to proponents of projects involving new discharges of waste from community or individual OWTS. However, the Regional Board may exercise discretion and approve exceptions to these guidelines if it is demonstrated that conformance with the above principles will be achieved. The Regional Board recognizes that there are certain actions which are best undertaken by local agencies to minimize the potential water quality problems resulting from new OWTS. The guidelines are based on the assumption that it is desirable that local agencies:

- Prohibit the use of new community and individual OWTS where existing community sewerage collection systems are reasonably available. The determination of whether or not existing systems are reasonably available should be the responsibility of the local agency or agencies having jurisdiction over the project.

- Prohibit the use of new individual OWTS for any subdivision of land unless the governing body having jurisdiction determines that the use of individual disposal systems will be in the best public interest.

- Assure that individual OWTS are maintained to the satisfaction of the responsible health officer. This could be accomplished through establishment of special maintenance districts, by the amendment of existing ordinances to assure adequate maintenance documented through periodic inspections, or other alternatives as deemed appropriate by the local health officer.

- Consider the cumulative impacts of individual OWTS discharges as a part of the approval process for development.

### *Community Sewerage Systems*

The Regional Board will regulate all discharges of wastes from community sewerage systems. The Regional Board will require a RWD to be filed for all proposed waste discharges which involve the use of new community sewerage systems.

The RWD must include the following:

- A final Environmental Impact Report or Negative Declaration covering the total project, unless categorically exempt, prepared and approved by the local lead agency pursuant to the California Environmental Quality Act (CEQA) of 1970 (as amended) and Chapter 3, Division 6, Title 14, of the CCR (as amended). In the approval process the Environmental Impact Report or Negative Declaration must be circulated through the State Clearinghouse; and

- Operation, maintenance, revenue and contingency plans for the wastewater treatment and disposal facilities or a commitment by the project proponent to prepare such plans and submit them to the Regional Board at least 60-days prior to the initiation of discharge.

The Regional Board strongly prefers that a public entity assume legal authority and responsibility for the ownership, operation, and maintenance of the proposed wastewater treatment and disposal system. This is because public entities provide permanency, expertise, and financial solvency.

In the absence of a satisfactory RWD, the discharge will be prohibited.

### *State OWTS Policy*

The purpose of the State Water Quality Control Policy for Siting, Design, and Maintenance of Onsite Wastewater Treatment Systems[7] (OWTS Policy) is to allow the continued use of OWTS, while protecting water quality and public health. The State Board adopted the OWTS Policy on June 19, 2012. The OWTS Policy recognizes that responsible local agencies can provide the most effective means to routinely manage OWTS. Therefore, it is the intent of the OWTS Policy to efficiently utilize and improve upon where necessary existing local programs through coordination between the State and local agencies. For this purpose, the OWTS Policy establishes a statewide, risk-based, tiered approach for the regulation and management of OWTS installations and replacements, and establishes the level of performance and protection expected from OWTS.

### *Waiver of Waste Discharge Requirements for Qualifying OWTS*

The OWTS Policy also waives the Water Code requirement that dischargers obtain Waste Discharge Requirements (WDRs) for OWTS that meet requirements specified in the OWTS Policy.

The Policy organizes OWTS into five separate implementation tiers (as outlined below). An OWTS that meets the criteria of one of the five tiers is eligible for the conditional waiver of WDRs, with regulation of the qualifying OWTS deferred to the approved local agency. In addition, to qualify for the waiver, owners of OWTS must comply with conditions specified in Section 12.0 of the OWTS Policy.

[7] The OWTS Policy can be found at http://www.waterboards.ca.gov/

### *Tier 0*

[illegible] requirements specified in Section 6.0 of the OWTS Policy. No action is required on the part of the owner, except maintaining the OWTS in good operating condition. An OWTS must have a projected flow of 10,000 gallons per day (gpd) or less to be included in Tier 0 of the OWTS Policy.

### *Tier 1*

This tier applies to new and replacement OWTS that meet the siting and design criteria specified in Sections 7.0 and 8.0 of the OWTS Policy. An OWTS must have a projected flow of 3,500 gpd or less to be included in Tier 1.

### *Tier 2*

This tier applies to new and replacement OWTS operating under an approved Local Agency Management Plan (LAMP). LAMPs allow local agencies to establish jurisdiction specific requirements and alternative design and siting criteria that may differ from those specified in the Tier 1 section of the OWTS Policy, and manage the installation of new and replacement OWTS under the LAMP. The alternative criteria can include local modifications of: system design requirements, siting controls such as system density and setback requirements, additional monitoring and maintenance requirements, design criteria for use of alternative or advanced OWTS, etc. Local agencies must consider the factors listed in Section 9.1 of the Policy in developing their LAMPs. OWTS meeting the requirements of a LAMP need not be regulated under WDRs issued by the Regional Board.

The OWTS Policy identifies the Regional Board designated to review and approve LAMPs for each County in the State, and requires the designated Regional Board to coordinate with other Regional Boards that have overlapping jurisdiction within the County[8]. San Diego County falls within the jurisdiction of both the San Diego Regional Board (Region 9) and the Colorado River Basin Regional Water Board (Region 7). The OWTS Policy designates the San Diego Regional Board as being responsible for review and approval of the LAMP for San Diego County. Riverside County falls within the jurisdiction of the San Diego (Region 9), Colorado River Basin (Region 7), and Santa Ana (Region 8) Regional Boards, while Orange County falls within the jurisdiction of the San Diego and Santa Ana Regional Boards. The OWTS Policy designates the Colorado River Basin and the Santa Ana Regional Boards as the lead Regional Water Boards responsible for review and approval of the LAMPs for Riverside and Orange Counties, respectively.

The San Diego Water Board authorizes the Executive Officer to review and administratively approve future modifications to the San Diego Department of Environmental Health (DEH) LAMP or decide to schedule an agenda item for further consideration of the San Diego DEH LAMP by the San Diego Water Board.

### *Tier 3*

This tier applies to existing, new, and replacement OWTS located within 600 feet of surface water bodies identified as impaired for nitrogen or pathogens due to possible contributions from OWTS discharges. The specific impaired water bodies are identified in Attachment 2 of the OWTS Policy. New or replacement OWTS near impaired water bodies must comply with any applicable TMDL or special provisions identified in a LAMP. New or replacement OWTS not located within 600 feet of water bodies listed in the OWTS Policy must meet the standards for supplemental treatment and other requirements specified in Tier 3. The OWTS Policy does not identify any qualifying impaired water bodies in the San Diego Region.

[8] See Attachment 3 of the OWTS Policy.

### *Tier 4*

This tier applies to any OWTS that require corrective action. OWTS included under Tier 4 are failing systems with:

- Surfacing effluent, failing septic tank systems or structural failure of septic tank leading to infiltrating ground water or exfiltrating wastewater; and

- Any OWTS that has affected or affects surface or ground water to a degree that creates a condition of pollution, makes surface or ground water unfit for drinking or other beneficial uses, or creates a condition of public nuisance.

These OWTS are required to be replaced or repaired to bring them under compliance with the OWTS Policy in a timely manner.

### *Report of Waste Discharge Submission for OWTS not Meeting Waiver Conditions*

The Regional Board will review specific proposals for OWTS that do not meet waiver conditions specified in the OWTS Policy or conditions specified in the applicable LAMP at the request of the appropriate local agency. For such proposals, a RWD must be filed with the Regional Board and WDRs must be obtained or waived by the Regional Board prior to recordation of the final map and/or issuance of a building permit. Before the Regional Board considers the RWD to be complete, the following technical information must be submitted:

- A hydrogeologic study which will, using accepted ground water hydrologic techniques and practices, assess the probable rise in the water table associated with the project, including effects of OWTS recharge, landscape irrigation, and ground water pumpage. The study will additionally address the impact of the projected water table rise or fall on the operation of new and existing septic systems.

- A nitrate study which will, using an acceptable mass balance method, demonstrate that the proposed project will not cause the concentrations of wastewater constituents in ground water to exceed applicable ground water quality objectives, particularly for nitrate. The study must also show that the project will not cause wastewater constituents in interconnected surface water to exceed applicable surface water quality objectives, particularly for total nitrogen.

In addition to the technical information submitted, the following conditions must be met:

- In most instances a public entity must assume legal authority and responsibility for the operation and maintenance of the proposed individual wastewater treatment and disposal systems;

- In some instances, such as commercial/industrial establishments, or projects involving only a single homesite, or special extenuating circumstances, the public entity condition may be set aside;

- A final Environmental Impact Report or Negative Declaration must be included covering the total project, unless categorically exempt, prepared and approved by the local lead agency pursuant to the California Environmental Quality Act of 1970 (as amended) and Chapter 3, Division 6, Title 14, of the California Administrative Code (as amended). In the approval process the Environmental Impact Report or Negative Declaration must be circulated through the State Clearinghouse;

- Operation, maintenance, revenue, and contingency plans must be submitted for the wastewater treatment and disposal facilities or a commitment must be made by the public entity to prepare such plans and submit them to the Regional Board at least 60-days prior to the initiation of discharge; and

- In the absence of a satisfactory Report of Waste Discharge, the discharge will be prohibited without prejudice.

## *WATER RECLAMATION AND REUSE*

Water reclamation is a process consisting of the following elements:

- Treatment of wastewater to a level of quality suitable for reuse;
- Transportation of reclaimed water to reuse areas; and
- Application of reclaimed water to an actual use.

Reclaimed water use typically falls into the following seven broad categories:

- Agricultural irrigation;
- Landscape irrigation (including highway landscape and golf courses);
- Impoundments for landscape, recreational or wildlife uses, wetland and wildlife enhancement;
- Industrial and Construction processes (e.g., cooling water, process water, washdown water or for dust control);
- Ground water recharge;
- Flushing of toilet and urinals in non-residential buildings; and
- Stream enhancement.

The State of California has a strong interest in promoting the conservation and efficient use of water through water reclamation. The California Constitution, Article X, section 2 provides that:

> "...Water resources of the state be put to beneficial use to the fullest extent of which they are capable, and that waste or unreasonable use of water be prevented, and that conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare..."

The State interest in the conservation and efficient use of its waters is further emphasized by Water Code section 13510 which deals specifically with water reclamation. Section 13510 provides that:

> "It is hereby declared that the people of the state have a primary interest in the development of facilities to reclaim water containing waste to supplement existing surface water and underground water supplies and to assist in meeting the future water requirements of the state."

In addition, Water Code section 13241 provides that the Regional Board consider the need to develop and use reclaimed water when establishing water quality objectives.

The State Board adopted the "*Policy with Respect to Water Reclamation In California*" and the related "*Action Plan for Water Reclamation in California*" in 1977 (State Board Resolution No. 77-1). The policy directs the State Board and Regional Boards to encourage reclamation and reuse of water, and to promote water reclamation projects which preserve, restore, or enhance instream beneficial uses. The policy also states that the State and Regional Boards recognize the need to protect public health and the environment in the implementation of reclamation projects.

The Porter-Cologne Water Quality Control Act also requires the State Board DDW to establish statewide reclamation criteria (see Table 4-4) for each type of reclaimed water use to protect public health. Any person proposing to discharge reclaimed water must file a report of waste discharge containing appropriate information related to the discharge with the Regional Board. The Regional Board, after consultation with State Board DDW, may adopt waste discharge requirements for the reclaimed water discharge.

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| Spray irrigation of food crops | Reclaimed water used for spray irrigation of food crops shall be at all times adequately disinfected, oxidized, coagulated, clarified, filtered wastewater. The wastewater shall be considered adequately disinfected if at some location in the treatment process, the median number of coliform organisms does not exceed 23 per 100 milliliters (ml) in more than one sample within any 30-day period. The median value shall be determined from the bacteriological results of the last 7 days for which analyses have been completed. |
| Surface irrigation of food crops | Reclaimed water used for surface irrigation of food crops shall be at all times an adequately disinfected, oxidized wastewater. The wastewater shall be considered adequately disinfected if at some location in the treatment process, the median number of coliform organisms does not exceed 2.2 per 100 ml as determined from the bacteriological results of the last 7-days for which analyses have been completed.<br><br>Orchards and vineyards may be surface irrigated with reclaimed water that has the quality at least equivalent to that of primary effluent provided that no fruit is harvested that has come in contact with the irrigating water or the ground. Exceptions to the quality requirements for reclaimed water used for irrigation of food crops may be considered by the State Department of Health on an individual basis where the reclaimed water is to be used to irrigate a food crop which must undergo extensive commercial, physical or chemical processing sufficient to destroy pathogenic agents before it is suitable for human consumption. |
| Irrigation of fodder, fiber and seed crops | Reclaimed water used for the surface or spray irrigation of fodder, fiber, and seed crops shall have a level of quality no less than that of primary effluent. |
| Irrigation of pasture for milking animals | Reclaimed water used for the irrigation of pasture to which milking cows or goats have access shall be at all times an adequately disinfected, oxidized wastewater. The wastewater shall be considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 23 per 100 ml, as determined from the bacteriological results of the last 7-days for which analyses have been completed. |
| Landscape irrigation of golf courses, cemeteries, freeway landscapes and similar areas | Reclaimed water used for the irrigation of golf courses, cemeteries, freeway landscapes, and landscapes in other areas where the public has similar access or exposure shall be at all times adequately disinfected oxidized wastewater. The wastewater shall be considered adequately disinfected if the median number of coliform organisms in the effluent does not exceed 23 per 100 ml as determined from the bacteriological results of the last 7-days for which analyses have been completed, and the number of coliform organisms does not exceed 240 per 100 ml in any two consecutive samples. |
| Permitted Use of Reclaimed Water | Summary of Title 22 (sections 60303 et. seq.) Health Requirements |

**Table 4 - 4 (continued). Permitted Uses and California Title 22 Health Requirements for Reclaimed Water.**

| Permitted Use of Reclaimed Water | Summary of Title 22 (sections 60303 et. seq.) Health Requirements |
|---|---|
| Irrigation of parks, playgrounds, schoolyards and similar areas | Reclaimed water used for irrigation of parks, playgrounds, schoolyards, and other areas where the public has similar access or exposure shall be at all times adequately disinfected, oxidized, coagulated, clarified, filtered wastewater or a wastewater treated by sequence of unit processes that will assure an equivalent degree of treatment and reliability. The wastewater shall be considered adequately disinfected if the median number of coliform organisms in the effluent does not exceed 2.2 per 100 ml, as determined from the bacteriological results of the last 7-days for which analyses have been completed. |
| Nonrestricted recreational impoundment (no limitations are imposed on body-contact sport activities) | Reclaimed water used as a source of supply in a nonrestricted recreational impoundment shall be at all times adequately disinfected, oxidized, coagulated, clarified, filtered wastewater. The wastewater shall be considered adequately disinfected if at some location in the treatment process, the median number of coliform organisms in the effluent does not exceed 23 per 100 ml in more than one sample within any 30 day period. The median value shall be determined from the bacteriological results of the last 7-days for which analyses have been completed. |
| Restricted recreation impoundment (recreation is limited to fishing, boating, and other non-body-contact water recreation activities) | Reclaimed water used as a source of supply in a restricted recreational impoundment shall be at all times an adequately disinfected, oxidized wastewater. The wastewater shall be considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 23 per 100 ml, as determined from the bacteriological results of the last 7-days for which analyses have been completed. |
| Landscape impoundment (aesthetic enjoyment or other function but no body-contact is allowed) | Reclaimed water used as a source of supply in a landscape impoundment shall be at all times an adequately disinfected, oxidized wastewater The wastewater shall be considered adequately disinfected if at some location in the treatment process the median number of coliform organisms does not exceed 23 per 100 ml, as determined from the bacteriological results of the last 7-days for which analyses have been completed. |
| Ground water recharge of domestic water supply aquifers | Recharge water requirements are made on a case-by-case basis to ensure that the water is of such quality that fully protects public health at all times. Factors considered include treatment provided, effluent quality and quantity, spreading operations, soil characteristics, hydrogeology, residence time, receiving water quality and distance to withdrawal. |
| Other uses (toilet flush, industrial cooling water, process water, seawater intrusion barrier) | User must demonstrate that methods of treatment and reliability features will assure an equal degree of treatment and reliability. |

When reviewing potential reclamation projects, the Regional Board must also consider potential impacts from reclamation on ground and surface water quality. It is common for the use of reclaimed water to cause an increase in total dissolved solids concentration in the receiving ground waters due to the effects of evapotranspiration. A variety of techniques can be employed to protect the beneficial uses of the receiving waters. Where well controlled irrigation is practiced, nitrate problems in the dry season will be controlled. Vegetative uptake will utilize soluble nitrates which could otherwise migrate into ground water. Demineralization techniques or source control of total dissolved solids may be necessary in some inland areas where ground waters have been or may be degraded. Presence of excessive salts, boron, or sodium could be the basis for rejection of proposals to irrigate cropland with effluent.

## *WATER RECLAMATION PROJECTS IN THE SAN DIEGO REGION*

The water supply in the San Diego Region is largely dependent upon water imported from northern California and the Colorado River. Future increases from these sources may be limited due to environmental concerns, contractual agreements, and over all capital costs. In light of the limited possibilities for future water sources, the need to develop water supply alternatives is important. For many water uses, reclaimed water is a viable alternative water supply.

The status of water reclamation projects in the San Diego Region during March 1993 is shown is shown in Table 4-5. For each water reclamation agency and/or facility in the San Diego Region, the table shows the permitted flow in MGD, the average effluent flow (in MGD), the average effluent flow reused (in MGD), the annual volume reused in million of gallons (MG) and acre-feet (AC-FT), the treatment process and disposal method, the type of use for the reclaimed water, the reclaimed water user and the status of the project. In the San Diego Region, a total of about 175 MGD of reclaimed water flow is permitted. About 16 MGD is reused from an average effluent flow of about 79 MGD. The annual volume reused is about 5,859 MG (18,597 AC-FT).

## *REGIONAL BOARD ACTION PLAN ON WATER RECLAMATION*

The Regional Board supports water reclamation and reuse to the maximum extent feasible to help meet the growing water needs of the Region. It has long been a policy of the Regional Board to encourage and promote water reclamation while taking into consideration the need to protect beneficial uses of surface and ground waters and protect the public health.

On March 24, 1986 the Regional Board adopted Resolution No. 86-06 which amended the Basin Plan to include an action plan for water reclamation. The policy described below updates and supersedes Resolution No. 86-06:

(1) The Regional Board will consider special amendments to the Basin Plan to encourage water reclamation.

(2) The Regional Board will consider comprehensive water quality monitoring programs for confirmation of original hydrogeological predictions, and an accurate measure of adverse ground water quality effects. These monitoring programs will be considered where water reclamation is not expected to result in adverse ground water quality impacts, and where ground water quality impacts are very difficult to predict.

(3) The Regional Board will consider projects involving stream and lagoon replenishment with reclaimed water where, as a minimum, a water quality management plan would be implemented and conformance with the State Board DDW wastewater reclamation criteria for nonrestricted recreational use would be achieved.

(4) The Regional Board will encourage use of ephemeral streams that are not used for domestic water supply, for the conveyance of reclaimed water for beneficial uses during periods of need.

## Table 4-5. Water Reclamation Projects as of March 1993.

| Name of Agency/ Facility | Hydro-logic Unit | Permit Flow MGD | Average Effluent Flow MGD | Average Effluent Flow Reused MGD | Annual Volume Reused MG | Annual Volume Reused AC-FT | Treatment Process and Disposal | Type of Use | Reclaimed Water User | Status |
|---|---|---|---|---|---|---|---|---|---|---|
| **ORANGE COUNTY** | | | | | | | | | | |
| Joplin Youth Center | 1.20 | 0.0075 | 0.0067 | 0.0067 | 2.45 | 7.50 | AS, PB | Landscape Irrigation, Ground Water Recharge | | Operating |
| San Clemente, City of San Clemente WRP | 1.20 | 7.00 | 3.996 | 0.610 | 222.65 | 683.28 | AS, PB, CH, SF, OF | Golf Course Irrigation, Construction | Municipal GC, Talega, Pacific GC | Operating |
| **SOUTH ORANGE COUNTY RECLAMATION AUTHORITY SERVICE AREA** | | | | | | | | | | |
| El Toro WD | 1.13 | 5.50 | 0.000 | 0.000 | 0.00 | 0.00 | AS, OF | Landscape Irrigation | | Proposed |
| Los Alisos WD | 1.13 | 5.50 | 0.000 | 0.000 | 0.00 | 0.00 | AS, OF | Landscape Irrigation | | Proposed |
| Moulton Niguel WD Plant 3A STP | 1.20 | 2.40 | 0.484 | 0.484 | 176.66 | 542.15 | AS, CH | Golf Course & Landscape Irrigation | Mission Viejo Country Club | Operating |
| Laguna Niguel (AWMA/MNWD) Joint Regional WRF | 1.13<br>1.14 | 12.00 | 5.191 | 0.278 | 100.67 | 308.93 | AS, F, CL, OF | Landscape Irrigation | El Niguel Country Club | Operating |
| Santa Margarita WD Oso Creek STP | 1.13<br>1.20 | 3.00 | 1.693 | 1.693 | 617.95 | 1896.39 | AT, F, CH, Of | Landscape Irrigation | Oso Valley Asn. CALTRANS | Operating |
| Nichols Institute | 1.20 | 0.04 | 0.032 | 0.025 | 9.13 | 28.00 | | Property landscaping | Nichols Inst. | Operating |
| Chiquita WRF | 1.20<br>1.30 | 3.50 | 2.103 | 0.016 | 5.92 | 18.18 | CH,F | Nursery, Construction, Dust Control | SeaTree Nursery Los Flores Dev. Desecha Landfill | Operating |
| South Coast County WD | 1.12<br>1.13<br>1.14 | 2.61 | 0.738 | 0.738 | 269.19 | 826.10 | AS, F, CH, OF | Irrigation of parks, greenbelt, golf course | AVCO Community De Ben Brown GC Orange County Parks | Operating |
| Trabuco Canyon WD Trabuco WRP | 1.13<br>1.20 | 0.25 | 0.459 | 0.561 | 204.77 | 628.40 | OD, F, CH, PB | Golf Course Irrigation | Dove Canyon GC | Operating |
| **RIVERSIDE COUNTY** | | | | | | | | | | |
| Eastern Municipal WD Rancho Calif. STP | 2.51 | 5.00 | 4.800 | 1.210 | 441.65 | 1355.4 | AS, PB | Irrigation Sod Farm | Ralph Daily Sod Farm | Operating |
| Rancho California WD Joaquin Ranch STP | 2.31 | 0.60 | 0.575 | 0.376 | 137.24 | 421.2 | OD, F, CH, PB | Golf Course Irrigation | Bear Creek Golf Course | Operating |
| Santa Rosa SBR WRF | 2.51 | 1.00 | 0.345 | 0.345 | 125.93 | 386.4 | F, CH | Ground Water Recharge | | Operating |

***TREATMENT PROCESS: AQ=aquaculture, AS=activated sludge, CH=chlorination, EA=extended aeration, F=filtration, MS=microscreen, OD=oxidation ditch, OF=ocean outfall, OP=oxidation pond, PB=percolation pond or bed, PS=primary sedimentation, RBC=rotating biological contactor, RO=reverse osmosis, TF=trickling filter***

| | | | Average Effluent Flow | | Annual Volume Reused | | Treatment Process and Disposal | Type of Use | Reclaimed Water User | Status |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | MGD | Reused MGD | MG | AC-FT | | | | |
| SAN DIEGO COUNTY | | | | | | | | | | |
| Buena Sanitation Dist. Shadow Ridge WRP | 4.32 | 1.10 | 0.809 | 0.062 | 22.63 | 69.4 | MS, RBC, F, RO, CH, OF | Irrigation | Shadow Ridge Golf Course | Operating |
| Encina | 4.40 | 22.50 | 19.000 | 0.001 | 0.37 | 1.1 | AS, CH, OP | Landscape Irrigation | Caltrans | Operating |
| Escondido WRP | 4.52<br>5.21 | 5.00 | 0.003 | 0.003 | 1.10 | 3.4 | AS, CH | Internal Use, Landscape Irrigation, Golf Course | Escondido San Marcos | Operating |
| Fairbanks Ranch WRP | 5.12 | 0.28 | 0.180 | 0.180 | 65.70 | 201.6 | EA, PB | Ground Water Recharge | | Operating |
| Fallbrook WD Plants 1 & 2 | 2.13 | 3.10 | 1.720 | 0.160 | 58.40 | 179.2 | PS, EA, CH, OF | Landscape Irrigation (I-5 Freeway) | Caltrans Nurseries | Operating |
| 4-S Ranch 4-S Ranch WRP | 9.31 | 0.60 | 0.062 | 0.038 | 13.69 | 42.0 | CH | Compaction Irrigation | Construction Pasture | Operating |
| Leucadia Water Dist. F.R. Gafner WRF | 4.51 | 0.75 | 0.000 | 0.000 | 0.00 | 0.0 | TF, PS, CH, OF | Aviara and La Costa Country Club Irrigation | La Costa & Aviara Country Clubs | Operating |
| Oceanside, City of N. San Luis Rey STP | 3.12 | 10.50 | 8.700 | 0.020 | 7.30 | 22.4 | AS, CL, OF, PB | Golf Course Irrigation, Ground Water Recharge | Oceanside Golf Course | Operating |
| La Salina | 4.10 | 0.50 | 0.000 | 0.000 | 0.00 | 0.00 | EA, AS, CH | Landscape Irrigation | Oceanside | Operating |
| Otay Municipal WD Ralph W Chapman WRF | 9.21 | 1.30 | 0.900 | 0.900 | 328.50 | 1008.1 | EA, F, RO, CH, OF | Landscape Irrigation | Eastlake Development | Operating |
| Otay Estates Hidden Valley Estates | 9.11 | 0.15 | 0.000 | 0.000 | 0.00 | 0.0 | AS, CH | Landscape Irrigation | | Operating |
| Padre Dam Municipal WD Water Reclamation Pl | 7.12 | 1.00 | 0.521 | 0.521 | 190.17 | 583.6 | AS, PS, OP, CH, OF | Recreational Lakes & Park Irrigation | Santee Lakes | Operating |
| Pauma Valley | 4.63 | 0.00 | 0.000 | 0.000 | 0.00 | 0.0 | EA, CH | Ground Water Recharge | | Proposed |
| Ramona Municipal WD Santa Maria WWTP | 5.41 | 1.00 | 0.600 | 0.600 | 219.00 | 672.1 | EA, PB | Irrigation, Pasture Ground Water Recharge | Ramona WD site | Operating |
| San Vicente STP | 7.23 | 0.60 | 0.541 | 0.541 | 197.47 | 606.0 | OD, CH, F, RO, PB | Avocado Grove Irrig. Ground Water Recharge | Solk Ranch | Operating |
| Rancho Santa Fe | 4.61 | 0.45 | 0.220 | 0.220 | 80.30 | 246.4 | AS, EA, CH, PB | Golf Course Irrigation | Rancho Santa Fe Golf Course | Operating |
| San Diego, County of Descanso STP | 9.31 | 0.04 | 0.026 | 0.026 | 9.56 | 29.3 | AS, PB | Landscape Irrigation | Descanso Facil. | Operating |
| Julian | 7.43 | 0.04 | 0.035 | 0.035 | 12.78 | 39.20 | OP | Irrigation (cattle feed) | | Operating |
| Mount Woodson SD | 5.11 | 0.08 | 0.000 | 0.000 | 0.00 | 0.0 | CH | Irrigation | Golf Course | Operating |
| Rancho Cielo SD | 5.11 | 0.20 | 0.000 | 0.000 | 0.00 | 0.0 | | Landscape Irrigation | | Operating |
| Whispering Palms CSD | 5.11 | 0.40 | 0.175 | 0.175 | 63.88 | 196.0 | EA, CH, PB | Ground Water Recharge | Del Rayo Prop. | Operating |
| San Diego, City of Water Utilities Dept San Pasqual WAP STP | 5.31 | 1.00 | 0.0190 | 0.0190 | 6.94 | 21.3 | AS, CH, PB | Irrigation & Animal Stock Watering | Wild Animal Park | Operating |

***TREATMENT PROCESS: AQ=aquaculture, AS=activated sludge, CH=chlorination, EA=extended aeration, F=filtration, MS=microscreen, OD=oxidation ditch, OF=ocean outfall, OP=oxidation pond, PB=percolation pond or bed, PS=primary sedimentation, RBC=rotating biological contactor, RO=reverse osmosis, TF=trickling filter***

## Table 4-5 (continued). Water Reclamation Projects as of March 1993.

| Name of Agency/ Facility | Hydro-logic Unit | Permit Flow MGD | Average Effluent Flow MGD | Average Effluent Flow Reused MGD | Annual Volume Reused MG | Annual Volume Reused AC-FT | Treatment Process and Disposal | Type of Use | Reclaimed Water User | Status |
|---|---|---|---|---|---|---|---|---|---|---|
| **SAN DIEGO COUNTY CONTINUED** | | | | | | | | | | |
| Mission Valley Pilot Aquaculture Project | 7.11 | 1.00 | 0.026 | 0.025 | 9.13 | 28.0 | AQ, QF | Freeway Landscaping (I-15 & I-8) | Caltrans | Operating |
| North City | 6.10 | 30.00 | 0.000 | 0.000 | 0.00 | 0.0 | | Landscape Irrigation | Caltrans | Operating |
| San Elijo JPA | 4.51 | 3.68 | 0.000 | 0.000 | 0.00 | 0.0 | CH, AS | Landscape Irrigation | Encinitas, Del Mar | Operating |
| US Marine Corps Base, Camp Pendleton Plant No. 1 | 2.13 | 1.50 | 0.429 | 0.687 | 247.54 | 759.7 | TF, CH, PB | Ground Water Recharge | Camp Pendleton | Operating |
| Plant No. 2 | 2.11 | 0.92 | 0.309 | 0.694 | 253.13 | 776.8 | TF, CH, PB | Golf Course Irrigation | Camp Pendleton | Operating |
| Plant No. 3 | 2.12 | 1.10 | 0.492 | 0.753 | 274.66 | 842.9 | TF, CH, PB | Ground Water Recharge | Camp Pendleton | Operating |
| Plant No. 8 | 1.51 | 0.59 | 0.074 | 0.296 | 107.86 | 331.0 | TF, CH, PB | Ground Water Recharge | Camp Pendleton | Operating |
| Plant No. 9 | 1.52 | 1.10 | 0.142 | 0.357 | 130.34 | 400.0 | TF, CH, PB | Ground Water Recharge | Camp Pendleton | Operating |
| Plant No. 10 | 1.51 | 0.85 | 0.325 | 0.378 | 138.08 | 423.7 | TF, CH, PB | Ground Water Recharge | Camp Pendleton | Operating |
| Plant No. 11 | 1.51 | 0.85 | 0.836 | 1.088 | 397.01 | 1218.4 | TF, CH, PB | Ground Water Recharge | Camp Pendleton | Operating |
| Plant No.12 | 1.40 | 0.85 | 0.142 | 0.420 | 153.37 | 470.7 | TF, CH, PB | Ground Water Recharge | Camp Pendleton | Operating |
| Plant No. 13 | 2.11 | 2.50 | 1.397 | 1.225 | 447.16 | 1372.3 | TF, CH, PB | Ground Water Recharge | Camp Pendleton | Operating |
| Plant No. 16 | 1.53 | 0.03 | 0.008 | 0.008 | 2.74 | 8.4 | EA, PB | Ground Water Recharge | Camp Pendleton | Operating |
| Vallecitos WD Meadowlark WRP | 4.51 | 2.00 | 0.995 | 0.525 | 191.63 | 588.1 | MS, RBC, F, CH, OF | Golf Course Irrigation | La Costa GC Carlsbad City | Operating |
| Valley Center MWD Lower Moosa Canyon WRP | 3.13 | 0.50 | 0.250 | 0.250 | 91.25 | 280.0 | AS, CH, PB | Golf Course Irrigation Ground Water Recharge | Circle R GC Valley Center MWD | Operating |

***TREATMENT PROCESS: AQ=aquaculture, AS=activated sludge, CH=chlorination, EA=extended aeration, F=filtration, MS=microscreen, OD=oxidation ditch, OF=ocean outfall, OP=oxidation pond, PB=percolation pond or bed, PS=primary sedimentation, RBC=rotating biological contactor, RO=reverse osmosis, TF=trickling filter***

## Summary of San Diego Region Water Reclamation Projects as of March 1993

| COUNTY SUBTOTALS | PERMIT FLOW | AVERAGE EFFLUENT FLOW | | ANNUAL VOLUME REUSED | |
|---|---|---|---|---|---|
| | (MGD) | GENERATED (MGD) | REUSED (MGD) | (MG) | (AC-FT) |
| Orange | 41.81 | 14.70 | 4.41 | 1,609.37 | 4,938.94 |
| Riverside | 35.20 | 25.532 | 1.997 | 728.91 | 2,236.9 |
| San Diego | 98.05 | 38.94 | 10.20 | 3,721.65 | 11,421.24 |
| **REGION TOTALS** | 175.06 | 79.171 | 16.603 | 6,059.9 | 18,597 |

(5) The Regional Board will consider the possibilities for the buyout of a beneficial use that is only minimally realized, and that if protected, would stand in the way of a water reclamation project.

(6) The Regional Board will continue efforts to seek the most recent and accurate environmental and technical information for the purpose of reviewing Basin Plan standards pertaining to the discharge of reclaimed water.

(7) The Regional Board will require all ocean and inland dischargers, having the potential to produce reclaimed water, to develop water reclamation plans.

(8) The Regional Board will encourage economic incentives for using reclaimed water, such as rebates by the San Diego County Water Authority and the Metropolitan Water District of Southern California to water suppliers engaged in water reclamation.

(9) The Regional Board will seek funding for studies to evaluate the potential of water reclamation in various areas of the Region including streams and coastal lagoons.

(10) The Regional Board will take appropriate actions, recommend legislation, and recommend actions by other planning agencies (county, federal, etc.) in the areas of (1) planning, (2) project funding, (3) regulation and enforcement, (4) research and demonstration, and (5) public involvement and information.

(11) The Regional Board will encourage and support measures which conserve the water resources of the San Diego Region.

(12) The Regional Board will encourage other agencies to assist in implementing this policy.

(13) As mitigation against potential nuisance odors and health hazards resulting from reclaimed water use, the Regional Board will continue to adopt and enforce waste discharge requirements containing prohibitions against nuisance odors and implementing the State Board DDW Wastewater Reclamation Criteria.

(14) The Regional Board will prepare Basin Plan amendments necessary for implementation of water reclamation projects in compliance with state policy for water quality control and, to the extent surface waters will be affected, with Environmental Protection Agency water quality standards regulations. Site specific environmental impacts will be evaluated in conformance with the California Environmental Quality Act (CEQA) for specific Basin Plan amendments.

## *FACTORING WATER SUPPLY CONSIDERATIONS INTO THE REGIONAL BOARD REGULATION OF WATER RECLAMATION PROJECTS*

Conventional reclamation facilities are not designed to reduce mineral constituents. Consequently, the mineral effluent quality is dependent on the composition of the water supply plus the mineral pickup during its use. Historically, water supply TDS concentrations have varied significantly. For example, concentrations of TDS of the blended water stored in Lake Skinner ranged from below 400 milligrams per liter (mg/l) to above 700 mg/l between 1985 and 1995.

Residential wastewater discharges will typically be 250 to 300 mg/l higher in TDS than their water supply source. Self-regenerating water softeners, brine from industrial dischargers, and ground water infiltration can further increase TDS concentrations in wastewater effluent. Many wastewater management agencies within the region are implementing programs to minimize the incremental pickup of minerals from these sources. These programs have had varying degrees of success.

Effective water conservation measures that are being implemented within the region may result in higher mineral and other constituent concentrations in wastewater effluent. Although the volume of wastewater is reduced by water conservation, the mineral and organic loading from its use remains nearly constant. As a result, the strength of the wastewater influent becomes stronger. In some cases, the characteristics of the wastewater influent may range briefly above the design parameters of the treatment plant.

In recognition of the variables in wastewater quality that are beyond the control of the discharger, the Regional Board authorizes the Executive Officer to suspend formal enforcement action, when a discharger submits an initial technical report with subsequent quarterly updates, that demonstrate to the satisfaction of the Executive Officer, compliance with the following conditions:

(1) The discharge is not subject to regulation by means of a NPDES Permit; and

(2) The enforcement action is only for violations of discharge specifications for mineral constituents, total suspended solids (TSS), biological oxygen demand (BOD) or carbonaceous biological oxygen demand (CBOD); and

(3) The effluent violations are due solely to changes in the quality of the imported water supply and/or to water conservation measures being implemented within the service area tributary to the treatment plant; and

(4) The discharge does not result in a mass loading of TSS, BOD and CBOD that exceeds the loading prior to implementation of water conservation measures; and

(5) The discharge will not cause Basin Plan water quality objectives to be exceeded, in the long term; and

(6) The discharge will not cause a violation of any applicable section from Title 22 of the CCR or any requirement specified by either the State Board DDW or the appropriate county health officer for the protection of public health; and

(7) The discharge does not contain a concentration of TDS exceeding 1,500 mg/l, or the concentration in the water supply plus 500 mg/l, whichever is less, with comparable adjustments for other mineral constituents; and

(8) The discharger implements a program to identify major sources of the mineral constituents of concern in the discharge, including but not limited to water softener regeneration brine; and to determine the average contribution of each major source and the best available options for reducing levels in the discharge; and to identify any negative effects on the potential for water reclamation caused by the failure to control the constituents of concern in the discharge. The program should include a time schedule to reduce mineral constituents in the discharge as necessary to assure that the potential for water reclamation will be realized to the maximum extent practicable.

## *RECLAIMED WATER CONFORMANCE WITH WATER QUALITY OBJECTIVES*

The Regional Board has established various policies concerning the compliance of reclaimed water discharges with applicable Basin Plan water quality objectives. These policies are described below.

### *DISCHARGES TO COASTAL LAGOONS FROM PILOT WATER RECLAMATION PROJECTS*

The Regional Board may grant an exception to the "Biostimulatory Substances" water quality objective described in Chapter 3 to provide for discharges to coastal lagoons from pilot water reclamation projects. The project proponent must demonstrate that the pilot water reclamation project is consistent with the conditions described in the Principles of the State Water Resources Control Board's Policy and Action Plan for Water Reclamation in California. The Policy and Action Plan for Water Reclamation in California was adopted by the State Board in January 1977 and is summarized below. In addition, the proponent must demonstrate that the threat of eutrophication as a result of the addition of nitrogen and/or phosphorus is reduced as a consequence of one or more of the following factors:

- Waters of the coastal lagoon are highly laden with natural silts or colors which reduce the penetration of sunlight needed for photosynthesis;

- The coastal lagoon is characterized by morphometric features of steep banks, great depths, and substantial flows which have contributed to a history of no plant problems;

- The coastal lagoon is managed primarily for waterfowl or other wildlife;

- An identified element other than nitrogen or phosphorus is limiting to plant growth in the coastal lagoon, and the level and nature of the limiting element would not be expected to increase to an extent that would influence eutrophication; or

- Control of nitrogen and/or phosphorus in the coastal lagoon cannot be sufficiently effective under present technology to make phosphorus or nitrogen the limiting nutrient.

The Principles of the Policy and Action Plan for Water Reclamation in California provide, in part, that water reclamation projects shall be encouraged which do not adversely impact vested water rights or unreasonably impair instream beneficial uses or place an unreasonable burden on present water supply systems, and which meet the following additional conditions:

- Beneficial use will be made of wastewaters that would otherwise be discharged to marine or brackish receiving waters or evaporation ponds;

- Reclaimed water will replace or supplement the use of fresh water or better quality water; or

- Reclaimed water will be used to preserve, restore, or enhance instream beneficial uses which include, but are not limited to, fish, wildlife, recreation, and aesthetics associated with any surface water or wetlands.

Exceptions to the numerical water quality objectives will be made only when a pilot reclamation project meets the following criteria:

- Need for the reclaimed water is demonstrated;

- Alternative disposal facilities are available in the event discharge to a coastal lagoon proves unfeasible;

- Conformance with the State Board's Water Quality Control Policy for the Enclosed Bays and Estuaries of California is demonstrated;

- Data will be generated that will be useful and timely for Regional Board review of water quality objectives for nutrients; and

- The project will include a lagoon management plan addressing the proposed methods of identifying and eliminating any pollution, contamination, or nuisance problems resulting from the proposed discharge and clearly identifying management responsibilities and capabilities.

## *DISCHARGES TO INLAND SURFACE WATERS*

Regional Board Resolutions Nos. 90-53 and 91-23 established an alternate method of conformance with the biostimulatory substances water quality objectives for portions of the San Diego River and Santa Margarita River. The Policy presented below supersedes Resolutions Nos. 90-53 and 91-23 and is applicable to all inland surface waters of the San Diego Region at a point downstream of lakes or reservoirs used for municipal water supply.

The Regional Board has developed an alternate method of showing compliance with the biostimulatory substances water quality objective contained in Chapter 3 to:

- Promote water reclamation;

- Enhance opportunities for reclaimed water discharges to inland surface waters; and

- Protect and enhance existing inland surface water beneficial uses through the greater use of reclaimed water.

The alternate method of compliance described below is applicable to reclaimed water discharges to inland surface waters at a point downstream of lakes or reservoirs used for municipal water supply. The alternate method of compliance is meant to encourage reclaimed water discharges into inland surface waters without degradation of the ambient water quality or adverse effects on beneficial uses.

### *Compliance Methods*

The Regional Board will establish appropriate effluent limitations for nitrogen and phosphorus in waste discharge requirements for discharges of reclaimed water to surface waters using one of the following methodologies:

- The Regional Board may use the goal for phosphorus concentration in flowing water contained in the Biostimulatory Substances objective as guidance in establishing appropriate effluent limitations; or

- Alternatively, the Regional Board may determine compliance with the narrative objective based upon the following four factors:

  - ✓ Measurement of ambient concentrations of nitrogen and phosphorus;

  - ✓ The dissolved oxygen requirements of downstream beneficial uses;

  - ✓ Use of best available technology (BAT) economically feasible for the removal of nutrients; and

  - ✓ The development and implementation of a watercourse monitoring and management plan.

Best available technology for the removal of nutrients includes biological and chemical removal. The extent to which the Regional Board may require additional removal of nutrients through chemical addition processes will be based upon an evaluation of the economic feasibility of this additional treatment in concert with an evaluation of the effectiveness of the watercourse monitoring management plan.

The watercourse monitoring and management plan shall include:

- A comprehensive program for chemical monitoring in receiving waters and effluent that will generate adequate data on ammonia nitrogen, nitrate nitrogen, nitrite nitrogen, organic nitrogen, total phosphate, ortho phosphate, dissolved oxygen (including vertical and diurnal dissolved oxygen profiles), pH, turbidity, biochemical oxygen demand (BOD) and other appropriate constituents and properties which may contribute to, or result from, nutrient related problems and impact beneficial uses.

- A comprehensive program for physical and biological monitoring in the receiving waters that will generate adequate data on chlorophyll 'a', corrected chlorophyll 'a', pheophyton 'a'; temperature (including diurnal and vertical temperature profiles); acute and chronic toxicity; the diversity and numbers of microinvertebrates, macroinvertebrates, and fish; the dynamics of the aquatic flora (macroalgae, phytoplankton, and emergent vegetation) and the related dissolved oxygen regime; substrate composition; frequency of nuisance conditions; flow rate; and other appropriate constituents and properties which may contribute to nutrient related problems and impact beneficial uses.

- A comprehensive program for physical and biological monitoring of the effluent that will generate adequate data on flow, temperature, chronic and acute toxicity, and other appropriate constituents which may contribute to nutrient related problems and impact beneficial uses.

- A procedure for evaluating the data collected under items (1), (2), and (3) above and determining the potential for nutrient related problems that may impact beneficial uses.

- Development and implementation of preventive and corrective actions that will ensure that a discharge containing nutrients will not adversely impact beneficial uses. These preventative and corrective actions may include, but are not limited to, the following:

  - ✓ Achievement of more stringent effluent limits for nutrient constituents discharged to the watercourse, through additional chemical treatment methods at the treatment facility, to further reduce nutrient loading to the river;

  - ✓ Maintenance of minimum reclaimed water flows discharged to the watercourse to prevent stagnant areas subject to nutrient related problems and to maintain the aquatic and riparian habitat beneficial uses that have been enhanced and/or created by such a discharge;

  - ✓ Effective measures for the instream chemical treatment of surface waters to prevent nutrient and stagnant water related nuisance problems that can adversely impact aquatic habitat beneficial uses, where this instream treatment will not adversely impact beneficial uses;

  - ✓ Effective measures for the physical management of the watercourse channel and vegetation;

  - ✓ Effective source control measures to reduce the amount of nutrient constituents in the reclaimed water; and

  - ✓ Other measures deemed appropriate and necessary by the Regional Board to ensure compliance with the Basin Plan narrative objective for nutrients and for the protection of beneficial uses.

### *Additional Mitigation*

As mitigation against adverse impacts of nuisance odors and health hazards resulting from use of reclaimed water, the Regional Board will continue to adopt and enforce waste discharge requirements containing prohibitions against creation of nuisance odors and implementing the State Board DDW Water Reclamation Criteria.

Additionally, as mitigation measures against degradation of ground and surface water quality resulting from an inland reclaimed water discharge, the Regional Board will require well head treatment or treatment at the point of use, or other appropriate measures acceptable to the Board, adequate to maintain the existing quality of ground and surface waters and the beneficial uses for all ground and surface waters adversely impacted by a discharge. The Regional Board will require monitoring of all ground water wells and legal direct diversions of surface water prior to permitting a discharge in order to establish the baseline quality that must be maintained.

As mitigation against any adverse effects to instream or downstream surface or ground water quality and the environment resulting from the discharge of reclaimed water, the Regional Board will require the discharger to establish and implement a comprehensive river monitoring and management program. The implementation of the watercourse monitoring and management plan will often require close coordination between many different public and private entities. The Regional Board shall recognize an agency to implement the watercourse monitoring and management plan and such recognition shall be made part of the provisions of appropriate waste discharge requirements for the discharge.

The watercourse monitoring and management plan, and all the associated requirements, shall apply to all downstream waters, including rivers, lagoons, estuaries, and bays, which may be impacted by the reclaimed water discharge. The Regional Board will regulate the volume of reclaimed water discharged into all inland surface waters to those levels which do not significantly and adversely alter the salinity regimes of downstream lagoons, estuaries, or bays. This regulation of flows will include a prohibition of fresh water flows that could result in the conversion of a lagoon, estuary, or bay from a saline environment to a fresh water environment. Salt marsh habitats are to be considered an integral part of the lagoon, estuary, or bay to which they are associated, and therefore shall be fully protected from conversion.

### *Implementation of Ground Water Quality Objectives for Reclaimed Water Discharges*

In order to facilitate water reclamation in the Region, the Regional Board, adopted Resolution No. 90-61 on November 5, 1990. Resolution No. 90-61 established a methodology for determining reclaimed water effluent limits. The policy described below updates and supersedes Resolution No. 90 61.

The Regional Board shall regulate discharges of reclaimed water by establishing effluent limitations designed to protect beneficial uses and ensure compliance with State Board Resolution No. 68-16. Use of adequately treated reclaimed water for irrigation or ground water recharge shall be encouraged in basins where reuse is clearly beneficial. Regulation of discharges of reclaimed water, where the reclaimed water displaces the use of imported water, or ground water having a quality exceeding the ground water quality objective, shall be in the following manner:

- For discharges upgradient of municipal water supply reservoirs the Regional Board shall adopt numerical effluent limitations for constituents at levels no lower than the quality of the basin's water supply but no higher than the Basin Plan ground water quality objective.

- In ground water basins not upgradient of municipal water supply reservoirs the Regional Board shall adopt numerical effluent limitations for constituents at levels no lower than the quality of the basin's water supply concentration plus an incremental increase equal to the typical incremental increase added to the water supply as a result of domestic use. The effluent limitations shall be no higher than the Basin Plan ground water quality objective.

- For discharges where the discharger has demonstrated sufficient assimilative capacity exists and ground water quality objectives will not be exceeded, the Regional Board may consider adoption of numerical effluent limitations for constituents based on the discharge quality and assimilative capacity analysis results.

- The Regional Board shall also require the implementation of effective salinity source control measures to ensure a reclaimed water quality that is suitable for long-term agricultural and landscape irrigation.

## *WATER RECLAMATION UNDER RESOLUTION NO. 81-16*

On March 23, 1981, the Regional Board adopted Resolution No. 81-16 which modified the water quality standards by relaxing the ground water objectives and modifying the beneficial use designations for portions of the Aliso Hydrologic Subarea (HSA) 901.13, Carlsbad HSA 904.21, Agua Hedionda HSA 904.31, Batiquitos HSA 904.51, and Telegraph HSA 909.11. These areas are described in Table 3-3. The terms and conditions of Resolution No. 81-16 are incorporated in this Basin Plan; accordingly Resolution No. 81-16 is superseded. The use of reclaimed water in these areas is subject to the following provisions:

- Notwithstanding the water quality objectives, the Regional Board will regulate waste discharges in the affected portions of Hydrologic Subareas 904.21 and 904.31 in a manner that will protect the waters produced by the existing operating wells. A presently existing ground water use will be considered terminated when the well has been abandoned pursuant to County of San Diego Water Well Standards.

- In applying the modified standards, the Regional Board will condition waste discharge requirements for discharges of domestic and municipal wastewater to require that the wastewater be reclaimed and reused in a manner that will displace the need for approximately equal volumes of imported potable water.

## *WATER RECLAMATION AS AN ALTERNATIVE TO OCEAN DISPOSAL*

The State Board in Order No. WQ 84-7 concluded that water reclamation should be carefully considered by persons proposing to discharge substantial quantities of once-used wastewater to the ocean particularly in a water short area where water is imported. Order No. WQ 84-7 directs the regional boards to require persons applying for permits to discharge once-used wastewater to the ocean in water-short areas to justify as part of each report of waste discharge why the wastewater is not being reclaimed.

The San Diego Region water supply is primarily imported water and the Region is clearly a water short area. Pursuant to State Board Order No. 84 7, the Regional Board will require persons proposing a discharge of once-used wastewater into the ocean to:

- Carefully analyze as an alternative, or partial alternative, the feasibility of reclaiming the wastewater for a beneficial use in lieu of ocean disposal.

- Submit, with the report of waste discharge in application for waste discharge requirements, sufficient information to justify why any wastewater proposed for discharge to the ocean after a single use is not being reclaimed for a beneficial use.

Reports of waste discharge which do not contain the water reclamation feasibility analysis described above, to the satisfaction of the Regional Board Executive Officer, will be considered incomplete and the Regional Board will not issue waste discharge requirements for the proposed discharge.

### *RECLAIMED WATER STORAGE REQUIREMENTS*

During the winter season, wet weather, and other periods when there is little or no demand, treatment plants continue to operate at normal flows and the excess treated effluent must either be: (1) discharged to storage facilities until such time as the irrigation demand requires the use of the stored water; (2) discharged through a fail-safe land outfall connection to an ocean outfall under the terms of an NPDES permit; or (3) discharged to inland surface waters for ground water recharge and/or stream replenishment under the terms of an NPDES permit. Theoretical water balance calculations for disposal of reclaimed water at golf courses and other reuse sites in the Region indicate that storage facilities should be sized for 84-days of storage. (1975 Comprehensive Water Quality Control Plan Report, Page II-16-32). In situations where reclaimed water storage ponds are necessary, the Regional Board will require reclaimed water producers to:

- Provide 84-days of storage capacity; or

Provide storage capacity based upon water balance calculation procedures such as described in:

- USEPA. 1981. Process Design Manual for Land Treatment of Municipal Wastewater. Center for Environmental Research Information. Cincinnati, OH. EPA 625/1-81-013 (COE EM1110-1-501).

# *INDUSTRIAL WASTE*

## *PRETREATMENT PROGRAM FOR INDUSTRIES*

It is generally recognized that the discharge of industrial pollutants can be controlled most economically at their source. This is particularly true for industries discharging waste to municipal wastewater treatment plants (commonly called "POTWs" for "publicly owned treatment works"). On that basis USEPA has developed pretreatment requirements (40 CFR 403) for many industries and has developed minimum standards for POTW pretreatment programs. A POTW is required to implement a pretreatment program as a condition of its NPDES permit if its design flow is greater than five MGD or there are significant industrial users discharging to the POTW. POTWs with design flows less than 5 MGD may also be required to establish a pretreatment program if nondomestic waste causes upsets, sludge contamination, or violations of NPDES permit conditions, or if industrial users are subject to national pretreatment standards.

The goal of the USEPA's National Pretreatment Program is to protect municipal treatment plants and the environment from the adverse impact that may occur when hazardous or toxic wastes are discharged into a sewer system. This protection is achieved mainly by regulating nondomestic users of POTWs that discharge toxic wastes or unusually strong conventional wastes. Local pretreatment programs are required to fulfill the following objectives:

- Prevent the introduction of pollutants into POTWs which will interfere with the operation of a POTW, including interference with its use or disposal of municipal sludge;

- Prevent the introduction of pollutants into POTWs which will pass through the treatment works or otherwise be incompatible with such works;

- Improve opportunities to recycle and reclaim municipal and industrial wastewaters and sludges; and

- Prevent exposure of POTW personnel from chemical hazards and poisonous gases.

The general pretreatment regulations establish industrial pretreatment standards to control industrial pollutant discharges into wastewater collection systems and treatment plants. The discharge standards apply to all industrial and commercial establishments discharging waste to wastewater collection systems tributary to POTWs. The standards prohibit the discharge of pollutants that may damage the POTW's facilities, disrupt operations or expose workers

to hazards. Categorical pretreatment standards are numerical effluent limits which apply to industrial and commercial discharges in 25 specific industrial categories determined to be the most significant sources of toxic pollutants. All firms regulated by a particular pretreatment standard are required to comply with these standards. One hundred and twenty-six toxic pollutants are regulated in the 25 categorical standards. Prohibited discharges into POTW plants, besides toxic substances, include:

- Substances that create a fire or explosion hazard in the plant or sewer system;
- Discharges that are corrosive (have a pH < 5.0);
- Discharges that obstruct flow in the sewer system or interfere with plant operation;
- Discharges that upset the treatment process or cause a violation of the POTW's permit;
- Discharges that increase the temperature of the wastewater entering the treatment plant to above 104º F (40º C);
- Oil based products in amounts that will cause interference or pass through;
- Substances which cause toxic gases, vapors or fumes in a quantity which may cause worker health or safety problem(s); and
- Trucked or hauled pollutants, except at discharge points designated by the POTW.

Municipalities are required to use and enforce these standards as well as locally developed standards, to control nondomestic users discharging to their wastewater collection and treatment systems. The federal regulations require all states that administer NPDES programs to POTW operators to develop local pretreatment programs. The California pretreatment program includes the same general elements which parallel the pretreatment compliance schedule activities specified in most POTWs' NPDES permits. Pretreatment programs are required to contain the following elements:

- Identification and evaluation of the nondomestic discharges to a treatment system.
- The POTW must operate under a legal authority that will enable it to apply and enforce the requirements of pretreatment regulations and other state and local rules needed to control nondomestic discharges.
- The POTW must establish local industrial effluent limits to protect treatment plant operation, receiving water quality and sludge quality.
- The POTW must develop procedures for monitoring its industrial users to determine compliance and non-compliance.
- The POTW must develop administrative procedures to implement its pretreatment program.
- The POTW must have sufficient resources (funds, equipment, personnel) to operate an effective and ongoing program.

## *STEAM ELECTRIC POWER PLANTS*

The Region has five steam electric power plants, four are operated by San Diego Gas and Electric Company (SDG&E) and one by Southern California Edison (SCE). Each of the SDG&E plants has one cooling water intake and one outfall structure. A separate NPDES permit has been issued for each SDG&E plant. The SCE plant, called the San Onofre Nuclear Generation Station (SONGS) has three power generating units, each with its own cooling water intake and outfall structure, and a separate NPDES permit has been issued for each of the three power generating units. All of these plants obtain cooling water from the ocean or San Diego Bay.

The SDG&E power plants are conventional fossil-fuel burning electrical generating facilities. The SDG&E plants are located in San Diego County, three of them are adjacent to San Diego Bay and one is adjacent to the Pacific Ocean. The San Onofre Nuclear Generating Station is located adjacent to the

Pacific Ocean in northern San Diego County and consists of three nuclear fueled electrical generating units.

The cooling water discharges from the power plants are regulated under the provisions of the Thermal Plan, which incorporates provisions of Section 316(a) of the Clean Water Act. All of the plants employ a once-through cooling water system. Seawater is pumped into the facility and used to cool the condensers, which results in an increase in the cooling water temperature of approximately 20 degrees Fahrenheit above the ambient seawater temperature. The cooling water is then discharged to marine waters, where the heat accumulated in the cooling water is dissipated.

The power plant NPDES permits establish effluent limitations for the discharge of cooling water and other wastes generated at the facilities. The effluent limitations are based upon applicable state water quality objectives and USEPA effluent guidelines and standards for steam electric power plants contained in 40 CFR 423. Each facility has a unique arrangement and thus a unique set of waste streams. Other wastewater discharges regulated by power plant NPDES permits, in addition to the cooling water discharge, include boiler blowdown, evaporator blowdown, floor drain discharges, chemical cleaning wastes and boiler wash.

Each power plant is required under the terms and conditions of its NPDES permit to comply with federal Clean Water Act sections 316 (a) and (b). Section 316(a) addresses the control of the thermal component of a discharge and its effects on fish population and wildlife. Section 316(b) requires that the location, design, construction, and capacity of cooling water intake structures reflect the best available technology for minimizing adverse impacts to the environment.

## *SUBSURFACE DISPOSAL FROM CAMPGROUNDS AND RECREATIONAL VEHICLE PARKS*

Since the early 1970's, the Regional Board has been issuing waste discharge requirements to campgrounds and/or recreational vehicle (RV) parks that discharge wastewater to subsurface disposal systems. Chemical preservatives in RV holding tanks increase the threat to ground water quality from these facilities. At one time, the WDRs specified that wastes other than domestic sewage shall be excluded from the discharge. Consequently, the requirements prohibited the discharge of water softener regeneration brine and RV holding tank waste to the septic tank and leach line systems and required the discharger to provide impervious storage tanks for RV holding tank wastes. In order to comply with the WDRs adopted by the Regional Board prior to 1978, the RV campground managers required RVs to empty their holding tank wastes into the campground's dump station if the RV would be provided with sewer hookups. WDRs adopted after 1978 do not require the installation of impervious holding tanks at RV parks nor are RVs required to dispose of RV holding tank wastes to impervious tanks. Currently, most campgrounds and/or RV parks in the Region do not have impervious storage tanks for RV holding tank wastes.

In 1978, the Regional Board adopted Resolution No. 78-24, suspending all ground water monitoring requirements at the campgrounds until such time as a study by the State Board on RV waste disposal was completed and reviewed by the Regional Board staff. In June 1980, the Sanitary Engineering Research Laboratory at University of California, Berkeley published a report for the State Board entitled, "*Recreational Vehicle Waste Disposal in Roadside Rest Septic Tank Systems*". This report however, did not address the requirements for ground water monitoring.

A common problem with community systems is that individual property owners and homeowners associations often deny responsibility for system failure and necessary repairs. Additional problems result when private entities operate community systems and do not have sufficient funds available to correct problems. Consequently, prior to approval of projects proposing community subsurface disposal systems, the Regional Board requires as part of the Report of Waste Discharge, documentation from the proponent that demonstrates that adequate funding is available to operate and maintain the disposal systems.

## *VESSELS (RECREATIONAL, COMMERCIAL, AND NAVAL) AND MARINAS*

Vessels of all types and sizes including recreational, commercial, and Naval craft, and the marinas (or other facilities) in which they berth can have serious impacts on water quality. This section will describe the most important waste categories, pollutants, and other water quality problems associated with vessels and marinas. A description of BMPs and applicable regulations is also included. Although presented below, it should be noted that vessels and marinas are typically considered a nonpoint source category.

**San Diego Bay sailboat**

### *VESSELS AND MARINAS IN THE SAN DIEGO REGION*

There are approximately 8,400 boat slips in San Diego Bay, 2,400 in Mission Bay, over 1,000 in Oceanside Harbor, and over 1,500 in Dana Point Harbor. In addition to boats with assigned slips, there are several hundred additional boats moored at a variety of "free" anchorages. In San Diego Bay, the San Diego Unified Port District has organized two of its free anchorages into formal anchorages which have shoreside showers, rest rooms, and docking facilities. Boat owners are required to pay fees for these services.

In 1986, the San Diego Unified Port District was granted permission by the Coast Guard to establish additional formal anchorages in San Diego Bay. Because of the reluctance of some boat owners to pay fees for mooring in the bay, many have elected to move their boats to new free anchorages. Such anchorages can be especially important sources of human pathogens from vessel sewage releases. In addition to the vessels normally maintained in the water, there are several thousand additional "trailer" boats using San Diego's boat harbors. In total, approximately 55,000 vessels are registered in San Diego County.

### *NAVY VESSELS IN THE SAN DIEGO REGION*

Home port to approximately one hundred US Navy vessels, San Diego Bay is one of the largest Naval ports on the west coast of the United States. As described above, Navy vessels are responsible for the same types of water quality impacts as other vessels. They are also subject to the same regulations and requirements as other vessels except that discharges from Naval vessels under certain circumstances are not subject to NPDES permits. A description of this exclusion (as found in Title 40, CFR, Part 122.3) was discussed earlier in this Chapter.

If enforcement action is necessary, operators of Naval vessels are subject to all of the same enforcement mechanisms outlined previously in this Chapter with one exception; the Navy is not subject to Administrative Civil Liability.

### *VESSEL WASTES*

The most significant waste categories associated with vessels include:

- Hull maintenance related wastes;
- Sewage;
- Marine engine related wastes; and
- Trash.

Of these categories, hull maintenance related wastes, and particularly antifouling paint, is believed to pose the greatest potential threat to water quality. This is because of its high degree of toxicity. Antifouling paint, which is applied to vessel hulls, is specifically designed to prevent the growth and attachment of marine organisms by continuously releasing toxic substances into the surrounding water. Cuprous oxide and tributyltin fluoride or tributyltin oxide are the principal toxicants in copper-based and organotin-based paints, respectively. Although the use of TBT is now significantly limited, leaching pollutants from antifouling paints remains a widespread and serious concern especially in areas of high vessel density and low hydrologic flushing.

Antifouling paint may pose an even greater water quality threat during and after its removal from vessel hulls since the pollutants in the paint chip wastes may continue to leach into receiving waters. In most cases, because paint removal activities on ships are conducted in ship repair yards, responsibility for the paint chip wastes is transferred from the vessel owner to the shipyard. (See shipyards and boatyards discussion). The same is generally true for recreational craft serviced at boatyards. However, small craft can also obtain some hull maintenance services directly in the water by underwater hull cleaners. In addition to paint, other examples of hull maintenance wastes include strippers, cleaners, and cathodic protection products. Although a variety of pollutants can be released during hull maintenance activities, metals are the pollutants of greatest concern.

Sewage is often intentionally discharged directly into receiving waters due to the lack of pumpout stations, inconvenience or inoperation of pumpout stations, or the irresponsibility or ignorance of vessel operators. Human pathogens present in sewage include a variety of fecal bacteria and viruses. Today sewage discharges in recreational marinas are believed to be more significant than at Naval berthing areas. This is because all US Navy vessels are currently equipped to connect to pumpout facilities while in port.

Marine engine related wastes such as fuels, oils, lubricants, antifreeze, solvents, and polluted bilge water are commonly released from vessels into receiving waters. The pollutants of greatest concern for marine engine wastes are metals and petroleum hydrocarbons. PAHs are a particular concern because they tend to accumulate and persist in aquatic sediments for years, poisoning benthic organisms. Garbage and trash are also discharged from vessels.

Each of the above waste categories can be, and frequently are, washed, spilled, scraped, dumped, and pumped directly into receiving waters. As a result, each of the wastes can take a major toll on water quality and beneficial uses. The marine habitat and shellfish harvesting beneficial uses are particularly sensitive to vessel wastes.

Furthermore, each of the waste categories is relevant to all vessel types and sizes including recreational boats as well as commercial and Naval ships. However, because of a ship's greater size and corresponding greater magnitude, variety, and toxicity of wastes generated, ships (particularly Navy ships) are generally believed to pose a greater threat to water quality than boats. For example, Navy vessels are typically drydocked for hull maintenance only once every five or more years and spend more time in port or at anchor than underway. Fouling organisms attach more readily when a ship is stationary. For these reasons, Navy coating systems are required to be effective for longer periods of time than those applied to commercial and recreational vessels. Accordingly, Navy vessels are blasted to "white metal" meaning all paint is removed to bare metal and the surface is abraded in preparation for adherence of a complete new coating system. Additionally antifouling paints used on Navy vessels contain higher levels of toxicants than those used on commercial and recreational vessels.

Nevertheless there is a formidable set of water quality impacts associated with small craft and small craft marinas as described below.

## *MARINAS*

Marinas and other boat berthing facilities typically have high boat densities and low hydrologic flushing. As a consequence of these characteristics, the following significant water quality problems often result within marinas:

- Increased pollutants in the water column;
- Decreased dissolved oxygen in the water column;
- Increased pollutants in aquatic sediment;
- Increased toxicity in the water column and sediments;
- Increased pollutants in the tissues of aquatic organisms; and
- Physical alteration or destruction of aquatic habitat.

The physical disruption, or destruction of wetlands, sediment, and other aquatic habitat is an especially troublesome impact. It is a result of both the original construction of the marina, ramps, and related facilities, as well as their ongoing use, operation, and maintenance.

Although most of the water quality problems listed above arise from the direct discharge of wastes by vessels, pollutants can also be transported into marina waters by way of storm water runoff from parking lots, docks, and other impervious surfaces.

Oceanside Harbor


## *CZARA(G) GUIDANCE FOR MARINAS*

Most of the impacts listed above can be mitigated by utilizing best possible siting and design criteria for each marina. Construction and operation and maintenance practices are also crucial to protecting water quality. Recognizing the importance of this, USEPA developed fifteen specific management measures (BMPs) to protect coastal waters from nonpoint pollution from marinas and recreational boating.

The management measures for marinas which are grouped into two broad headings, (1) siting and design; and (2) operation and maintenance, were developed pursuant to section 6217 of the Coastal Zone Act Reauthorization Amendments (CZARA) of 1990 and are incorporated into the (g) guidance. As with all nonpoint source pollution protection measures, the key to protecting water quality in marinas is pollution prevention.

## *REGULATION OF VESSELS AND MARINAS*

Management measures related to preventing pollutants, such as sewage, fuel and oil leaks, toxics, fish wastes, and hull scrapings from entering coastal waters are primarily the responsibility of the Regional Board. The Regional Board prohibits the discharge of these wastes through a variety of Basin Plan discharge prohibitions. The Board also encourages and participates in public education/awareness campaigns. The Harbors and Navigation Code section 151 prohibits the intentional or negligent discharge of oil to the waters of the state. Penal Code section 374(e) as amended in 1970 provides that any person who litters or places waste matter into any bay, lagoon, channel, river, creek, slough, canal or reservoir or body of water is guilty of a misdemeanor.

Local governments have significant authority to carry out these CZARA management measures through their zoning ordinances, and by using their police, fire, or building departments to ensure implementation.

The California Department of Pesticide Regulation regulates the application of antifouling paints. Regulations for organotin-based paints have been established which limit the TBT release rate, require application by certified commercial applicators, and allow application only on vessels at least 25 meters in length and/or aluminum hulls and parts. As described earlier, tributyltin fluoride or tributyltin oxide are the principal toxicants in organotin-based paints.

The Health and Safety Code section 4425 prohibits a vessel with a toilet from operating upon the waters of any lake, reservoir, or fresh water impoundment of this State unless the toilet is designed so that no human sewage can be discharged in such waters. This code section does not apply to rivers, estuaries or saltwater areas of California. Section 312 of the Clean Water Act provides that marine sanitation devices on board new or existing vessels must be designed to prevent the discharge of untreated or inadequately treated sewage into or upon the navigable waters of the United States (see discussion below on "No Discharge Zone"). The Marine Sanitation (section 775) of the Harbors and Navigation Code declares that every vessel terminal shall be equipped with vessel pumpout facilities for the transfer and disposal of sewage from marine sanitation devices in order to protect water quality.

## *NO DISCHARGE ZONE*

Division 7 of the Water Code authorizes the Regional Board to regulate any discharge of waste, including sewage, to waters of the state. The federal Clean Water Act however partially preempts the state's authority to regulate vessel sewage discharges. Section 312 of the Clean Water Act provides that no state or local entity may adopt or enforce any laws regarding the design, manufacture, installation or use of marine sanitation devices (MSDs). Instead, USEPA must adopt federal standards of performance for MSDs which must be enforced and implemented through regulations adopted by the United States Coast Guard (USCG).

Marine sanitation devices either retain sewage or discharge treated sewage. If sewage is discharged, the effluent must meet USCG specified effluent standards described in 33 CFR 159, Coast Guard Regulations on Marine Sanitation Devices. Types I and II MSDs are flow-through systems which treat and discharge sewage. Type I MSDs produce an effluent having a fecal coliform bacteria count not greater than 1,000 per 100 ml and no visible floating solids. Type II MSDs produce an effluent having a fecal coliform bacteria count not greater than 200 per 100 ml and suspended solids not greater than 150 mg/l. Type III MSDs are holding tanks only and prevent the overboard discharge of treated or untreated sewage.

There is one significant exception to the federal preemption of a state's regulation of vessel sewage discharges. Clean Water Act section 312 (f) allows states to completely prohibit vessel sewage discharges into waters requiring greater water quality protection, provided that USEPA determines that adequate vessel sewage pumpout facilities are available for these waters.

In 1976 the State of California petitioned USEPA, pursuant to section 312 (f)(3) of the Clean Water Act, for a determination that adequate pump-out facilities were reasonably available for that portion of San Diego Bay that is less than 30 feet deep at MLLW; and for all of Mission Bay, Oceanside Harbor, and Dana Point Harbor (41 Federal Register 21516 May 26, 1976). On August 6, 1976, USEPA made the requested determination (41 Federal Register 34453 August 6, 1976).

As a result, the discharge of all sewage, treated or untreated, from all vessels is completely prohibited in all portions of Mission Bay, Oceanside Harbor, and Dana Point Harbor (regardless of vessel size or water depth). Mission Bay, Oceanside Harbor, and Dana Point Harbor are, in their entirety, "No Discharge Zones". (Note that this prohibition includes discharges from a properly functioning USCG certified MSD).

The discharge of all sewage, treated or untreated, from all vessels is completely prohibited in all portions of San Diego Bay that are less than 30 feet deep at MLLW. The No Discharge Zone in San Diego Bay is defined as all portions of the bay having a depth of less than 30 feet MLLW. In the absence of the no discharge zone (i.e., in those portions of San Diego Bay having a depth of 30 feet or greater), discharge of treated sewage through a properly functioning USCG certified Type I or II marine sanitation device is allowed. (USCG certification provides that the specified effluent limitations will be met). The discharge of untreated sewage from a Type III holding tank is not allowed under any condition in any portion of San Diego Bay (regardless of depth).

Because of dilution and circulation in San Diego Bay, it is assumed that the discharge of treated sewage into waters deeper than 30 feet from a properly functioning USCG certified Type I or II MSD will not degrade the bay's beneficial uses. Additionally, with the exception of a few recent uses (such as jet skiing and sail boarding), the REC I designated beneficial use occurs in shallow waters (i.e., in waters less than 30 feet). This supports the need for a complete prohibition in such shallow waters.

Furthermore, as a practical matter, it is not possible to regulate sewage discharges from all vessels in San Diego Bay. For example, some foreign vessels may not be equipped to use the existing pump-out facilities. Since the no discharge designation is conditioned upon the existence of adequate pump-out facilities, it was necessary to make an allowance in the prohibition for such vessels. These vessels require berthing accommodations outside of the designated area. (All US Navy vessels are equipped to connect to pump-out barges or pier-side sewage facilities).

Most small pleasure craft are equipped with either a Type I or II flow-through treatment device or a Type III holding tank, but rarely both. Those vessels equipped with only a flow-through treatment device must secure their device while in a No Discharge Zone in order to prevent overboard sewage discharges. Those vessels equipped with only a holding tank are required to utilize pump-out facilities at all times and may not discharge into any portion of any bay. In other words, a vessel in San Diego Bay with a holding tank may not move into water greater than 30 feet and discharge sewage from its holding tank.

A study of the levels of coliform and Enterococcus bacteria caused by vessel discharges is needed to allow the Regional Board to make decisions based on measured levels. The Regional Board could then advise the county health officer, the Port District, and the Coast Guard so appropriate actions could be taken to abate the effects of sewage discharges from vessels.

## *SHIPYARDS*

This section contains a general discussion of shipyards, their threat to water quality, and regulatory complexity. A discussion specific to San Diego Bay shipyards is included near the end of this section.

Shipyard activities may result in the discharge of wastes to receiving waters. The presence of elevated concentrations of pollutants, primarily heavy metals, in the sediment adjacent to shipyards nationwide is well documented in the literature (see references). Although there are numerous other potential threats, the single most significant threat to water quality posed by shipyards is the potential discharge of abrasive blast waste to receiving waters.

### *SHIPYARD THREAT TO WATER QUALITY*

From the perspective of protecting beneficial uses, a discharger's threat to water quality is critically important and plays a role in virtually all regulatory decisions. By definition, the basis of a discharger's threat to water quality is the effect the discharger would have on the receiving water if discharges occurred in violation of its NPDES permit. In other words, a discharger's threat to water quality is its potential for degrading water quality. The following six characteristics are relevant in evaluating a shipyard's threat to water quality: (1) primary activities; (2) facilities; (3) industrial processes; (4) materials used; (5) wastes generated; and (6) waste discharges to receiving waters (actual and potential). A discussion of each follows.

## *PRIMARY ACTIVITIES AT SHIPYARDS*

The shipbuilding and repair industry is engaged in the construction, conversion, alteration, repair, and maintenance of all types of military and commercial ships and vessels. Shipbuilding and repair encompasses a large number and variety of activities and industrial processes including, but not limited to, formation and assembly of steel hulls; application of paint (coating) systems; installation and repair of a large variety of mechanical, electrical, and hydraulic systems and equipment; repair of damaged vessels; removal and replacement of expended or failed paint (coating) systems; and provision of entire utility/support systems to ships (and crew) during repair.

The list of occupations required to conduct these activities is also extensive, including sandblasters, painters, shipfitters, machinists, metalsmiths, welders/burners, blacksmiths, boilermakers, chemists, carpenters, coppersmiths, electricians, electronic technicians, joiners and patternmakers, laborers, riggers, pipefitters, and foundrymen. Not all occupations are present at all shipyards.

## *SHIPYARD FACILITIES*

There are four major types of building/repair facilities at shipyards, which together with cranes, enable ships to be assembled, launched, or repaired. These facilities are graving docks/shipbuilding ways, floating drydocks, marine railways, and berths/piers. With the exception of berths and piers, the basic purpose of each facility is to separate the vessel from the bay and provide access to parts of the ship normally underwater.

Each facility type presents its own unique set of environmental concerns. Depending on size and capabilities, a single shipyard will generally have a combination of two or more of these facilities.

In addition to these facilities, shipyards must also conduct the wide range of support or complementary activities previously described. Many of these activities require their own facility, space, or shop; for example concrete platens (for steel fabrication), machine shop, pipe shop, electroplating shop, weld shop, sheet metal shop, electrical shop, coppersmith shop, blacksmith shop, carpentry shop, and boiler shop, etc. Not all facilities are present at all shipyards.

## *SHIPYARD INDUSTRIAL PROCESSES*

The primary activities described above involve a multitude of industrial processes, many of which must be conducted over water or very close to the waterfront. Because they typically represent the greatest threat to water quality, the following discussion will focus primarily on the industrial processes conducted inside graving docks or floating drydocks.

### *Surface Preparation and Paint Removal*

Methods of surface preparation and paint removal include dry abrasive blasting, wet abrasive or slurry blasting, hydroblasting, and chemical paint stripping. Each paint removal method has a unique purpose and poses its own set of water quality risks.

Dry abrasive blasting is the preferred method of preparing steel surfaces for application of a new paint (coating) system for saltwater immersion. It is used for most exterior hull work and virtually all interior tank work (e.g., fuel, bilge, ballast tanks etc). Dry abrasive blasting is the process in which blasting abrasive is conveyed in a medium of high pressure air, through a nozzle at velocities up to 450 feet per second resulting in very large quantities of solid waste and airborne particulates (dust). Although the most efficient of the paint removal methods, dry blasting produces the largest quantity of airborne particulates.

Wet abrasive or slurry blasting is the process in which water replaces air as the abrasive propellant. The use of water significantly reduces airborne particulate emissions but generates large quantities of wet residue and wastewater.

Hydroblasting is a process in which water under very high pressure is used instead of abrasive. Hydroblasting produces large amounts of wastewater and is primarily used at shipyards to remove marine growth, not to remove existing coatings. Chemical paint stripping is uncommon in drydocks and used primarily for removable parts.

### *Paint (coating) Application*

After preparation, surfaces are painted. Most painting occurring in a drydock involves the ship hull and internal tanks. Painting is also conducted in other locations throughout a shipyard including piers and berths. Paint application is accomplished by way of air or airless spraying equipment.

### *Tank Cleaning*

Tank cleaning operations utilize steam to remove dirt and sludge from internal tanks, particularly fuel tanks and bilges. Detergents, cleaners, and hot water may be injected into the steam supply hoses. Wastewater is generated.

### *Other Industrial Processes (graving docks/drydocks)*

Other industrial processes conducted inside graving docks or floating drydocks include mechanical repair, maintenance, installation; structural repair, alteration, assembly; and integrity/ hydrostatic testing. Hydrostatic or strength testing (flushing) is conducted on hull, tanks, or pipe repairs and on new systems during ship construction phases. Hydrostatic testing generates significant water flow.

### *Other Industrial Processes (elsewhere)*

Numerous other industrial processes take place at numerous other locations throughout a typical shipyard, including activities at a variety of repair and specialty shops. Examples include paint equipment cleaning; engine repair/ maintenance/ installation; pipe fitting; steel fabrication and machining; electrical repair/ maintenance/ installation; hydraulic repair/ maintenance/ installation; tank emptying; fueling; pattern making; shipfitting; boiler cleaning; carpentry; refurbishing/ modernization/ cleaning; air conditioning/ refrigeration repair; sheet metal fabrication; fiberglass repair; electroplating/ metal finishing; blacksmithing; zinc primer application; printing; and photo processing. As a result of these processes, an assortment of wastes are generated, many of which are hazardous.

## *MATERIALS USED AT SHIPYARDS*

Materials commonly used at shipyards are described below beginning with those utilized during graving dock or floating drydock operations.

### *Abrasive Grit*

Abrasive grit is typically slag from the smelting of copper ore and consists principally of iron. Trace elements such as copper, zinc and titanium may also be present in the slag. Sand, cast iron, or steel shot are also used as abrasives. Very large amounts of abrasive are needed to remove paint to bare metal. For example, removing paint from a 15,000 square foot hull can take up to 6-days and consume 87 tons of grit. Grit is needed in all dry and wet (slurry) abrasive blasting.

### *Fresh Paints*

Fresh paints contain copper, zinc, chromium, and lead (all priority pollutants) as well as numerous hydrocarbons. The two major types of paints used on ship hulls are anticorrosive paints and antifouling paints. Anticorrosive paint (primers) include vinyl, vinyl-lead, or epoxy based coatings. Others contain zinc chromate and lead oxide. (Although newer paint formulations no longer include chromium and lead, such constituents may be present in shipyard wastes due to the removal of older coating systems).

Antifouling paints are designed to prevent growth and attachment of marine organisms by continuously releasing toxic substances into the water. Cuprous oxide and tributyltin fluoride or tributyltin oxide are the principal toxicants in copper-based and organotin-based paints, respectively.

### *Other Materials*

Other materials used include oils (engine, cutting, and hydraulic); lubricants, grease; fuels; weld rod; detergents, cleaners; rust inhibitors; paint thinners; hydrocarbon and chlorinated solvents; degreasers; acids; caustics; resins; adhesives/ cement/ sealants; cyanide; zinc (e.g., zinc dust); chlorine; and mercury.

## *WASTES GENERATED AT SHIPYARDS*

The major categories of wastes commonly generated by shipyard industrial processes are discussed below. Wastes resulting from graving or floating drydock operations are presented first.

### *Abrasive Blast Waste*

Abrasive blast waste, consisting of spent grit, spent paint, marine organisms, and rust is generated in very large quantities during all dry or wet abrasive blasting procedures. The constituent of greatest concern with regard to toxicity is the spent paint, particularly the copper and tributyltin antifouling components, which are designed to be toxic and designed to continuously leach into the water column. Other priority pollutants in paint include zinc, chromium, and lead. Although the grit itself is not highly toxic, it is a major component in the large solid waste load and is settleable. As a result, its deposition can degrade the benthic community and increase the need for dredging. Abrasive blast waste can be conveyed by water flows, become airborne (especially during dry blasting), or fall directly into receiving waters. Wet abrasive blasting of a Naval DDG class destroyer (437-536 feet long; 47-67 feet wide; 15-20 feet draft) can generate up to 180 tons of solid wet abrasive waste.

### *Paint Losses*

Paint losses, or paint which ends up somewhere other than its intended location (e.g., drydock floor, bay, worker's clothing), results from spills, drips, and overspray. Typical overspray losses are estimated at approximately 5% for air spraying and 1-2% for airless spraying.

### *Bilge Waste/Other Oily Wastewater*

This is generated during tank emptying, leakages, and cleaning operations (bilge, ballast, fuel tanks). In addition to petroleum products (fuel, oil), tank washwater may also contain detergents or cleaners (nitrogen and phosphorus compounds) and can be generated in large quantities.

### *Blast Wastewater*

Wet abrasive (slurry) blasting and hyrdoblasting generates large quantities of wastewater. Wet abrasive blasting of a Naval DDG class destroyer can generate up to 500,000 gallons of contaminated water. In addition to suspended and settleable solids (spent abrasive, paint, rust, and marine organisms) and water, blast wastewater may also contain rust inhibitors such as diammonium phosphate and sodium nitrite.

### *Other Wastes*

These include oils (engine, cutting, and hydraulic); lubricants, grease; fuels; waste paints/ sludge/ solvents/ thinners; construction/ repair wastes and trash; asbestos (from ship refurbishing/ modernization); sewage (black and grey water from vessels or docks); boiler blowdown, condensate, discard; spent hydrocarbon or chlorinated solvents; electroplating/ metal finishing wastes; acid wastes; caustic wastes; and aqueous wastes (with and without metals).

## *SHIPYARD WASTE DISCHARGES TO RECEIVING WATERS*

Actual and potential waste discharges to receiving waters from typical shipyard operations are discussed below. Most are either the direct result of an industrial process (drydock, marine railway, or berth operations) or, more commonly, the result of water coming into contact with wastes, typically spent abrasive blast waste. There are numerous sources of water at a shipyard including: industrial processes; building or repair facilities (e.g., drydock); vessels under repair (e.g., cooling water); bay water (e.g., due to tidal influence or wave action); storm water; or other sources.

Actual and potential waste discharges to receiving waters include: floating drydock deballasting (tanks); floating drydock submergence/ emergence (platform); floating drydock operations; graving dock dewatering; gate leakage; hydrostatic relief flows; shipbuilding ways dewatering/ gate leakage/ relief flows; marine railway operations; berth and pier operations; storm water; integrity/ hydrostatic testing discharge (new vessels); boiler and cogeneration feedwater; fire protection system discharge; cooling water; and miscellaneous water flows.

## *SHIPYARD COMPLEXITY*

From a regulatory and environmental control standpoint, shipyards present a unique and difficult problem. Traditional NPDES dischargers generate or intake wastewater, treat it to specified effluent limits, and discharge treated effluent, often by way of a single pipe. Unlike traditional dischargers, shipyards are significantly more complex in all respects: numerous and diverse industrial processes; numerous discharge mechanisms, waste streams, and discharge points; and Best Management Practices Plan based permits. Each is discussed below.

### *Numerous and Diverse Industrial Processes*

As described previously, shipyards conduct a large number and broad range of industrial processes which require a wide range of facilities and substantial workforce.

### *Numerous Discharge Mechanisms, Waste Streams, and Discharge Points*

Shipyards are complex to regulate because they have numerous discharge mechanisms, discharge points, and waste streams. A less complex discharger will typically have a single or small number of each. A discussion of abrasive blast waste with respect to discharge mechanisms, discharge points, and waste streams follows. Abrasive blast waste is discharged primarily as a result of graving dock flooding, drydock immersion, drainage, or runoff. In other words, at shipyards, the principle mechanism by which wastes are conveyed to receiving waters is via the contact of wastes with water, both of which occur in large quantities. For this reason, storm water and storm drain inlets are of particular concern at shipyards. Abrasive blast waste can also become subject to tidal or wave action. Airborne releases represent another important discharge mechanism. Because abrasive blast waste is generated in part as airborne particulates, such releases to receiving waters pose a significant threat to water quality. Furthermore, and because of their proximity to receiving waters, a third discharge mechanism exits at shipyards. Direct discharges from shipyards occur when wastes are allowed to fall directly into receiving waters (off the end drydock, edge of pier, between gratings, etc).

In summary, because abrasive blast waste can be washed, hosed, pushed, blown, become subject to tidal/wave action, and be directly or otherwise discharged, the potential for abrasive blast waste from shipyards to enter receiving waters is great. In addition to multiple discharge mechanisms, numerous waste streams, and discharge points also exist at shipyards. The discharges described above can potentially enter receiving waters from numerous shipyard worksites including graving docks, drydocks, marine railways, piers, repair/ specialty shops, as well as via storm drains and sheet flow runoff.

### *Best Management Practices Based Permits*

Unlike traditional NPDES discharges which are regulated by numerical effluent limits, the control of waste discharges from shipyards is accomplished by the implementation of BMP plans. The purpose of a BMP plan is to prevent, reduce, or eliminate the spillage or illicit discharge of pollutants into receiving waters and can include any number of preventive controls or measures. Due to the types of activities and multiple discharge pathways, numerical effluent limitations are not practical at shipyards. The evaluation of the effectiveness of BMP Plans from a regulatory standpoint is more complicated and resource intensive than comparison of end-of-pipe monitoring results to numerical effluent limitations.

## *LONG-TERM EFFECTS OF SHIPYARD DISCHARGES ON WATER QUALITY AND BENEFICIAL USES*

Unlike short lived pollutants (e.g., BOD and bacteria) the type of pollutants present in shipyard discharges are typically long-lasting. Shipyard pollutants, such as heavy metals and PAHs are persistent in the marine environment, in part, because they can become attached to sediment particles and can accumulate to high concentrations in both sediments and in marine organisms. Once incorporated into sediment and tissues, these pollutants are very difficult to remove and may recycle in the marine system indefinitely. Because sediment cleanup projects are difficult, expensive, and lengthy, contaminated sediment can remain in place, adversely affecting beneficial uses and water quality, for many years.

## *SAN DIEGO BAY SHIPYARDS*

The following discussion is specific to San Diego Bay shipyards.

### *NPDES Permits*

There are currently four commercial shipyards in the San Diego Region, all of which are located adjacent to San Diego Bay. All of the shipyards are currently regulated under individual NPDES permits which are BMP based, rather than based on effluent limits. The shipyard permits also include standard receiving water limitations and discharge prohibitions. Additionally, all of the shipyards are also subject to the statewide General Industrial Storm Water Permit.

### *Threat to Water Quality and Best Management Practices*

Although the discussion above was intended as a general description of the shipyard industry as a whole, the majority of the information is applicable to the San Diego Bay shipyards. One notable exception is that wet abrasive or slurry blasting and chemical paint stripping are currently not conducted at San Diego Bay shipyards.

By definition a discharger's threat to water quality is its potential to cause damage to water quality and beneficial uses under worst case conditions, i.e., assuming all BMPs and treatment measures fail. For this reason, the general shipyard discussion on threat to water quality focuses on potential risks rather than on BMPs. As described, a shipyard's potential risks to water quality are significant in many respects. BMPs are specifically designed to reduce those risks and are therefore extremely important for shipyards. Hence, the second reason to focus on potential risks is to emphasize the need for effective BMPs at shipyards.

San Diego shipyards report strict adherence to a large number of BMPs to control water and airborne wastes during a variety of industrial processes. Such BMPs include physical and procedural controls. Physical controls isolate runoff pathways from contact with abrasive blast wastes through the use of shrouding, sealing of drains, and diversion of sump discharge pathways. Procedural control methods include dock sweeping and elimination of sources of runoff during blasting operations. The shipyards also report the effective management of their wastes including treatment, recycling, and disposal in compliance with the San Diego County Hazardous Materials Management Division, their San Diego Metropolitan Industrial Waste Program permits, and the San Diego County Air Pollution Control District.

### *Contaminated San Diego Bay Sediment and Mussels*

Regional Board staff has reviewed the results of sediment samples collected adjacent to the shipyards in San Diego Bay. Elevated concentrations of copper, tributyltin, and zinc exist in these sediments. Copper, tributyltin and zinc are contained in both the materials used by San Diego Bay shipyards as well as in the wastes which they generate. Furthermore elevated concentrations of copper, tributyltin, and zinc have also been measured in the tissues of mussels collected from stations located adjacent to San Diego Bay shipyards.

Although this data may suggest that the BMPs employed by San Diego Bay shipyards are not effective, it may also represent historical discharges which occurred at a time when BMPs were not carefully implemented. Regional Board staff plans to investigate the matter further. The existence of contaminated sediment adjacent to the shipyards serves to further underscore the importance of shipyard BMPs.

### *SHIPYARDS – GENERAL CONCLUSIONS*

In summary, shipyards typically pose a significant threat to water quality for the following reasons. Relative to other regulated dischargers, shipyards conduct a large number and wide variety of activities and industrial processes. The conduct of these industrial processes requires numerous physical facilities and a large number, amount, and variety of materials. As a result, a large number, amount, and variety of wastes are generated and are, or may be, discharged to receiving waters. Shipyard discharges have the potential to cause the long-term loss of a designated beneficial use in receiving waters.

From a regulatory perspective, shipyards are complex. Toxic pollutants are, or could be, present in wastes discharged to receiving waters from shipyards. They have numerous discharge points and are regulated by permits which do not contain numeric effluent limits. Shipyards are typically "major" NPDES dischargers and require a high level of regulatory effort.

In conclusion, because shipyards pose a significant threat to water quality and are complex to regulate, the BMPs which they employ (to reduce or eliminate the discharge of wastes to receiving waters) are extremely important. It is critical that shipyard BMPs are effective and diligently implemented.

### *BOATYARDS*

There are currently 12 boat building and boat repair facilities (commonly called boatyards) adjacent to receiving waters in the San Diego Region. Most of the boatyards are located adjacent to San Diego Bay, while Mission Bay, Oceanside Harbor, and Dana Point Harbor are serviced each by a single boatyard. Additional boatyards are located in inland areas of the Region. Seven of the boatyards located adjacent to receiving waters are currently regulated under an individual NPDES permit. Eventually all of the waterfront boatyards will be regulated under an individual NPDES permit. Additionally, all of the boatyards in the Region are currently subject to the statewide General Industrial Storm Water Permit. Like the shipyard permits, boatyard permits do not contain numeric effluent limits but are based instead on BMPs.

The most significant waste categories associated with boatyards include hull maintenance related wastes and marine engine related wastes. Hull maintenance related wastes, and particularly antifouling paints, are believed to pose the greatest threat to water quality from boatyard operations. Cuprous oxide (copper) and TBT fluoride or TBT oxide are the principle toxicants in antifouling paint used at boatyards. Marine engine related wastes include fuels, oils, lubricants, antifreeze, solvents, and bilge water. The pollutants of concern from marine engine wastes are metals and petroleum hydrocarbons. PAHs are of particular concern because they persist in the marine environment. Implementation of BMPs is the key to controlling boatyard waste discharges to receiving waters.

## *GROUND WATER DEWATERING*

A number of dewatering operations are associated with construction projects for foundations, bridges, roads, etc. Other dewatering operations are ground water remediation projects which are required under Cleanup and Abatement Orders issued by the Regional Board. Many of the proposed dewatering operations are located where petroleum or other pollutants plumes exist. Petroleum or other pollutants may be pumped from the ground water and discharged to a storm drain and subsequently to a water of the United States.

Since the mid-1980's, the Regional Board has regulated dewatering operations under the NPDES permit process. Two general NPDES permits have been adopted by the Regional Board which regulate discharges from ground water remediation projects and discharges from ground water dewatering operations to surface waters of the United States.

The first permit, Order No. 2000-90, NPDES No. CAG919001 regulates temporary ground water extraction and similar waste discharges to San Diego Bay and storm drains or other conveyance systems tributary thereto. This Order prohibits ground water extraction waste discharges to San Diego Bay from new permanent ground water extraction operations.

The second permit, Order No. 2001-96, NPDES No. CAG919002 regulates ground water extraction waste discharges from construction, remediation, and permanent ground water extraction projects to surface waters within the San Diego Region except for San Diego Bay.

In addition, the Waiver Order described earlier in this Chapter waives WDRs for short-term construction dewatering operations where there is no discharge to surface waters.

# *DREDGING AND DISPOSAL OF DREDGE SPOIL*

## *REGULATORY FRAMEWORK FOR DREDGED MATERIAL DISPOSAL*

### *FEDERAL STATUTES AND REGULATION*

The regulation of dredged material disposal in waters of the United States (US) on a federal level is a responsibility shared by the USEPA and the USACOE. The Marine Protection, Research and Sanctuaries Act, also called the Ocean Dumping Act, is the primary federal environmental statute governing the discharge of dredged material to the ocean. The Clean Water Act is the primary federal statute governing the discharge of dredged and/or fill material into US waters. Material dredged from waters of the US and disposed in the territorial sea is evaluated under the Marine Protection, Research and Sanctuaries Act unless the material discharged is for the primary purpose of fill (e.g., beach replenishment, island creation, or underwater berms), in which case the disposal is evaluated under the Clean Water Act [33 CFR 336.0(b)]. Other applicable federal statutes and regulations include the following.

#### *The Rivers and Harbors Act of 1899*

The Rivers and Harbors Act of 1899 (33 USC 401 et. seq.) requires a USACOE permit for any work or structure, including fill material discharges, in navigable waters of the United States. The primary purpose of section 10 of this act is to ensure that structures (i.e., disposal berms, piers, pipelines, bridges, wharfs) constructed in navigable waters do not adversely affect federal interstate navigation.

#### *The Fish and Wildlife Coordination Act of 1958*

The Fish and Wildlife Coordination Act requires that, for any proposed federal project or permit that may affect a stream or other body of water, the USACOE must first consult with federal and state fish and wildlife agencies. This consultation addresses the prevention of damages to wildlife resources and provides for the development and improvement of wildlife resources.

#### *The Endangered Species Act of 1973*

Section 7(a)(2) of the Endangered Species Act (ESA), as amended (16 USC 1531 et. seq.) requires federal agencies, in consultation with the Secretaries of Interior (represented by the US Fish and Wildlife Service) and Commerce (represented by the National Marine Fisheries Service), to insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of such species.

### *The Coastal Zone Management Act of 1972*

The Coastal Zone Management Act (16 United States Code (USC) 1451 et. seq.) authorizes a federal program for the effective management, beneficial use, protection and development of the coastal zone. The act requires the USACOE to coordinate permit review and federal projects with all state level coastal zone review agencies. Under this act, coastal states are required to formulate a management program for the land and water resources of its coastal zone, which extends out to the seaward limit of the territorial sea, and submit it for approval to the Secretary of Commerce. In 1977, the California Coastal Management Program was approved.

### *Overview of the Clean Water Act*

**California tree frog**

Section 404 of the Clean Water Act requires the USEPA, in conjunction with the USACOE, to promulgate guidelines for the discharge of dredged or other fill material to ensure that such proposed discharge will not result in unacceptable adverse environmental impacts to waters of the United States. Section 404 assigns to the USACOE the responsibility for authorizing all such proposed discharges, and requires application of the guidelines in assessing the environmental acceptability of the proposed action. The USACOE and the USEPA also have authority under section 230.80 to specify, in advance, sites that are either suitable or unsuitable for the discharge of dredged or fill material in US waters. In addition, Clean Water Act section 401 provides the States a certification role as to project compliance with applicable water quality standards.

### *Clean Water Act, Section 401 Certification State of California*

The Clean Water Act, section 401 gives the states authority to grant, deny, or waive certification for a federally permitted or licensed activity that may result in a discharge to waters of the United States. Any applicant for a federal permit which conducts any activity which may result in any discharge into the navigable waters of the State must present to the permitting agency a certification (or waiver of certification) from the State that any such discharge will comply with the applicable Clean Water Act provisions of section 301, 302, 303, 306, and 307. The certification issued by the State should establish relevant effluent limitations, monitoring requirements, and standards or performance which become conditions of the federal permit. In California, the responsibility for section 401 certification is assigned to the State Board and regional boards. After review of data submitted by an applicant, and any other information available as to whether the proposed activity will comply with all applicable water quality standards, limitations and restrictions, the Regional Board may:

- Waive water quality certification;
- Issue waste discharge requirements; or,
- Recommend approval with or without conditions, or denial of water quality certification, to the State Board.

In order to grant section 401 certification, the State Board must certify that the proposed discharge will not result in unacceptable adverse environmental impacts to waters of the United States.

For a project to proceed, a waiver of certification or waste discharge requirements must be obtained from the Regional Board or a certification with or without conditions must be obtained from the State Board, indicating the Board's concurrence with the decision that the proposed action is not expected to cause a violation of the State's water quality standards.

## *STATE STATUTES AND REGULATIONS*


The State of California has several programs that parallel or overlap many of the listed federal Acts. Relevant state statutes and regulations include the following:

- Water Code, Division 7 (Porter-Cologne Water Quality Control Act);
- State Board and Regional Water Quality Control Board Plans and Policies;
- Water Code, Division 4 (California Bay Protection and Toxic Cleanup Act);
- California Fish and Game Code;
- California Environmental Quality Act; and
- California Coastal Zone Management Act.

The primary statutory state law pertaining to the regulation of water quality and sediment control issues is the Porter-Cologne Water Quality Control Act which is contained in Division 7 of the Water Code.

### *California Water Code, Division 7 (Porter-Cologne Water Quality Control Act)*

Dredging and dredged material disposal is an ongoing activity at harbors within the San Diego Region. The discharge of dredged or fill material which comes within the purview of section 404 of the federal Clean Water Act is not subject to regulation under the NPDES permit program (Clean Water Act section 402). However, if the project involves the discharge or potential discharge of waste (e.g. dredge spoils, dredge spoil return water, etc.) which may adversely impact water quality, then the discharge may be regulated through the issuance of WDRs. WDRs are issued by the Regional Board pursuant to the Porter-Cologne Water Quality Control Act.

The Regional Board is concerned with turbidity, dissolved oxygen depletion, and other physical, chemical, and biological parameters in the receiving waters which are impacted by dredge/fill projects. In recent years, there has also been concern about the concentrations of chemicals in the material to be dredged. Harbor areas may contain high levels of contaminants in bottom sediments due to navigational use, and due to wastes from urban, industrial, and riverine sources. For projects involving dredging the proponent is required to submit a Report of Waste Discharge (RWD) in application for WDRs. The RWD must include a characterization of the material to be removed to determine whether the proposed project is expected to meet all applicable water quality standards, limitations, restrictions and discharge prohibitions. The decision to issue or waive WDRs for dredging projects is made on a case-by-case basis regardless of dredge spoil volume. Disposal of dredge material at authorized open-ocean disposal sites (e.g., LA-5 Ocean Dredged Material Disposal Site) fall under the jurisdiction of the USEPA and the USACOE. However, because of the potential threat to water quality due to dredging operations, the Regional Board may still issue a WDR for the actual dredging portion of the project.

Adopted WDRs typically require monitoring for dissolved oxygen, turbidity and, where concentrations of chemicals in the sediments are high, monitoring for chemical constituents. Monitoring may be required of the receiving water at the dredge site or at the disposal site(s), and of the dredge spoil return water if applicable.

### *Enforcement Process for Contaminated Sediment*

Dredging is often part of the remediation process for contaminated sediments in marine waters. The Regional Board under the authority of the Water Code section 13304 may issue a cleanup and abatement order to require an identified responsible party which caused the discharge of chemical constituent(s) present in a contaminated sediment to remediate or effect cleanup of the contaminated sediment.

Specific directives of cleanup and abatement orders issued for remediation or cleanup of contaminated sediments typically direct the responsible party to:

- Quantify the lateral and vertical extent of the contaminated sediment;
- Examine the engineering feasibility of the following alternative sediment cleanup/ remediation strategies;
  - ✓ Complete removal of all contaminated sediment;
  - ✓ Removal or remediation of contaminated sediment to a level that will conform with water quality objectives and protect/ restore beneficial uses; and
  - ✓ No action alternative level - The "no action" alternative level involves reliance upon natural processes for the remediation of contaminated sediment sites;
- Examine the cost of sediment cleanup/ remediation to various cleanup/ remediation levels; and
- Examine the environmental consequences of sediment cleanup/ remediation to various cleanup/remediation levels.

### *State Water Resources Control Board and Regional Water Resources Control Board Plans and Policies*

State plans and policies which affect dredging and disposal of dredge spoil include the Ocean Plan, the (Resolution No. 74-43), the Basin Plan, and any other applicable plans or policies.

### *Ocean Plan*

The Ocean Plan establishes general requirements for waste discharges which could affect state ocean waters. For dredge/fill projects, this may include discharges associated with dredging operations, dredge spoils disposal including beach replenishment, or discharge of dredge spoil return water. The Ocean Plan requirements are incorporated into WDRs issued by the Regional Board for dredge/fill projects.

### *Water Quality Control Policy for the Enclosed Bays and Estuaries of California*

This policy requires that dredge spoils to be disposed of in bay and estuarine waters must comply with federal criteria for determining the acceptability of dredged spoils to marine waters, and must be certified by the State Board or Regional Board as in compliance with state plans and policies. Dredging must also comply with applicable discharge prohibitions contained in the policy (i.e., the policy prohibits the direct or indirect discharge of silt, sand, soil, clay, or other earthen materials from onshore operations including mining, construction, agriculture, and lumbering, in quantities which unreasonably affect or threaten to affect beneficial uses).

### *California Bay Protection and Toxic Cleanup Act*

The California Bay Protection and Toxic Cleanup Act (Water Code, Division 4, Chapter 5.6, sections 13390-13396) requires the Regional Board to identify and characterize toxic hot spots in bays and estuaries and ocean waters of the state and plan for cleanup or remediation of the sites. Furthermore, CWC section 13396 states that no person shall dredge or otherwise disturb a toxic hot spot without first obtaining Clean Water Act section 401 certification or WDRs. Dredging projects involving removal or disturbances of sediments at toxic hot spots must meet the following conditions to the satisfaction of the Regional Board:

- The polluted sediment will be removed in a manner that prevents or minimizes water quality degradation.
- Polluted dredge spoils will not be deposited in a location that may cause significant adverse effects to aquatic life, fish, shellfish, or wildlife or may harm the beneficial uses of the receiving waters, or does not create maximum benefit to the people of the state.

- The project or activity will not cause significant adverse impacts upon a federal sanctuary, recreational area, or other waters of significant national importance.

### *California Coastal Zone Management Act*

The California Coastal Zone Management Act requires that the dredging of coastal waters and estuaries be limited where feasible to maintaining navigational depths [section 30233(a)(2)]. Section 30233(b) further encourages the transportation of dredged material so generated and determined to be suitable for beach replenishment to appropriate beaches or into suitable long shore current systems.

### *California Fish and Game Code*

Dredging operations and the disposal of dredge spoil and dredge spoil return water are subject to applicable sections of the California Fish and Game Code, especially those pertaining to:

- Water pollution (Division 6, Chapter 2, section 5650);
- Endangered species (Division 3, Chapter 1.5, sections 2050 - 2098); and/ or the
- Alteration of any river, stream or lake (Division 2, Chapter 6, section 1601 and section 1603).

### *California Environmental Quality Act of 1973*

The Regional Board may not adopt WDRs for a dredge/fill project until the California Environmental Quality Act (CEQA; P.R.C. 21000-21177) requirements have been satisfied. CEQA requires full public disclosure of a project and the assurance that environmental factors are considered in the decision making process. CEQA requires one of the following:

- An Environmental Impact Report;
- A Categorical Exemption; or
- A Negative Declaration.

## *HISTORY OF DREDGE AND FILL PROJECTS*

### *SAN DIEGO BAY*

**San Diego Bay Bridge**

Dredging of San Diego Bay has occurred for a variety of reasons. San Diego Bay is a major port for commercial and military vessels. In order to provide adequate water depths for navigation and berthing of vessels, dredging projects are required from time-to-time to maintain existing water depths or to increase depths to accommodate these vessels. Significant dredging first occurred within San Diego Bay in the early 1900's.

The volume of material dredged from San Diego Bay over the years is estimated to be between 180 and 190 million cubic yards (mcy) (Smith, 1977 from US Navy, Sept. 1992). About 5 to 8 mcy was disposed at ocean dumping sites, about 35 mcy was placed along Silver Strand beach, and about 147 mcy was used around the Bay as fill. Most of this material was placed prior to 1970. During 1992 and 1993, there were a total of fifteen recent, ongoing, and future dredge and fill projects in San Diego Bay for a total volume of about 3.7 mcy. The US Navy anticipates dredging an additional 13 mcy through 1998.

### *OTHER AREAS*

There is on-going maintenance dredging in other areas throughout the San Diego region.

These areas include:

- Agua Hedionda Lagoon;
- Mission Bay; and
- Oceanside Harbor.

- Batiquitos Lagoon;
- Murrieta Creek;
- San Marcos Creek; and
- Santa Margarita River.

## *DISPOSAL OF DREDGED MATERIAL*

Disposal of dredged material is a necessity whenever a dredging project is undertaken. There are alternatives for disposal available within the San Diego Region, including several which can yield significant environmental benefits. However, disposal of dredged material can be a significant problem when there is toxic contamination of the dredged materials. Prior to dredging, physical, chemical, and biological testing of the sediment have been required in order to determine the appropriate alternative for disposal of the dredged material. Potential alternatives for the disposal of dredged material from San Diego Bay include:

- Beach replenishment;
- Habitat restoration/ enhancement;
- Ocean disposal;
- Incineration;
- Upland disposal without treatment;
- Upland disposal with treatment;
- Confined aquatic disposal; and
- Reuse sites such as capping.

### *Physical Characteristics of Dredged Material*

Evaluation of the physical characteristics of sediments proposed for discharge is necessary to determine potential environmental impacts of disposal, the need for additional chemical or biological testing, as well as potential beneficial use of the dredged material. The physical characteristics of the dredged material include: particle-size distribution, water content or percent solids, specific gravity of solids, and plasticity characteristics. The sediment physical characteristics should also be evaluated from the standpoint of compatibility with different kinds of biological communities likely to develop for the disposal environments under consideration.

### *Chemical Characteristics of Dredged Material*

The initial screening for contamination is designed to determine, based on available information, if the sediments to be dredged contain any contaminants in forms and concentrations that are likely to cause unacceptable impacts to the environment. During this screening procedure, specific contaminants of concern are identified in a site-specific sediment so that any subsequent evaluation is focused on the most pertinent contaminants.

### *Physical behavior of the material at the disposal site*

Physical testing and assessment should focus on both the short-term and long-term physical behavior of the material. For open-water alternatives, these assessments might include an analysis of water-column dispersion, mound development, and long-term mound stability or dispersion. For confined alternatives, these assessments might include an analysis of solids retention and storage requirements during disposal and long-term consolidation behavior in the confined disposal facility.

Any contaminant testing should focus on those contaminant pathways where contaminants may be of environmental concern, and the testing should be tailored to the available disposal site. For open-water alternatives, contaminant problems may be related to either the water column or benthic environment, and the appropriate testing and assessments would include required Clean Water Act or MPRSA testing. For confined sites, potential contaminant problems may be either water quality related (return water effluent, surface runoff, and ground water leachate), contaminant uptake related (plant or animal), or air related (gaseous release).

Traditional locations for disposal of non-contaminated dredged material have included nearshore ocean waters along Silver Strand, in-bay waters of the Naval Amphibious Base Coronado, and the LA-5 Ocean Dredged Material Disposal Site (LA-5).

Dredging permits issued during the past twenty years have allowed about 10 mcy of material to be disposed either on Silver Strand beaches or LA-5. Chemical testing data for projected future US Navy projects suggest that 92 percent of the material planned to be dredged from San Diego Bay will qualify for placement at either habitat enhancement sites, Silver Strand beaches or at LA-5.

Material which is not physically compatible with the receiving disposal site may qualify to be disposed of at LA-5. Material which cannot meet either the 404(b)(1) Guidelines or the USEPA ocean dumping criteria must be disposed in a different manner.

### *Beach Replenishment*

Shore erosion is a major concern along the coast of the San Diego Region. Beach replenishment is usually accomplished by dredging sand from inshore or offshore locations and transporting the sand by truck, by split-hull hopper dredge, or by hydraulic pipeline to an eroding beach (e.g., Silver Strand beach). These operations may result in displacement of the substrate, changes in the topography or bathymetry of the borrow and replenishment areas, and destruction of nonmotile benthic communities. However, a well-planned beach nourishment operation can minimize these effects by taking advantage of the resiliency of the beach and nearshore environment and its associated biota, and by avoiding sensitive resources. When dredged material is used for beach replenishment it should closely match the sediment composition of the eroding beach and be low in fine sediments, organic material, and pollutants. The USACOE requires that dredged sediments proposed for placement on a beach must be:

- Particles mostly greater than 74 microns (i.e., sand, gravel or rock);
- Compatible with sediments on the receiving beach; and
- Substantially the same as the disposal site.

Generally, the disposal of clean, sandy material on beaches poses no present problem in terms of sediment quality, quantity, or feasibility. In fact, to be consistent with the California Coastal Management Plan, every effort must be made to beneficially use sandy material for beach nourishment or habitat restoration/ enhancement.

### *Habitat Restoration/ Enhancement*

Restoration/ enhancement of wetlands is an alternative that can benefit the environment. In general, restoration of a former wetland is more likely to be successful than creation of a new wetland where none had existed previously. In selecting a site, alteration of substrate and changes in circulation and sedimentation patterns should be considered. In general, the material used for wetland restoration should remain water-saturated, reduced, and near neutral in pH. These characteristics have a great influence on the environmental activity of any chemical contaminants which may be present.

### *Ocean Disposal*

The ocean water disposal technique involves placing the dredged sediment in open ocean waters at an USEPA approved site. The suitability of dredged sediment for open-water disposal is evaluated by effects-based testing as there are no sediment criteria.

In situations where the contaminated sediment will not meet USEPA's or the Corps of Engineers' criteria for ocean disposal, the sediment must be treated to meet those criteria by physical, chemical, biological, or thermal treatment methods.

### *LA-5 Ocean Dredged Material Disposal Site*

LA-5 received final designation from the USEPA in 1991. This site has been used for the disposal of dredged material since the 1970's and has no capacity or dumping rate restrictions. About 4 mcy were disposed there by the USACOE between 1977 and 1987. About 2.5 mcy were deposited by the US Navy, the National Steel and Shipbuilding Corporation, and Southwest Marine, Inc. during that same period (USEPA, 1988). The LA-5 site is a non-dispersive open water disposal site. Most of the material placed here is intended to remain on the bottom following placement. This site is located 11 km (5.4 nm) southwest of Point Loma on the continental shelf in 147 to 200 m (80 to 110 fm) of water. The center coordinates of the site are 32º 36' 83" North latitude and 117º 20' 67" West longitude, with a radius of 910 m (1,000 yd).

### *Upland (Landfill) Disposal without Treatment*

Upland disposal is the process of placing dredged material into or onto a properly permitted solid waste disposal facility or landfill, or into a structure specifically designed to accept dredged material. This upland disposal alternative is used when the dredged material does not qualify for any aquatic disposal alternative.

### *Upland (Landfill) Disposal with Treatment*

The landfill disposal with treatment technique refers to situations where the contaminated sediment will not meet state criteria for landfill disposal without the employment of physical, chemical, biological or thermal treatment methods.

### *Confined Disposal*

Confined disposal is placement of dredged material within diked nearshore or upland confined disposal facilities via pipeline or other means. Confined disposal facilities are designed and operated to provide adequate storage capacity for meeting dredging requirements and to maximize efficiency in retaining the solids. If contaminants are present in the dredged material, then control of contaminant releases is important in the design and operation of the confined disposal facility. In most cases confined disposal facilities must be used over a period of many years, storing material dredged periodically over the design life. Long-term storage capacity of these confined disposal facilities is therefore a major factor in design and management. Once water is drained from the confined disposal facility following active disposal operations, natural drying forces begin to dewater the dredged material, adding additional storage capacity.

### *Reuse Sites – Capping*

Capping can be done in place or through the controlled accurate placement of contaminated material at an open water disposal site. Capping in place is a type of non-removal action and refers to the placement of a clean cover material over the contaminated sediment. Capping can also be done by the accurate placement of contaminated material at an open water disposal site followed by a covering or cap of clean isolating material.

In both cases, the purpose of the cover material is to minimize or prevent the migration of contaminants from the sediment to the water column. In remedial actions involving capping, monitoring is needed to ensure that the integrity of the cap is maintained. The key elements of the monitoring program may include the monitoring of:

- Changes in cap thickness;
- Erosion around cap boundaries; and/ or
- Possible leakage of contaminants from the cap.

## *PROBLEMS POSED BY DREDGING SEDIMENT / CONTAMINATED SEDIMENT*

Many chemical substances discharged into marine waters tend to become attached to sediment particles and thus accumulate to high concentrations in benthic sediments. The dredging process can disturb bottom sediments leading to the release of pollutants into the water column by resuspension of contaminated sediment particles; dispersal of interstitial water in the sediment pores; and desorption of chemicals from the contaminated sediment. Common toxic constituents of many sediments include ammonia, low dissolved oxygen and hydrogen sulfide.

### *ENVIRONMENTAL THREAT ASSOCIATED WITH CONTAMINATED SEDIMENTS*

Benthic marine sediments support biological communities which reside there (e.g., clams, worms, bottom feeding fish), and provide spawning habitat for many pelagic species (e.g., invertebrates and fish). Elevated concentrations of chemicals in the sediment may cause acute mortality or affect the reproductive behavior, egg hatching characteristics, and early life development of these organisms. In addition to causing acute mortality and abnormal development, contaminated sediments can also lead to the accumulation of contaminants in organisms due to the effects of bioaccumulation. In addition, biomagnification of the contaminants can occur in the food chain when small contaminated organisms are consumed by higher trophic level species including man.

The threat to the public health from contaminated sediments centers around three principal pathways of exposure:

- Consumption of fish and shellfish contaminated by chemicals in the sediment through the processes of bioaccumulation and biomagnification;
- Direct contact with contaminated sediments by people; and
- Incidental ingestion of contaminated sediment or associated waters by people.

### *DISPOSAL OF CONTAMINATED MATERIAL AND DREDGE SPOIL RETURN WATER*

After removal of the contaminated material from the water, the contaminated material must be separated from the slurry to attain two distinct waste streams, the concentrated contaminated material and the dredge spoil return water. The methods for separating the material solids from the water include the use of settling basins, clarifiers, impoundment basins, screens and cyclones. The dredge spoil return water consists of a substantially liquid waste stream that may need to be subsequently treated by physical, chemical or biological methods for removal of dissolved and suspended pollutants.

# *DISCHARGES OF WASTE TO LAND*

Discharges of solid, semi-solid, and liquid wastes to landfills, waste piles, surface impoundments, pits, trenches, tailings ponds, natural depressions and land treatment facilities (collectively called "waste management units") have the potential to create significant pollution sources affecting water quality. Unlike surface waters, which often have the capacity to assimilate discharges of wastes, ground waters have little or no assimilative capacity. This is due to slow contaminant migration rates, lack of aeration, minimal biological activity, and laminar flow patterns. Waste containing elevated pollutant concentrations can require containment in waste management units or active treatment for extended periods to prevent waste migration and impairment of the underlying ground water quality. The pollutants may continue to affect water quality long after the

discharge has ceased, either because of continued leachate or gas discharges from the unit, or because pollutants have accumulated in underlying soils from which they are gradually released to ground water.

Landfills for disposal of municipal or industrial solid waste (solid waste disposal sites) are the major categories of waste management units in the Region. Surface impoundments are also used for storage or evaporative treatment of liquid wastes, waste piles for the storage of solid wastes, and land treatment units for the biological treatment of semi-solid sludge from wastewater treatment facilities. Sumps, trenches, and soil depressions have also been used in the past for liquid waste disposal. The Regional Board issues waste discharge requirements to ensure that these discharges are properly contained to protect the Region's water resources from degradation, and to ensure that dischargers implement effective monitoring to verify continued compliance with all applicable requirements.

Waste Management Units may be subject to concurrent regulation by other state and local agencies responsible for land use planning, solid waste management, and hazardous waste management. "Local enforcement agencies" (LEAs) implement the State's solid waste management laws and local ordinances governing the siting and operation of solid waste disposal facilities (usually landfills) with the concurrence of the California Department of Resources Recycling and Recovery (CalRecycle). CalRecycle also has direct responsibility for review and approval of plans for closure and post-closure maintenance of nonhazardous solid waste landfills. The Department of Toxic Substances Control (DTSC) issues permits for all hazardous waste management treatment, storage, and disposal facilities (which include incinerators, tanks, and warehouses where hazardous wastes are stored in drums as well as landfills, waste piles and surface impoundments). The State Board, Regional Boards, CalRecycle, and DTSC have entered into a Memorandum of Understanding to coordinate their respective roles in the concurrent regulation of these discharges.

The laws and regulations governing discharges of hazardous and non-hazardous wastes have been revised and strengthened over the past decade. The discharge of municipal solid wastes to land are closely regulated and monitored; however, some water quality problems have been detected and are being addressed. Past monitoring efforts under the State and Regional Boards' Land Disposal and SWAT programs revealed that discharges of municipal solid wastes to unlined landfills have resulted in ground water degradation and pollution by volatile organic constituents (VOCs) and other waste constituents. VOCs are components of many household hazardous wastes and certain industrial wastes that are present within municipal solid waste streams. VOCs can easily migrate from landfills either in leachate or by vapor-phase transport. Clay liners and natural clay formations between discharged wastes and ground waters are largely ineffective in preventing water quality impacts from municipal solid waste constituents. In a recently adopted policy for water quality control, the State Board found that "research on liner systems for landfills indicates that (a) single clay liners will only delay, rather than preclude, the onset of leachate leakage, and (b) the use of composite liners represents the most effective approach for reliably containing leachate and landfill gas" (State Board Resolution No. 93-62, Policy for Regulation of Discharges of Municipal Solid Waste).

The USEPA adopted federal regulations under Subtitle D of the Resource Conservation and Recovery Act (RCRA) which require the containment of municipal solid wastes by composite liners and leachate collection systems. Composite liners consist of a flexible synthetic membrane component placed above and in intimate contact with a compacted low-permeability soil component. This liner system enhances the effectiveness of the leachate collection and removal system and provides a barrier to vapor-phase transport of VOCs from the unit. Regional Boards and CalRecycle are implementing these new regulations in California under a policy described in State Board Resolution No. 93-62. The State Board developed revised regulations under

## *CALIFORNIA CODE OF REGULATIONS TITLE 27 AND TITLE 23, CHAPTER 15*

Discharges of wastes to land include treatment, storage, or disposal:

- The regulations governing discharges of non-hazardous wastes to land in California Code of Regulations (CCR) Title 27, Division 2 cover landfills, surface impoundments, waste piles, land treatment units, mining waste management units and confined animal facilities.

- The regulations governing discharges of hazardous wastes to land in CCR, Title 23, Division 3, Chapter 15 cover landfills, surface impoundments, and waste piles.

In addition, actions to clean up and abate conditions of pollution or nuisance at contaminated sites[9] are covered by relevant portions of the regulations where contaminated materials are taken off-site for treatment, storage, or disposal and, as feasible, where wastes are contained or remain on-site at the completion of cleanup actions. The regulations classify wastes according to their threat to water quality, classify waste management units according to the degree of protection that they provide for water quality, and provide siting, construction, monitoring, corrective action, closure and post closure maintenance criteria. The applicable regulatory requirements are minimum standards for proper management of each waste category. These regulations require the complete containment of wastes which, if discharged to land for treatment, storage or disposal, have the potential to degrade the quality of water resources. The Regional Board may impose more stringent requirements to accommodate regional and site-specific conditions.

The applicable regulations define waste types including hazardous wastes, designated wastes,[10] nonhazardous wastes and inert wastes as shown in Table 4-6.

Chapter 15 required the review and update of waste discharge requirements for all nonhazardous waste treatment, storage, and disposal sites by July 1, 1994. As of 2014, the San Diego Region has two hazardous waste disposal sites (Class I), which are the Otay Class I Landfill and former Omar Rendering Class I Landfill. Designated wastes (Class II), nonhazardous solid wastes (Class III) and the management of inert wastes are regulated by the Regional Board.

The regulation of nonhazardous solid waste disposal sites (Class III) has been ongoing by the Regional Board since the early 1960's. Many of the small older sites have closed, and waste is now being disposed at large regional sanitary landfills. The Regional Board's main actions at nonhazardous solid waste facilities are review of Joint Technical Documents (JTDs) for the review and revision of waste discharge requirements for the active sites to assure consistency with the current regulations. These actions include review of proposed engineering design and construction plans for liner systems, leachate collection and removal systems, storm water conveyance systems, etc. and construction quality assurance (CQA) documents for new expansions of operating waste containment units and landfill cover systems at closing units; defining the levels of designated wastes, the upgrading of water quality monitoring systems to determine if water quality protection standards are violated; establishing corrective action programs where standards are violated; and review and oversight of the development and implementation of facility closure plans.

[9] Also see State Water Board Policy Resolution No. 92-49 (Chapter 5)

[10] Also see Water Code section 13173

| | | |
|---|---|---|
| Class I Hazardous Waste | (a) Hazardous waste is any waste which, under Division 4.5 of Title 22, is required to be managed according to Division 4.5 of Title 22.<br>(b) Hazardous waste shall be discharged only at Class I waste management units which comply with the applicable provisions unless wastes qualify for a variance under section 25143 of the Health and Safety Code.<br>(c) Waste which have been designated as restricted wastes by DTSC pursuant to section 66268.29, of Title 22 shall not be discharged to waste management units after the restriction dates established by Article 2, Chapter 18, Division 4.5 of Title 22 unless:<br>(1) Such discharge is for retrievable storage; and<br>(2) DTSC has granted a variance from restrictions against land disposal of the waste under section 66268.29 of Title 22. | Materials that contain high concentrations of pesticides, certain solvents, and PCBs are examples of hazardous wastes. |
| Class II Designated Waste | (a) Designated waste is defined as:<br>(1) Nonhazardous waste which consists of or contains pollutants which, under ambient environmental conditions at the waste management unit, could be released at concentrations in excess of applicable water quality objectives, or which could cause degradation of waters of the state.<br>(2) Hazardous waste which has been granted a variance from hazardous waste management requirements pursuant to section 25143 of the Health and Safety Code.<br>(b) Wastes in this category shall be discharged only at Class I waste management units in compliance with Chapter 15 or at Class II waste management units which comply with the applicable provisions of Title 27 and have been approved for containment of the particular kind of waste to be discharged. Decomposable wastes in this category may be discharged to Class I or II land treatment waste management units. | Materials with high concentrations of biological oxygen demand (BOD), hardness, or chloride. Inorganic salts and heavy metals are "manageable" hazardous wastes. |
| Class III Nonhazardous Solid Waste | (a) Nonhazardous solid waste means all putrescible and nonputrescible solid, semi-solid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes and other discarded solid or semi-solid waste: provided that such wastes do not contain wastes which must be managed as hazardous wastes, or wastes which contain soluble pollutants in concentrations which exceed applicable water quality objectives, or could cause degradation of waters of the state (i.e., designated waste). | Garbage, trash, refuse, paper, demolition and construction wastes, manure, vegetable or animal solid and semisolid wastes. |

**Table 4 – 6 (continued). Landfill Classifications**

| Disposal Site Classification | Definitions of Waste Types (California Code of Regulations, Title 27, Division 2, section 20220 et. seq.) | Examples |
|---|---|---|
| Class III Nonhazardous Solid Waste (continued) | (b) Except as provided in section 20220(b) of Title 27, nonhazardous solid waste may be discarded at any classified landfill which is authorized to accent such waste, provided that:<br>(1) The discharger shall demonstrate that co-disposal of nonhazardous solid waste with other waste shall not create conditions which could impair the integrity of containment features and shall not render designated waste hazardous (e.g., by mobilizing hazardous constituents);<br>(2) A periodic load-checking program approved by CalRecycle or Solid Waste LEA and Regional Boards shall be implemented to ensure that hazardous materials are not discharged at Class III landfills.<br>(c) Dewatered sewage or water treatment sludge may be discharged at a Class III landfill under the following conditions, unless DTSC determines that the waste must be managed as a hazardous waste:<br>(1) The landfill is equipped with a leachate collection and removal system;<br>(2) The sludge contains at least 20 percent solids by weight if primary sludge, or at least 15 percent solids if secondary sludge, mixtures of primary and secondary sludges, or water treatment sludge; and<br>(3) A minimum solids-to-liquid ration of 5:1 by weight shall be maintained to ensure that the co-disposal will not exceed the initial moisture-holding capacity of the nonhazardous solid wastes. The actual ratio required by the Regional Board shall be based on site-specific conditions.<br>(d) Incinerator ash may be discharged at Class III landfill unless DTSC determines that the waste must be managed as hazardous waste. | Garbage, trash, refuse, paper, demolition and construction wastes, manure, vegetable or animal solid and semisolid wastes. |
| Unclassified/ Inert Waste | (a) Inert waste does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives. It does not contain significant quantities of decomposable waste.<br>(b) Inert waste do not need to be discharged to classified management units.<br>(c) Regional Boards may prescribe individual or general waste discharge requirements for discharges of inert wastes. | Concrete, rock, asphalt, plaster, brick, vehicle tires, uncontaminated soils. |

The criteria for classifying a nonhazardous waste as a designated waste are based on water quality objectives in the vicinity of the site, the containment features of the solid waste facility, and the solubility/mobility of the waste constituents. Therefore, all owners andoperators of active nonhazardous municipal solid waste facilities in the San Diego Region who wish to receive wastes other than municipal solid waste or inert waste must propose waste constituent concentration criteria above which wastes will be considered designated waste and therefore, not suitable for disposal at their site.

In addition, the Regional Board may revise waste discharge requirements to incorporate reclassification and retrofitting requirements and a revised monitoring program. Closed, abandoned and inactive landfills and other nonhazardous solid waste disposal sites are also subject to the provisions of either Title 27 (section 20080(g) for nonhazardous wastes) or Chapter 15 (for hazardous wastes).

Persons responsible for such sites may be required to develop and implement monitoring, to comply with closure and post-closure maintenance requirements, and to comply with reporting, notification, financial assurances, and record keeping requirements.

### *Waste Classification*

Contaminated soil and other material must be treated or properly disposed in order to minimize the threat to the quality of surface or ground waters.

Waste is classified in California by two separate California Environmental Protection Agency (Cal-EPA) agencies with separate regulatory authority. The California Department of Toxic Substances Control (DTSC) classifies waste as hazardous or non-hazardous based on the threat to public health. The State Board, together with the Regional Boards, classifies non-hazardous waste as "designated", "nonhazardous", or "inert" based on the threat that each poses to the beneficial uses of ground and surface waters, as required by the Porter-Cologne Water Quality Control Act and regulations, water quality control plans and policies set forth by the Regional Board.

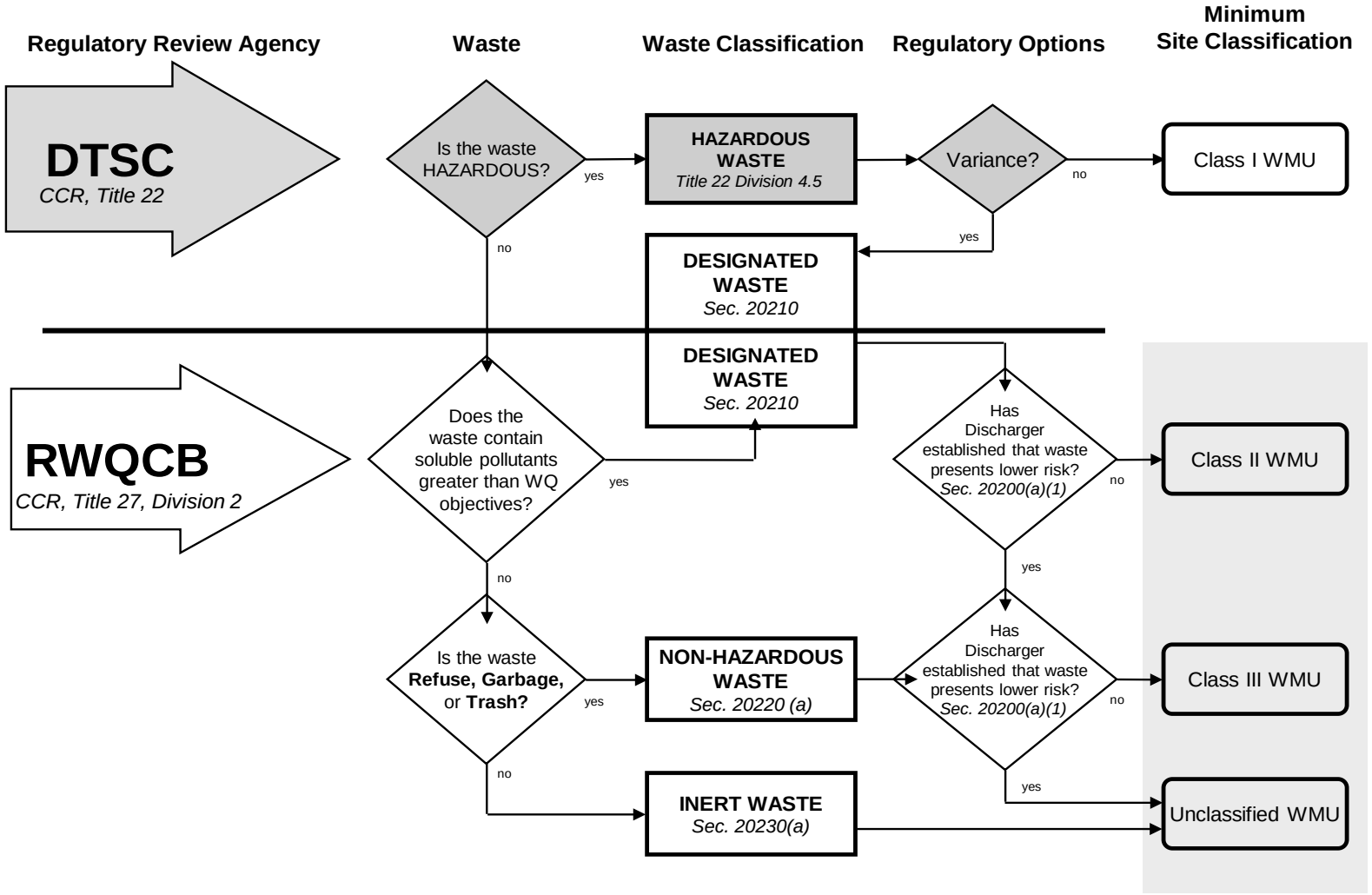
As shown in Figure 4-2, the applicable regulations divide waste into four categories which in turn, determine the classes of waste management units to which their discharge is permitted for treatment, storage or disposal. Detailed criteria are contained in Title 22 of the CCR, Division 4.5, for determining whether a waste falls into the hazardous category. These criteria fall under the headings of toxicity, ignitability, reactivity, corrosivity, and listing under the Resource Conservation and Recovery Act (RCRA). Hazardous waste may be discharged only to Class I waste management units which provide both natural geologic and engineered containment features to isolate the wastes from the environment, unless a specific variance has been granted by DTSC from California's hazardous waste management requirements.

"Nonhazardous solid waste" (see Title 27, section 20220, Table 4-6) is the regulatory term for "municipal solid waste" or "refuse" and is characterized as having a significant proportion of putrescible (degradable) matter, stringent moisture limitations, and prohibitions against inclusion of "designated" or "hazardous" wastes. "Nonhazardous solid waste" may be discharged to Class III landfills that protect beneficial uses of nearby waters, but do not provide complete waste containment. The only threat to water quality posed by wastes in the "inert" category is siltation. Paving fragments and non-degradable construction debris are examples of "inert waste". Wastes in this category may be discharged to unclassified waste management units that are located and managed to keep the wastes from entering surface waters or drainage courses.

"Designated waste" is defined in the California Water Code section 13173 and Title 27, section 20210 regulations, and is described in Table 4-6. The second part of the definition refers to those wastes granted a variance by DTSC from Class I disposal.

Dischargers are required to submit an initial analysis of the material by a state-certified laboratory. If the material is deemed hazardous, the discharger is referred to the California Department of Toxic Substances Control. For non-hazardous materials, general WDRs can be issued on a case-by-case basis.

# Figure 4-2. Waste Classification Process



All permitted treatment or disposal includes monitoring and reporting requirements.

Remediation treatment includes biodegradation (by a land treatment process) for hydrocarbon contaminated soil found on a site and a fixation process for metals contaminated soils. In-situ disposal (without treatment) can be allowed, on a case-by-case basis, for material that is not considered to be a threat to surface or ground water.

## *RESOURCE CONSERVATION AND RECOVERY ACT OF 1976*

The Resource Conservation and Recovery Act (RCRA) is the federal law regarding the treatment, storage and disposal of waste to land. The State implements RCRA's Subtitle C (management of hazardous wastes) through the Department of Toxic Substance Control (DTSC) and the Regional Boards. In August 1992, the USEPA formally delegated RCRA Subtitle C program implementation authority to DTSC. As described above, regulation of hazardous waste discharges is also included in Chapter 15. Monitoring requirements were amended in 1991 to make Chapter 15 equivalent to RCRA requirements. Those RCRA equivalent monitoring requirements also carried over into Title 27 in 1997. These monitoring requirements are implemented through the adoption of WDRs for hazardous waste sites covered by RCRA. The discharge requirements are then a part of a state RCRA permit issued by DTSC.

Federal regulations required by the RCRA's Subtitle D (nonhazardous wastes) were adopted for municipal solid waste landfills (40 CFR Parts 257 & 258). The California Department of Resources Recycling and Recovery (CalRecycle) and the State Board are jointly responsible for implementation of Subtitle D in California. The State Board also has the responsibility to implement Subtitle I (Underground Storage Tanks).

## *SOLID WASTE ASSESSMENT TEST (SWAT)*

The Regional Board administers the Solid Waste Assessment Test (SWAT) Program in the Region. The SWAT program requires owners of active or inactive non-hazardous solid waste disposal sites to evaluate the possible migration of hazardous waste or leachate to waters of the state. The SWAT program was initiated with the enactment of Water Code section 13273 in 1985. In addition to requiring site evaluations, the SWAT program also:

- Provides deadlines for implementation of water quality monitoring systems at active solid waste disposal sites;

- Requires the State Board to develop a ranked list of all solid waste disposal sites, on the basis of the threat which they may pose to water quality; and

- Requires operators of active and inactive solid waste disposal sites to implement a water quality monitoring system to verify that the solid waste disposal site has not been affected by leakage, and if there is leakage to take remedial actions under the Land Disposal program.

Program funding was eliminated in 1991, reducing Regional Board review to SWAT sites under regulation due to higher priority work in other Regional Board programs. All sites eventually will be required to complete a SWAT and more sites will be reviewed if more program funding becomes available.

## *SLUDGE USE AND DISPOSAL*

Sludge is a residual by-product of sewage treatment, water treatment, and certain industrial processes. The higher the degree of wastewater treatment, the larger the residue of sludge that must be handled. The treatment and disposal of sludge can be the single most complex and costly operation in a municipal wastewater treatment system. The sludge is

**Thickening**
Separation of as much water as possible by gravity or flotation process by subjecting the sludge to vacuum pressure, or other drying processes.

**Stabilization**
Stabilization of the organic solids so that they may be handled or used as soil conditioners without causing a nuisance or health hazard through processes referred to as "digestion".

**Reduction**
Reduction of solids to a stable form by wet oxidation processes or incineration.

The disposal point alternatives for municipal wastewater sludge in the San Diego Region are limited. Since treated and untreated sludge can contain high concentrations of toxic metals and significant amounts of toxic organic pollutants and pathogens, the USEPA and the Regional Board do not allow the direct discharge of sludge to the ocean or any other surface waters. Air pollution regulations have strict requirements on sludge incineration processes. Sludge disposal to land must be carefully controlled because of potential impacts on ground and surface water quality.

Sludge handling and disposal is regulated under 40 CFR Part 503 as a self-implementing program enforced by USEPA; the State does not have delegated authority for implementing the sludge program. Uses of sludge or sludge by-products and sludge disposal in the Region include:

- Sludge digester methane gas as fuel in gas boilers to generate electricity;
- Sludge as a soil amendment: composting dewatered sludge (pathogens are killed at composting temperatures);
- Sludge as a nutrient source for non-edible crops: direct application to agricultural crops not meant for direct human consumption (mixing, tilling, or injecting sludge into soil);

**Conditioning**
Treatment of the sludge with chemicals or heat so that the water may be readily separated.

- Sludge disposal directly in certain landfills;
- Sludge disposal in-situ; and
- Incineration.

Prior to disposal of sludge, an initial analysis by a state certified laboratory is required to determine if there are any hazardous substances in the sludge. Nonhazardous sludge can be disposed of in the above ways, usually under WDRs. Disposal of nonhazardous sludge at Class III landfills is regulated under WDRs and must meet criteria listed in Table 4-6. Landfills are required to report the quantity and chemical composition of all accepted sludge as part of their individual WDRs.

Currently, the Regional Board can regulate handling and disposal of sludge pursuant to Title 27 and DTSC standards. The USEPA has promulgated a policy of promoting those municipal sludge management practices that provide for the beneficial use of sludge while maintaining or improving environmental quality and protecting public health. USEPA is currently developing sludge use and disposal criteria. The USEPA has also proposed a rule which requires states to develop a program to assure compliance with the Federal criteria. The State Board will be developing a state sludge management program consistent with the USEPA policy and criteria.

## *AUTO SHREDDER WASTE*

According to CalRecycle, autoshredder waste is one of the top three materials used for alternative daily cover at nonhazardous waste landfills in California. There is a significant volume of auto shredder waste generated in California every year. CalRecycle reports that approximately 500,000 tons of autoshredder wastes were used as alternative daily cover in 2004, 2008 and 2012. Auto shredder waste is the material that remains after articles such as auto bodies, appliances and sheet metal are shredded and have had their metals removed. The majority of auto shredder waste is being treated to nonhazardous levels, but a significant portion of the waste must be disposed of in a hazardous waste landfill. Eight metal compounds, which include cadmium, total and hexavalent chromium, lead, copper, mercury, nickel and zinc, plus PCBs may cause auto shredder waste to be classified as hazardous. Senate Bill 976 was passed in 1985 which required Regional Boards to prepare a list of Class III, nonhazardous waste landfills as authorized to accept and dispose of auto shredder waste.

### *POLICY ON DISPOSAL OF SHREDDER WASTE*

The State Board Policy on the Disposal of Shredder Wastes (Shredder Waste Disposal Policy Order 87-22) was adopted on March 19, 1987. The Regional Board adopted Resolution No. 88-06 on February 8, 1988 to incorporate that policy into the Basin Plan and enforce the statewide policy (Resolution 87-22). This policy designates West Miramar Landfill, Otay Annex Landfill, and Prima Deshecha Landfills as facilities that are authorized to receive shredder wastes. The policy also permits the disposal of shredded wastes produced by the mechanical destruction of car bodies, old appliances and similar castoffs, into certain landfills under specific conditions designated and enforced by the Regional Boards. Hazardous and nonhazardous shredder waste may be disposed of in appropriate Class III landfills where doing so would not cause water quality impairment. The policy specifies the shredder waste must not exceed PCB levels of 50 milligrams per kilogram (mg/kg). Also, the shredder waste must be disposed on the last and highest lift in a closed disposal cell or in an isolated cell solely designated for the disposal of shredder waste.

# CONTROL OF NONPOINT SOURCE POLLUTION

## CHRONOLOGY OF NONPOINT SOURCE POLLUTION CONTROL MEASURES

To implement nonpoint source pollution control, several regulatory measures have been taken by federal, state, regional and local government. The following chronology shows the applicable regulatory measure, responsible governmental agency, and year when each measure was enacted or adopted. These regulatory measures will be discussed in the pages that follow.

| Regulatory Measure | Responsible Agency | Year |
|---|---|---|
| RB Resolution No. 79-25 | RB | 1979 |
| RB Resolution No. 87-91 | RB | 1987 |
| CWA, section 201(g)(1)(b) | USEPA | 1987 |
| CWA, section 205(j)(5) | USEPA | 1987 |
| CWA, section 319(h) | USEPA | 1987 |
| CWA, section 402(p) | USEPA | 1987 |
| CWA, section 603(c)(2) | USEPA | 1987 |
| CZARA, section 6217 | USEPA | 1990 |
| RB Resolution No. 92-21 | RB | 1992 |

## THE NEED FOR NONPOINT SOURCE POLLUTION CONTROL

Efforts to improve water quality under the NPDES program have traditionally focused on reducing pollutants from the major point sources, namely municipal sewage and industrial process wastewater. Point sources are defined as discrete conveyances, from which pollutants are, or may be discharged. These point sources received early emphasis because they were obvious sources of pollution and easily linked to degraded water quality conditions. However, as the permitting effort proceeded and control measures for municipal sewage and industrial wastewater were implemented, it became increasingly clear that control and reduction of nonpoint source pollution was also needed in order to restore and protect the nation's waters.

## DEFINITION OF NONPOINT SOURCE POLLUTION

In contrast to point sources, nonpoint sources of water pollution are generally defined as sources which are diffuse in nature, usually associated with man's uses of land, and are not subject to the federal NPDES permitting program. Diffuse sources originate over a wide area rather than from a definable point. They often enter receiving waters in the form of surface runoff but are not conveyed by way of pipes or discrete conveyances. By definition, nonpoint sources (like discharges to ground water) are exempt from the federal NPDES permitting program which regulates point sources to surface waters.

## CATEGORIES OF NONPOINT SOURCE POLLUTION

Nonpoint source pollution is primarily the result of man's uses of land such as urbanization, roads and highways, vehicles, agriculture, construction, industry, mineral extraction, physical habitat alteration (dredging/ filling),

hydromodification (diversion, impoundment, channelization), silviculture (logging), and other activities which disturb land. Additional categories of nonpoint sources include agricultural return water, marinas and recreational boating, confined animal facilities, resource extraction, channel erosion, resuspension of pollutants from contaminated aquatic sediments, waste disposal sites, septic systems (onsite or subsurface disposal), atmospheric deposition, acid precipitation, seawater intrusion, and geothermal development.

## *OVERLAPS BETWEEN NONPOINT & POINT SOURCES*

The distinction between point source and nonpoint sources is not always clear. As a result, there have always been overlaps and ambiguities between programs designed to control nonpoint sources and those designed to control point sources of pollution. The most important example of such an overlap involves urban runoff and storm water which are clearly diffuse and nonpoint in origin, but become channelized and are ultimately discharged through discrete point source conveyance systems to receiving waters. Because it becomes channelized, urban runoff is legally considered a point source discharge. However, because it originates as nonpoint source, urban runoff and storm water are discussed in the Nonpoint Source section.

## *SEVERITY OF NONPOINT SOURCE PROBLEM*

According to the 1988 National Water Quality Inventory, nonpoint source pollution has become the largest single factor preventing the attainment of water quality standards. The inventory reported over 40% of the nation's rivers and streams are impaired due to siltation and 25% are impaired due to nutrients (such as phosphorus and nitrogen) from nonpoint sources. Agricultural runoff was reported as the major nonpoint pollution source affecting over 50% of impaired rivers. Also, over half of the states reported threats to ground water from nonpoint pollution sources.

## *NONPOINT SOURCE FUNDING*

Innovative ways of financing and implementing nonpoint source projects have been developed. Prior to the 1987 amendments to the Clean Water Act, states used section 106 and 205(j) monies to fund limited nonpoint source activities. The primary federal funding for current nonpoint source program development and implementation includes section 104(b)(3), 205(j)(5), 319(h), 201(g)(1)(b), 603(c)(2), and 604(b) monies as described below.

### *Section 104(b)(3)*

This section established grants for state water pollution control agencies and others for the purpose of conducting and promoting research and investigations related to the causes, effects, extent, prevention, reduction, and elimination of pollution. Such research and investigations are to be carried out in cooperation with federal, state, and local agencies.

### *Section 205(j)(5)*

This section established a set-aside of construction grants for the purposes of carrying out activities under section 319, including program development and the preparation of state assessment reports and management plans. These funds were used for assessment and development activities for California's program through fiscal year 1989.

### *Section 319(h)*

Grant funds authorized by this section can be used for the implementation of nonpoint source management programs but cannot be used for assessment activities. States must have an USEPA approved Assessment and Management Plan before qualifying for these monies. This grant program funds both State and Regional Board programs and provides competitive grants for other agencies to use in implementing nonpoint source measures around the state. These grants include a "non-federal" match of 40 percent which illustrates the intent of Congress and USEPA to have the states make a financial commitment to implementing nonpoint source programs.

### *Section 201(g)(1)(b)*

The 1987 amendments to the Clean Water Act added this section that established a new purpose for which 201 funds could be used, "...*any purpose for which a grant can be made under section 310(h) and (i)*". These funds can be used for either nonpoint source development or implementation projects.

### *Section 603(c)(2)*

The 1987 amendments added Title VI to the Clean Water Act establishing a State Water Pollution Control Revolving Fund Program (SRF). This program provides funding in the form of loans, refinancing, and bond insurance which can be used for (1) construction of publicly owned treatment works, (2) the implementation of state nonpoint source management programs, and (3) the development and implementation of state estuary conservation and management plans. The State and Regional Boards encourage local agencies to apply for these low-interest loans to implement nonpoint source demonstration projects and programs in the Region.

### *Section 604(b)*

States must set aside one percent of their Title VI allotments or $100,000, whichever is greater, to carry out planning programs under 205(j) and 303(e) of the Clean Water Act. These funds can be used under 205(j) planning for nonpoint source related activities. This can become an important source of funding for nonpoint source planning and assessment tasks since these types of activities cannot be carried out under section 319.

## *SECTION 319 NONPOINT SOURCE MANAGEMENT PROGRAM*

To address the nonpoint source pollution problem, Congress added section 319 to the Clean Water Act in 1987. Section 319 requires each state to develop and implement a Nonpoint Source Management Program and to conduct an inventory of the waterbodies in the State which are impaired due to nonpoint source pollution. To fulfill these requirements, the State Board adopted the Nonpoint Source Management Plan (NPSMP) in 1988 which is discussed in Chapter 5 and the Water Quality Assessment in 1990 which is discussed later in this chapter.

The NPSMP established a statewide policy for managing nonpoint source inputs to California's waters and is incorporated by reference into this Basin Plan. The objective of the Nonpoint Source Management Program in California is to measurably improve water quality through the implementation of various BMPs.

Unlike end of pipe treatment for point sources (which is impractical and cost prohibitive for nonpoint sources), the key to managing nonpoint source pollution is pollution prevention. Pollution prevention means stopping the generation of pollution at its source by reducing the use of products containing pollutants. Once pollutants have been generated, pollution control BMPs must be employed to prevent the existing pollution from coming into contact with the waters of the State. BMPs are defined as the schedules of activities, prohibitions, procedures, or other management practices designed to prevent or reduce the discharge of pollutants into receiving waters.

The State and Regional Board(s) believe that the voluntary and widespread application of BMPs is the most effective means by which nonpoint source pollution can be reduced. Accordingly the following three general management options are adopted in the

Nonpoint Source Management Plan to address nonpoint source problems. In general, the least stringent option that successfully protects or restores water quality is employed. More stringent options are only required if water quality improvements are not achieved.

### *Voluntary Implementation of BMPs*

Voluntary implementation of BMPs is encouraged through financial assistance, education, training, technical assistance, and demonstration projects. Grants and loans provide incentives.

### *Regulatory Based Encouragement of BMPs*

Regional Boards require waste discharge requirements for nonpoint sources but waive the requirement if BMPS are effectively implemented. Regional Boards can also enter into Management Agency Agreements (MAAs) with other agencies which specify acceptable BMPs and their implementation. The MAAs are referenced in Regional Board basin plans and become the primary basis for evaluation of compliance. The State Board has existing MAAs with the US Forest Service, the California Board of Forestry and Department of Forestry.

In either case, the Regional Board will generally refrain from imposing effluent requirements on dischargers who are implementing BMPs in accordance with a waiver of waste discharge requirements or an approved management agency agreement. In both cases, the BMPs become the primary mechanism for meeting water quality standards.

### *Issuance of Permits*

Adopt and enforce waste discharge requirements which set effluent limits on the discharge of specific pollutants.

The State Board has also established four program objectives for its Nonpoint Source Management Program, each of which are being implemented in the San Diego Region as follows:

(1) **Implementation of Nonpoint Source Management Plan.** This includes integration of the Coastal Nonpoint Pollution Control Program (which is required under the CZARA and is described below) into the NPSMP.

(2) **Outreach Activities.** Regional Board outreach activities primarily center around the industrial, construction, and municipal participants in the NPDES Storm Water Permit Program (described in a later section). Other activities include participation in Resource Conservation District, technical advisory and planning committee, and lagoon foundation meetings.

(3) **Watershed Assessment Projects.** San Diego's target watershed is Escondido Creek and San Elijo Lagoon.

(4) **Project Tracking and Participation.** The Regional Board has two nonpoint source program contracts. The first contract is entitled the Chollas Creek Watershed Protection Plan project. The Chollas Creek contract has been completed. However, the watershed remains a high priority for the toxic substances monitoring program and for chronic and acute toxicity monitoring. These monitoring programs may identify changes in the water quality due to the education program funded by this contract. The second project involves a nitrate contamination project in the Rainbow Creek watershed. Although the USEPA funded study has not been formally initiated, the Flynn-Rainbow Nursery has converted to a complete tailwater recovery and reuse system. This conversion resulted in a reduction of nitrate loads to the creek. The Rainbow Creek contract will be modified to study other nurseries and sources of nutrients.

## *ALL NONPOINT SOURCE DISCHARGES ARE CURRENTLY REGULATED*

Despite the overlaps between point and nonpoint sources, all nonpoint source discharges are currently regulated under one of two relatively new statutory requirements. These requirements are the NPDES Storm Water Permitting Program required under section 402(p) of the Clean Water Act and the Coastal Nonpoint Pollution Control Program required under section 6217 of the CZARA.

Although the two programs are complementary and exclusive of each other (i.e., one program applies to any discharge that the other does not), their recent implementation has heightened the confusion about point source verses nonpoint source program applicability.

Both the programs are fully discussed in later sections, and a brief overview is included here. In its simplest form, the Clean Water Act section 402(p) program, which is an NPDES permitting program, is designed to regulate storm water and urban runoff (i.e., the nonpoint source discharges that become point sources). Virtually all other nonpoint sources are subject to the Coastal Nonpoint Pollution Control Program under CZARA. Although there are a few minor complications which are also discussed later, the essential concept is that all nonpoint source discharges are currently subject to regulation under either the NPDES Storm Water Program or the Coastal Nonpoint Pollution Control Program.

## *NPDES STORM WATER PROGRAM*

### *CLEAN WATER ACT SECTION 402(P)*

Pursuant to the federal Clean Water Act, many municipalities and most industries in the United States are now required to obtain coverage under an NPDES permit for discharges of storm water runoff. NPDES storm water permits authorize only the discharge of storm water into storm water conveyance systems and prohibit all non-storm water discharges.

### *DEFINITION OF STORM WATER*

The federal regulations (40 CFR 122, 123, 124, November 1990) define storm water as surface runoff from rain or snow melt, including sheet flow. This is a narrow definition which is meant to include the runoff of precipitation only. Storm water does not include water which originates from any source other than precipitation such as process wastewater, cooling waters, and wash waters. These are examples of non-storm water discharges and are not allowed in the storm water conveyance system. A non-storm water discharge is any discharge that is not composed entirely of storm water. Also unacceptable for discharge into the storm water conveyance system is precipitation runoff which has come in contact with pollutants.

### *THE PROBLEM*

Although storm water runoff is part of the natural hydrologic cycle, human activities, particularly urbanization, can result in significant and problematic changes to the natural hydrology of an area. Under conditions of minimal urbanization, water is percolated through pervious surfaces in which soil filtration and biological action remove pollutants. During urbanization, pervious surfaces (i.e., vegetated and natural ground cover) are converted to impervious surfaces (i.e., rooftops and roads) decreasing the infiltration capacity of the soil for both water and pollutants.

As a result, when rain falls on and drains through urban freeways, industries, construction sites, and neighborhoods it picks up a multitude of pollutants. The pollutants can be dissolved in the runoff and quickly transported by gravity flow through a vast network of concrete channels and underground pipes referred to as storm water conveyance systems.

Such systems ultimately discharge the polluted runoff, without treatment, into the nation's creeks, rivers, estuaries, bays, and oceans. In short, urbanization results in a dramatic increase in the volume, velocity, and especially in the pollutant load carried by storm water runoff to receiving waters.

Pollutants typically found in urban runoff include sediment, nutrients (e.g., fertilizers), oxygen-demanding substances (e.g., decaying vegetation), bacteria, viruses, heavy metals, synthetic organics (e.g., fuels, oils, solvents, lubricants), pesticides, and other toxics. These pollutants severely degrade the beneficial uses of surface waters, and threaten the health of both humans and aquatic organisms.

In addition to the pollutants contributed by precipitation runoff, dry weather flows also cause serious degradation of receiving water quality. Dry weather flows, which can be substantial, consist of flows from illicit connections and illegal discharges to the storm water conveyance system. Common examples of the latter include illegally disposed used motor oil and antifreeze.

Studies, most notably the Nationwide Urban Runoff Program (NURP), found pollutants in urban runoff to be similar to those found in sewage and industrial wastewater discharges. Similar concentrations were also observed. Thirty-eight states report urban runoff as a major cause of impaired water quality. Locally, the closure of Southern California beaches following major storm events due to high bacteriological levels in ocean waters is a common occurrence. Clearly urban runoff is a significant water quality problem which deserves attention.

## *STATUTORY AUTHORITY*

To address the storm water/urban runoff problem, Congress added section 402(p) to the Clean Water Act in 1987. This section, and the federal regulations which implement it (40 CFR 122, 123, and 124; November 1990) require NPDES permits for storm water/ urban runoff discharges from municipalities and industries, including construction.

The distinction between point source and nonpoint sources of pollution begins to fade with the requirement for NPDES permits for storm water discharges. Although storm water is clearly diffuse and nonpoint source in origin, it is quickly channelized and ultimately discharged through discrete point source conveyance systems to receiving waters. Because of this, storm water is legally considered a point source discharge and as such is subject to the NPDES permitting program under section 402(p).

## *MUNICIPAL, INDUSTRIAL, AND CONSTRUCTION PERMITS - COMMON CHARACTERISTICS*

As a result of the 1987 Clean Water Act amendments, there are currently three types of storm water permits in California: municipal, industrial, and construction. The municipal permits are areawide permits which were issued by the Regional Board. The industrial and construction permits are statewide general permits which were issued by the State Board. There are three important characteristics which all storm water permits have in common.

### *Permit Objective*

The overall objective of the entire storm water program and all three types of permits is to reduce or eliminate the discharge of pollutants into the storm water conveyance system. Section 402(p) of the Clean Water Act does however establish different performance standards for municipal and industrial discharges. Municipalities must reduce pollutant discharges to the maximum extent practicable, or MEP (see discussion below). Industries (including construction) must implement Best Available Technology (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce pollutants.

### *Pollution Prevention*


**Best Management Practices**

The permit objective is achieved by way of pollution prevention. To eliminate pollutants in storm water, one can either clean it up by removing pollutants or prevent it from becoming polluted in the first place. Because of the overwhelming volume of storm water and the enormous costs associated with pollutant removal, pollution prevention is the only approach that makes sense.

Pollution prevention which means stopping the generation of pollution at its source by reducing the use of products containing pollutants, is in fact, the basis of the entire storm water program. Once pollutants have been generated, pollution control best management practices (BMPs) must be employed to prevent the existing pollution from coming into contact with the water of the State. It is important to point out that this approach is distinctly different from the conventional end-of-pipe treatment approach commonly used in water quality regulation.

Pollution prevention is accomplished by way of BMPs which are defined as schedules of activities, prohibitions, procedures, or other management practices designed to prevent or reduce the discharge of pollutants to storm water.

Source control BMPs include practices that eliminate or reduce pollutants at their point of generation, or source, so that they cannot come into contact with storm water. Source controls are non-structural, inexpensive, and can be extremely effective. Because source control BMPs are site specific, they vary widely depending on the application. For example, regulatory powers and land use planning are important BMPs for municipalities. Berming and covering storage areas are excellent BMPs at industrial facilities; reduced vegetation removal and phased development planning are effective at construction sites.

Two source control BMPs are common to all three applications (municipalities, industries, and construction), namely good housekeeping practices (cleaning up and immediately disposing of wastes properly) and most importantly, education (employee and public). Education, which ultimately results in a change in behavior and increased public awareness, is the key to pollution prevention. Many people think that street gutters are plumbed to the sanitary sewage treatment plant and do not realize that they flow instead directly to the bays and ocean without treatment. Education should be conducted in two directions: (1) prevent the discharge of pollutants and (2) reduce the use of materials which are the sources of pollution.

### *No Numeric Effluent Limits*

None of the three types of storm water permits contain numeric effluent limits at this time. The permits are intended to be BMP based and instead contain narrative receiving water limitations.

## *AREAWIDE MUNICIPAL STORM WATER PERMITS*

Under section 402(p) of the Clean Water Act and the federal regulations implementing it, operators of large and medium sized municipal storm water conveyance systems are required to obtain NPDES permits for their storm water conveyance systems at this time. Large and medium sized municipal storm water conveyance systems are defined as those serving populations greater than 250,000 and 100,000, respectively. Smaller municipalities (those under serving populations less than 100,000) have until late 1994 to obtain coverage but may be required to do so earlier if it is determined that (1) they are significant contributors of pollutants to receiving waters or (2) if their storm water conveyance systems are "interrelated" to larger municipal systems. In the municipal permits the Regional Board made a finding that all of the smaller municipalities in the San Diego Region meet both of these criteria (Order No. 90-42). All the municipalities contribute to the condition of water quality impairment (see Table 4-7) and the storm water discharges are "interrelated" in that they jointly and cumulatively contribute significant pollutants to the near coastal waters of San Diego County. Consequently, in July 1990, the Regional Board adopted an areawide Municipal Storm Water Permit for each of the three counties in the Region, San Diego, Riverside, and Orange as follows:

(1) Order No. 90-42 (NPDES Permit No. CA 0108758), Waste Discharge Requirements for Storm Water and Urban Runoff from the County of San Diego and Incorporated Cities of San Diego County and the San Diego Unified Port District.

***Table 4 - 7. Receiving Waters Impacted by Pollution from Storm Water and Urban Runoff (Order No. 90-42)***

| IMPACTED RECEIVING WATER | REFERENCES | PARAMETERS | MUNICIPALITIES / JURISDICTION |
|---|---|---|---|
| San Diego Bay | WQLS, NPSI | PET, TRA, SYN, COL, DEB, MET | City of San Diego, Coronado, National City, Chula Vista, Imperial Beach, La Mesa, Lemon Grove, County of San Diego, San Diego Unified Port District |
| Mission Bay | WQLS, NPSI | COL, MET | City of San Diego |
| Santa Margarita Lagoon | WQLS, NPSI | NUT | Camp Pendleton, County of San Diego, County of Riverside, Temecula |
| Oceanside Harbor | NPSI | TRA, SYN | Camp Pendleton, Oceanside |
| Buena Vista Lagoon | NPSI | NUT, SED | Oceanside, Vista, Carlsbad, County of San Diego |
| Agua Hedionda Lagoon | SDHSR | COL | Carlsbad, San Marcos |
| Batiquitos Lagoon | WQLS, NPSI | NUT, SED | Carlsbad, Encinitas, San Marcos, County of San Diego |
| San Elijo Lagoon | WQLS, NPSI | NUT, SED | Encinitas, Escondido, Solana Beach, County of San Diego |
| San Dieguito Lagoon | NPSI, TSMP | SED, TRA | City of San Diego, Del Mar, Solana Beach, County of San Diego, Escondido |
| Los Penasquitos Lagoon | WQLS, NPSI | NUT, SED | City of San Diego, Del Mar, Poway, County of San Diego |
| Tijuana River Estuary | WQLS, NPSI | TRA, SYN, DOX, NUT | Tijuana, Mexico, City of San Diego, Imperial Beach |
| San Diego River | NPSI | SYN, PES, SED | City of San Diego, La Mesa, El Cajon, Santee, County of San Diego |
| Forester Creek | NPSI | TRA | El Cajon, Santee |
| Tijuana River | WQLS, NPSI | NUT, DEB, COL, DOX, SYN, PES, TRA | Tijuana, City of San Diego |
| Lake Hodges | NPSI | NUT, DIS | City of San Diego, Escondido, Poway |

*** Abbreviations for Table 4-7:**

**REFERENCES**

- **WQLS** Water Quality Limited Segment
- **NPSI** Nonpoint Source Inventory Report
- **SDHSR** State DHS Report on Shellfish Contamination in Agua Hedionda Lagoon
- **TSMP** Toxic Substances Monitoring Program elevated values

**PARAMETERS**

- **COL** Coliform bacteria or other microbes
- **DEB** Debris
- **DIS** Dissolved Solids
- **DOX** Low dissolved oxygen, except when associated with algal blooms caused by nutrients
- **MET** Metals, except trace elements
- **NUT** Nutrients, macro- and micro-nutrients, including algal bloom-low dissolved oxygen syndrome
- **PES** Pesticides, except trace elements, including insecticides, nematocides, herbicides, and fungicides
- **PET** Petroleum distillates
- **SED** Sedimentation/turbidity, including habitat alteration due to sedimentation
- **SYN** Synthetic organics, except herbicides and pesticides
- **TRA** Trace elements: aluminum, beryllium, cadmium, chromium, copper, lead, mercury, manganese, molybdenum, nickel, selenium, silver, titanium, and zinc

(2) Order No. 90-46 (NPDES Permit No. CA 0108766), Waste Discharge Requirements for Storm Water and Urban Runoff from the Riverside County Flood Control and Water Conservation District, the County of Riverside and the Incorporated Cities of Riverside County within the San Diego Region.

(3) Order No. 90-38 (NPDES Permit No. CA 0108740), Waste Discharge Requirements for Storm Water and Urban Runoff from the County of Orange, the Orange County Flood Control District and the Incorporated Cities of Orange County within the San Diego Region.

Included as co-permittees in the above permits are all of the land use regulatory agencies; the county, all incorporated cities within the county, and special districts. For this reason, the municipal permits are referred to as "areawide" permits. As it moves from inland to coastal areas, storm water does not recognize jurisdictional boundaries. Since all municipalities contribute to the cumulative storm water pollution problem, a coordinated, "areawide" approach to managing it is essential, more effective, and far less expensive than numerous individual efforts.

### *Objective*

The objective of an areawide municipal storm water permit is to reduce pollutants in storm water discharges to the maximum extent practicable (MEP). This is a standard used by USEPA for municipal discharges of storm water. Although not specifically defined in the federal regulations, the intent of MEP is to reduce as much as possible the discharge of pollutants. Thus, the municipal dischargers are required to employ whatever BMPs are feasible (i.e., are likely to be effective and are not cost prohibitive). Where a choice is made between two BMPs which provide generally comparative effectiveness, the discharger may choose the least expensive alternative and exclude the more expensive BMP. However, it would not be acceptable either to reject all BMPs which address a pollutant source or to pick a BMP based solely on cost, which would be clearly less effective. In order to reduce pollutants to the MEP many factors including technical feasibility and effectiveness, as well as economic factors, must be taken into consideration.

### *Permit Requirements*

Municipal Storm Water Permits contain the following two major requirements:

(1) Prohibit non-storm water discharges; and

(2) Develop/implement a comprehensive storm water management program. The comprehensive storm water management program must include the following five components:

- BMP program;
- Monitoring and reporting program;
- Illicit connection/ illegal discharge detection program;
- Storm water ordinance or code; and
- A funding source.

### *Ultimate Responsibility for Quality of Storm Water Discharges (Municipal Regulation of Industry)*

Under an areawide municipal storm water permit, municipalities are ultimately held responsible for the quality of discharges from their storm water conveyance systems, including contributions from industrial and construction activities. This provides important incentive for municipalities to regulate these activities occurring within their jurisdiction.

As called for in the federal storm water regulations, the regulation of industrial storm water discharges (including construction) into municipal storm water conveyance systems should be accomplished by a cooperative effort between the Regional Board and the local municipality.

## *GENERAL INDUSTRIAL STORM WATER PERMIT*

To reduce the administrative burden of issuing individual permits to the overwhelming number of industries now subject to NPDES storm water permitting, USEPA has initiated a four-tiered strategy for regulating industries. The first tier involves the use of a small number of "general" permits. A general permit is a single permit under which many facilities can obtain coverage (for example, all of the industries in a given type). Under the tiered strategy, the permitting process begins general and becomes increasingly more specific and rigorous over time. Subsequent tiers target specific watersheds, industry types, and finally individual facilities.

Consistent with the tiered approach, the statewide General Industrial Storm Water Permit entitled, "*Waste Discharge Requirement (WDR) for Discharges of Storm Water Associated with Industrial Activities excluding Construction Activities, Order No 91-13 (General Permit No. CAS 000001)*" was adopted by the State Board on November 19, 1991.

### *Industries Requiring Coverage*

As shown below, the federal regulations identify eleven categories of industrial facilities which are required to obtain coverage under an NPDES storm water permit. Ten of the eleven categories are covered under the statewide General Industrial Storm Water Permit. Category x, construction activities, is covered under a separate permit, which will be discussed in a later section. Categories i through ix are considered "mandatory industries" and are required to obtain coverage under the General Industrial Storm Water Permit whether or not they have materials and activities exposed to storm water. Category xi, "*conditional industries*," are only required to obtain coverage under the general permit if they have materials, equipment, or activities exposed to storm water. Six of the categories are defined by narrative descriptions of the industrial activity. The remaining five categories are defined by Standard Industrial Classification (SIC) codes.

| | |
|---|---|
| (i) | Facilities Listed Under 40 CFR Subchapter N |
| (ii) | (Heavy) Manufacturing Facilities |
| (iii) | Oil and Gas/ Mining Facilities |
| (iv) | Hazardous Waste Treatment, Storage, or Disposal Facilities |
| (v) | Landfill, Land Application Sites and Open Dumps |
| (vi) | Recycling Facilities |
| (vii) | Steam Electric Power Generation Facilities |
| (viii) | Transportation Facilities |
| (ix) | Sewage or Wastewater Treatment Works |
| (x) | Construction Activities |
| (xi) | (Light) Manufacturing Facilities (with exposure) |

In addition to private industry, industrial facilities owned or operated by governmental entities (including federal, state, and municipal facilities) are also required to obtain permit coverage.

### *When Is Coverage Not Needed*

If a facility discharges all of its storm water to a municipal sanitary sewer system or to evaporation ponds, percolation ponds, or dry wells, and if there is no discharge to surface water under any circumstances, coverage under the general permit may not be required.

### *Permit Requirements*

The General Industrial Storm Water Permit and General Construction Storm Water Permit both contain the following three major requirements:

(1) Eliminate non-storm water discharges;

(2) Develop and implement a Storm Water Pollution Prevention Plan. A Storm Water Pollution Prevention Plan (SWPPP) is a site specific plan consisting of all BMPs which will be implemented at a facility to reduce or eliminate the discharge of pollutants to storm water. (It is the most important requirement and the key to source controls); and

(3) Develop and implement Monitoring and Reporting program in accordance with the general permit.

## *GENERAL CONSTRUCTION STORM WATER PERMIT*

Although it is one of eleven industrial categories specified in the federal regulations, construction activities are regulated under a separate general permit in California. The statewide General Construction Storm Water Permit entitled, "*Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity, Order No. 92-08-DWQ (General Permit No. CAS 000002),*" was adopted by the State Board on August 20, 1992.

### *Definition of Construction*

Construction activity includes, but is not limited to clearing, grading, and excavation, as well as building and reconstruction. Construction activity does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility.

### *Who Needs Coverage?*

In California at this time, discharges of storm water associated with construction activities that result in the disturbance of five acres or more of total land are required to obtain coverage under the general permit. Construction activities disturbing less than five acres are also required to obtain coverage under the permit if they are part of a larger common plan of development or sale. Because of a recent court ruling, it is important to note that the current five acre exemption is subject to change.

### *Erosion - The Major Construction Concern*

Natural erosion processes are greatly accelerated when protective ground cover is removed during construction activities. Studies reveal that the rate of erosion on land where construction activities are occurring is approximately 2,000 times greater than on timber land that has not been logged.

Erosion results in not only the loss of productive soil, which is essentially irreplaceable, but also in severe impacts to water quality. Twenty-one states, including California, report construction site runoff as a major cause of water quality impairment. "Clean sediment" alone is by definition, a pollutant because of its ability to degrade water quality. Although there are many water quality impacts associated with clean sediment, the two most important ones include: (1) increased turbidity and corresponding decreased light transmittance (resulting in reduced biological productivity and adverse effects on aesthetic value); and (2) direct suffocation of benthic (bottom dwelling) communities due to excessive sediment deposition. In addition to these problems, sediment also provides a major transport mechanism for countless other pollutants. First priority should be placed on soil stabilization and erosion prevention, not sediment interception.

### *Permit Requirements*

The General Construction Storm Water Permit contains the same three requirements as the General Industrial Storm Water Permit (see discussion above).

### *Industries/Construction Are Subject To Municipal Regulation*

There is a "double" system of regulation for industrial storm water which is discharged through municipal conveyance systems. Such discharges are regulated by both the statewide general permit (industrial or construction) issued to the discharger and by the municipality subject to the areawide Municipal Storm Water Permit. It is the Regional Board's responsibility to enforce the general permits and the areawide Municipal Storm Water Permit. It is the responsibility of the municipality to enforce its own ordinances. The statewide general permits (industrial and construction) specifically require dischargers to comply with the lawful requirements of local agencies regarding discharges to storm water conveyance systems within their jurisdiction.

## *HIGHWAY RUNOFF CONTROL PROGRAM*

Cars, trucks, and other vehicles are the major contributors to highway runoff pollution. Landscaping, highway maintenance, and highway construction also contribute to highway runoff pollution (see Table 4-8). An essential component of the NPDES storm water program is the implementation of practices for maintaining public highways that reduce impacts on receiving waters from highway runoff.

**Highway**

However, cities and counties (permittees) do not have jurisdiction over public highways controlled by the California Department of Transportation (Caltrans). To comply with the requirements of the NPDES storm water program, Caltrans must either actively participate as an entity in the Area Wide storm water program, or obtain a separate NPDES permit for storm water discharges for highways under its jurisdiction. Such a program for Caltrans shall include a Storm Water Management Plan which addresses the design, construction, and maintenance of highway facilities relative to reducing pollutants in highway discharges to the maximum extent practicable. The Plan shall include:

- A characterization of Caltrans highway systems, including pollutants, highway layout, and drainage control system in the area;
- A description of existing highway runoff control measures;
- A description of additional highway runoff control measures to enhance pollutant removal; and
- A plan for monitoring the effectiveness of control measures and highway runoff water quality and pollutant loads.

The highway runoff management plan shall specifically address litter control, proper pesticide/ herbicide management, reduction of direct discharges, reduction of runoff velocity, landscape over-watering, use of grassed channels, curb elimination, catch basin maintenance, appropriate street cleaning, establishing and maintaining vegetation, infiltration practices, and detention/ retention practices. Caltrans shall coordinate its urban runoff program with local agencies and existing programs related to the reduction of pollutants in highway runoff.

**Table 4-8. Highway Runoff Constituents and their Primary Sources**

| CONSTITUENT | PRIMARY SOURCES |
|---|---|
| Particulates | Pavement wear, vehicles, maintenance |
| Nitrogen, Phosphorus | Atmosphere, roadside fertilizer application |
| Lead | Tire wear (lead oxide filler material, lubricating oil and grease, bearing wear) |
| Zinc | Tire wear (filler material), motor oil (stabilizing additive), grease |
| Iron | Auto body rust, steel highway structures (guard rails, bridges, etc.), moving engine parts |
| Copper | Metal plating, bearing and bushing wear, moving engine parts, brake lining wear, fungicides and insecticides |
| Cadmium | Tire wear (filler material), insecticide application |
| Chromium | Metal plating, moving engine parts, brake lining wear |
| Nickel | Diesel fuel and gasoline (exhaust), lubricating oil, metal plating, bushing wear, brake lining wear, asphalt paving |
| Manganese | Moving engine parts |
| Cyanide | Anticake compound used to keep deicing salt granular (ferric ferrocyanide, sodium ferrocyanide, yellow prussiate of soda) |
| Sodium, Calcium, Chloride | Deicing salts |
| Sulfate | Roadway beds, fuel, deicing salts |
| Petroleum | Spills, leaks or blow-by of motor lubricants, antifreeze and hydraulic fluids, asphalt surface leachate |

# *COASTAL NONPOINT POLLUTION CONTROL PROGRAM*

## *COASTAL ZONE ACT REAUTHORIZATION AMENDMENTS*

**Imperial Beach**

In 1990, Congress amended the Coastal Zone Management Act (CZMA). The amendments are referred to as the Coastal Zone Act Reauthorization Amendments (CZARA). Section 6217, "Protecting Coastal Waters", of CZARA established the Coastal Nonpoint Pollution Control Program. Section 6217 of CZARA requires USEPA to develop, and states to implement, enforceable "management measures" (i.e., BMPs) to control nonpoint source pollution in coastal waters. The definition of the "coastal zone" in California was expanded to encompass the entire state.

Like the NPDES storm water permitting program, implementation of the Coastal Nonpoint Pollution Control Program is still evolving. As of the 1994 Basin Plan update, USEPA has published management measures, which are collectively referred to as the "(g) guidance", pursuant to section 6217(g) of the CZARA. There are six major categories of nonpoint sources addressed by the (g) guidance, including: agriculture sources, forestry, urban areas, marinas, hydromodification projects and wetlands.

The storm water NPDES permitting program under the Clean Water Act and the Coastal Nonpoint Pollution Control Program section under CZARA are intended to be complimentary but exclusive of each other. In other words, the Coastal Nonpoint Pollution Control Program applies only to nonpoint sources that are not currently regulated under an NPDES storm water permit. This includes all of the traditional non-urban nonpoint sources such as agriculture and silviculture and those urban sources which are not currently subject to the NPDES storm water permitting program. Examples of the latter in 1994 include some municipalities with populations under 100,000; construction sites disturbing less than 5 acres; and storm water discharges from wholesale, retail, service, or commercial activities.

The key concept is that all nonpoint pollution sources, both urban and non-urban (including those that become point sources), are currently subject to regulation under either the NPDES Storm Water Permitting Program required under section 402 (p) of the Clean Water Act or the Coastal Nonpoint Pollution Control Program required under section 6217 of the CZARA.

## *AGRICULTURE*

In the San Diego Region, agriculture ranks as the fourth largest industry in the economy and accounts for 1.7 percent of the Region's economy. The coastal and inland valley areas of the county possess a moderate and virtually frost-free climate able to support a variety of sub-tropical crops, making the San Diego area a unique agricultural region. The primary crops being grown for the national and international markets are avocados, citrus, cut flowers, and nursery products. To a lesser extent, local fresh market crops and livestock are produced in the area.

The San Diego County Water Authority (Authority) is the largest agricultural water consuming agency within Metropolitan Water District (MWD), requiring approximately 50 percent of MWD's total agricultural water supply each year. Agricultural water use within the Authority is concentrated mainly in north county agencies such as Rainbow MWD, Valley Center MWD, Fallbrook PUD and Yuima MWD.

Pursuant to the CZARA section 6217 (g), USEPA has identified management measures to protect coastal waters from sources of nonpoint pollution from agriculture. Specifically, the (g) Guidance for agriculture contains management measures to address erosion from cropland, applying nutrients to cropland, applying pesticides to cropland,

confined animal facilities, land used for grazing, and cropland irrigation. The three most significant water quality impacts from agriculture in the San Diego Region are:

- Erosion of agricultural soils;
- Agricultural irrigation return water (salt loading and applied chemicals); and
- Confined animal facilities.

Basic information on each impact is summarized below.

## *EROSION CONTROL*

Erosion is a problem, not only in terms of the loss of agricultural production, but also because it degrades important aquatic habitat. Eroded soils can bury benthic communities, cover spawning grounds, destabilize channel banks and fill sensitive wetland areas. Furthermore, other pollutants are often bound to eroded soils. Under certain conditions, these pollutants may be remobilized into the water column causing problems for human health, wildlife, and aquatic resources.

The State and Regional Boards have adopted narrative standards that prohibit the impairment of aquatic habitat from erosion. However, no specific numeric standard limiting sediment loads has been established. Implementation of effective management practices to control erosion is typically accomplished through the combined efforts of several agencies working with landowners. Local Resource Conservation Districts, with technical assistance from the U.S. Soil Conservation Service, help landowners prevent erosion problems. The University of California, Agricultural Extension Service also assists in developing management practices and informing growers of optimum strategies for soil fertility and stabilization. Additionally, the U.S. Agricultural Stabilization and Conservation Service provides grants and low interest loans to farmers for improvements which retain valuable topsoil in cultivated areas.

## *AGRICULTURAL IRRIGATION RETURN WATER*

Agricultural irrigation return water is the wastewater which runs off or leaches through an irrigated area. The two major concerns with agricultural irrigation return water are salt loading and the release of applied chemicals.

## *SALT LOADING*

Since the water supply in the San Diego Region is generally quite high in salts and the climate is dry, irrigation with this relatively saline water causes salt accumulation in the soil. Crop roots absorb only essentially pure water while leaving dissolved salts behind. If these salts are not leached out by regularly applying more irrigation water than is needed for evapotranspiration, salts accumulate in the root zone and the land eventually becomes too salty for agriculture. However, the saline soils may be reclaimed by leaching. The percolation of the water used to leach salts from the soil can be a serious source of ground water degradation.

The actual effect of irrigation return water on ground water quality in the Region is difficult to determine without further study. The construction of irrigation return water drain tiles to collect and transport return flows is a possible remedial measure that could be implemented in certain portions of the Region. This has not been considered necessary to date and no plans for such construction are presently pending.

## *APPLIED CHEMICALS*

Modern agriculture is based on the extensive use of applied chemicals such as fertilizers, pesticides, and herbicides to obtain high crop yields. The improper use of these applied chemicals may lead to serious degradation of both ground water and surface water quality. Some of the chemicals applied to farm land move down with deep-percolation water from crop root zones and can contaminate underlying ground water. Surface waters are primarily contaminated by the runoff of irrigated agriculture containing sediments, nutrients such as phosphorus and nitrogen, pesticides, and other pollutants.

The release of applied chemicals, into surface and ground waters can have adverse effects on the quality of those waters and the beneficial uses supported by them. Aquatic toxicity, as measured by toxicity bioassay tests, has been found in many waters within the State. The application of agricultural chemicals, in some cases, has been linked directly to this toxicity and is suspect in many other impaired waterbodies. In addition to degradation of the aquatic environment, the contamination of ground and surface waters by pesticides and fertilizers is believed to also pose a threat to human health. Pesticides for example are known to bioaccumulate.

The Basin Plan contains a water quality objective requiring that all waters be maintained free of toxic substances in concentrations that are toxic to human, plant, animal, or aquatic life. The Basin Plan also contains a water quality objective for pesticides requiring that no individual pesticide or combination of pesticides be present in the water column, sediments, or biota at concentrations that adversely affect beneficial uses.

Although the Department of Pesticide Regulation (DPR) controls the application and use of agricultural pesticides, regulation of the quality of agricultural runoff waters is the responsibility of the State and regional boards. The regional boards have adopted water quality standards that apply to all surface waters of the State. Although standards for certain metals and some older pesticides have been adopted, standards for the majority of currently used agricultural chemicals do not exist. Generally, narrative standards which prohibit toxicity and degradation of waterbodies apply to agricultural discharges as do specific toxicity standards. To implement these standards, the regional boards have relied on a number of voluntary efforts and a concerted effort to educate growers on the need to protect waterbodies from the adverse effects of farm chemicals. The State Board also uses grant funds to support implementation of projects which demonstrate improved management practices.

In coordination with DPR, the regional boards have begun to put restrictions on the use of certain agricultural chemicals to address water quality problems. DPR has the responsibility to condition the use of any agricultural chemical to ensure its safe use. Where DPR has been convinced of the significant potential to cause environmental problems, it has established restrictions on the application, release, or timing of pesticide applications. DPR also encourages changes in formulations or in the combinations of pesticides applied in order to minimize water quality problems. An overall integrated pest management program for each agricultural site, rather than sole reliance on pesticides is needed.

There are other reasons to be concerned with the judicious use of agricultural chemicals (in addition to environmental issues). These interests are often concerned with questions of production and profit. To the extent that the application of agricultural chemicals are limited for cost control reasons, these concerns often result in benefits for water quality as well.

The narrative and/or numeric nutrient objectives presented in this Basin Plan are also applicable to irrigation return water. The State Board may require the use of pollutant control techniques to implement irrigation water management in its water rights permits or through Nonpoint Source Management Plan.

Irrigation water management may be implemented through reducing the use of fertilizers and pesticides to levels which minimize their presence in irrigation return water, as well as through the implementation of irrigation systems which reduce the volume of return water.

## *IRRIGATION WATER*

In 1992, two laws were passed which require agricultural water suppliers delivering more than 50,000 AF/Y to prepare water management plans (CWC, sections 10800 and 10904). The plans are to focus on water conservation measures, improved irrigation efficiency, and environmental enhancement. The Department of Water Resources has established an advisory committee to review and study irrigation practices for these purposes. The implementation of conservation plans will likely have a side benefit of reduced erosion as irrigation efficiency improves.

## *DAIRIES – CONFINED ANIMAL FACILITIES*


**Dairy**

Problems associated with dairy operations in the San Diego Region include ground water mineralization, the addition of nitrates to ground water, surface runoff of biodegradable and suspended material, nuisance odors, the addition of nutrients to adjacent surface water streams and other miscellaneous problems. All dairies in the Region are regulated under waste discharge requirements. These waste discharge requirements implement the regulations for confined animal facilities contained in CCR, Title 27, Division 2, Article 1, sections 22560-22565.

The major requirements contained in waste discharge requirements for dairies are as follows:

(1) Dairies must be designed and constructed to retain all facility wastewater generated, together with all precipitation on, and drainage through manured areas during a 25-year, 24-hour storm.

(2) All precipitation and surface drainage outside of manured areas, including that collected from roofed areas, and runoff from tributary areas during the storm events described in subsection (1) of this section, shall be diverted away from manured areas, unless such drainage is fully retained.

(3) Retention ponds and manured areas at dairies must be protected from inundation or washout by overflow from any stream channel during 20 year peak stream flows. Existing facilities that are protected against 100-year peak stream flows must continue to provide such protection.

(4) New facilities shall be protected against 100 year peak stream flows.

(5) Retention ponds shall be lined with or underlain by soils which contain at least 10 percent clay and not more than 10 percent gravel or artificial materials of equivalent impermeability.

(6) Facility wastewater, collected precipitation and drainage may be discharged to properly operated use or disposal fields or to wastewater treatment facilities approved by the Regional Board.

### *Regional Board Dairy Waste Management Policy (Resolution No. 87-71)*

The Regional Board adopted Resolution No. 87-71, "*A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region*" (Regional Board Dairy Waste Management Policy) on November 16, 1987. On March 17, 1988, the State Board adopted Resolution No. 88-35 approving the Regional Board Dairy Waste Management Policy with a few minor changes.

The Regional Board Dairy policy contained in Resolution No. 87-71 is incorporated below; accordingly Resolution No. 87-71 is superseded.

The Regional Board regulatory program on dairy waste disposal is designed to be a part of the Basin Plan. The program is based upon the following principles to ensure that the goals of the Basin Plan are implemented:

(1) The Regional Board is committed to the reasonable protection of present and future beneficial uses of ground water.

(2) Coordination among state, federal, and local agricultural and regulatory agencies, the dairy industry, local planning and land-use agencies is necessary to resolve potential water quality problems associated with dairies.

(3) Cooperation between this Regional Board and the dairy industry is required when developing and implementing measures to achieve conformance with the Basin Plan ground water objectives.

(4) Comprehensive assessments of salt loading on the ground water basins in the San Diego Region are necessary to develop reasonable and cost effective water quality protection measures for all nonpoint and point sources of waste.

(5) An interim dairy wasteload regulatory program is necessary until the assessment studies noted in Principle 4 are completed. The interim program should provide a simple, region-wide approach to controlling dairy wasteloads, that may be reviewed on a case-by-case basis if necessary. The program should be easy to understand, easy to implement and enforce and provide greater protection of water quality than present practices.

As part of an overall program of dairy waste management, the following measures shall be implemented:

(1) The Regional Board shall continue to enforce all State and Federal water quality laws, and regulations regarding dairy waste treatment and disposal, including CCR Title 27 and USEPA Effluent Guidelines and Standards for feedlots point source category (40 CFR 412).

(2) The Regional Board shall continue to seek funding to conduct the necessary studies and develop computer models to provide an accurate assessment of existing and projected wasteloads in the various ground water basins.

(3) Based upon the results of the studies described in item 2, the Regional Board will revise Basin Plan ground water objectives if warranted and specify or revise wasteload limits that will be appropriate for the point and nonpoint sources of waste, including dairies if necessary.

(4) For an interim period, until the necessary ground water assimilative capacity and wasteload assessment studies are completed, the Regional Board shall limit the disposal of corral manure to dairy disposal land to no more than 3 tons dry weight or 10 cubic yards per acre per year, and to cropland where crops are grown and harvested twice annually, to no more than 12 tons dry weight per acre per year. The Regional Board shall consider manure application higher than the 12 tons per acre per year limit upon demonstration that the crops require the increased manure loadings.

(5) The U.S. Department of Agriculture, Soil Conservation Service, University of California at Riverside, the State and County Departments of Agriculture and other governmental and educational institutions are encouraged to provide dairy operators with the latest technical information regarding waste disposal practices that would result in additional water quality protection.

(6) The local land use and planning agencies are encouraged to conduct long-term planning for addressing water quality issues of new and expanded dairies in the region. The dairy industry is encouraged to provide accurate five-year projections of dairy herds at existing dairies and potential locations for new dairies to the planning agencies and to the Regional Board, so that the Board may include the required Basin Plan studies as part of the Board's triennial review process.

(7) The Regional Board will continue to obtain and review technical information regarding the hydrologic basins and to recommend the update of Basin Plan standards if warranted.

(8) The Regional Board encourages the implementation of water conservation measures at dairies, and the beneficial reuse of dairy farm wastewater that would replace the use of imported water.

## *MANAGEMENT PRINCIPLES*

(1) Property owners are considered ultimately responsible for all activities and practices that could result in adverse effects on water quality from waste discharges and from surface runoff.

(2) Local units of government should have the lead role in controlling land use and construction activities that cause erosion and may, as necessary, impose further conditions, restrictions, or limitations on waste disposal and other activities that might degrade the quality of waters of the State.

(3) BMPs should be implemented to reduce erosion and sedimentation and minimize adverse effects on water quality.

## *REGIONAL BOARD IMPLEMENTATION MEASURES*

(1) Local governments shall be encouraged to develop effective erosion and sedimentation control ordinances and regulatory programs that are at least equivalent to the model ordinance in the "*Erosion and Sediment Control Handbook*" published by the California Department of Conservation, May 1981.

(2) If necessary, a Memorandum of Understanding (MOU) or Management Agreement could be adopted to more clearly define the cooperative roles between the local units of government and the Regional Board.

(3) The Regional Board may participate with other concerned agencies such as the California Department of Fish and Game, the Resource Conservation Districts, the various lagoon foundations, etc., to identify watersheds, coastal lagoons and estuaries with critical erosion and sediment problems. The Regional Board may assist in the assessment of such problems and causes, and assist in the development of alternative measures to prevent future problems.

(4) As time and resources permit, the Regional Board will review existing local grading ordinances to determine the adequacy of the ordinances to provide effective erosion control. The Regional Board may then recommend specific improvements to the ordinances for consideration by the local agencies. If necessary, the Regional Board may request a report on the implementation of the Board's recommendation.

(5) If necessary, the Regional Board may request periodic status reports of construction and grading activities from local agencies to determine the effectiveness and potential problems with the implementation of local erosion and sediment control program.

(6) The Regional Board shall encourage the Resource Conservation Districts to review and update if necessary, their erosion control ordinances in order to develop more effective programs for erosion and sediment control for agricultural activities. Local units of government are encouraged to take a more active role in addressing erosion problems from agricultural activities.

## *THE ELSINORE-MURRIETA-ANZA RESOURCE CONSERVATION DISTRICT SEDIMENT CONTROL ORDINANCE (RESOLUTION NO. 79-25) AND THE RESOURCE CONSERVATION DISTRICTS OF SAN DIEGO COUNTY EROSION AND SEDIMENT CONTROL POLICY (RESOLUTION NO. 92-21)*

The Elsinore-Murrieta-Anza Resource Conservation District and the Resource Conservation Districts (RCDs) of San Diego County were established to provide for the conservation of soil and water resources and for the prevention and control of soil erosion and sediment damage due to agricultural and other land use activities.

The RCDs establish guidelines for land management programs by adopting BMPs such as those presented in the Soil Conservation Service Technical Guide covering San Diego County. Currently, farmers and other land owners contact the RCDs on a voluntary basis for assistance in developing individual erosion and sediment control programs which conform to the BMPs.

In order to assure that all farmers and other land owners operate under the Resource Conservation Districts BMP guidelines, and to better address the existing and potential water pollution problems caused by agriculture and other land uses, the RCDs have adopted sediment control ordinances and policies (e.g., Elsinore-Murrieta-Anza Resource Conservation District Sediment Control Ordinance and the Resource Conservation Districts of San Diego County Erosion and Sediment Control Policy). These documents formally adopt the Soil Conservation Service's BMPs and define the existing and expanded functions and responsibilities of the RCDs. These documents also suggest means by which the California Regional Water Quality Control Board, San Diego Region, can assist the RCDs in implementation of the policy.

The Resource Conservation District Sediment Control Ordinance, and the Erosion and Sediment Control Policy establish the duties of the Regional Board and the RCD's as outlined below. The Resource Conservation Districts will implement these documents as follows:

(1) Continue to assist farmers and other land owners in establishing management programs which comply with BMPs.

(2) Authorize any of its directors to file a formal complaint against any person who is causing or permitting any accelerated erosion and sediment damage.

(3) Take action against any person causing or permitting any accelerated erosion and sediment damage.

   A. Receive complaints from RCD directors, land occupiers, or city, state and county officials responsible for the maintenance of water quality in the jurisdictions.

   B. Conduct hearings of the Resource Conservation District Board of Directors on complaints. If the complaint is valid, the "land disturber" is allowed two months to develop and implement a voluntary conservation plan.

   C. Request action by the Regional Board if compliance schedules are not followed or if further noncompliance occurs, when such noncompliance results in the intentional or negligent discharge or deposition of any waste where it is, or probably will be discharged into the waters of the state or creates or threatens to create a condition of pollution or nuisance.

The Regional Board will assist the Resource Conservation Districts in implementing the Erosion and Sediment Control Policy by doing the following:

(1) Inform the appropriate RCD of instances when the staff of the Regional Board finds that accelerated erosion damage has occurred or is likely to occur as a result of violations of the BMP guidelines.

(2) Receive requests for action on complaints from the RCDs when compliance schedules have not been met or when further noncompliance has occurred, and consider appropriate enforcement action pursuant to section 13304 (a) of the Porter-Cologne Water Quality Control Act.

# *RESOURCE EXTRACTION*

## *SAND, GRAVEL AND OTHER MINERAL RESOURCE EXTRACTION OPERATIONS*

The sand and gravel related processing industry represents one of the largest single classes of industry in the San Diego Region. Construction activities in the Region will require a continuing need for sand and gravel products. The industry can generally be classified as follows:

- Sand and gravel processing (including rock crushing);
- Concrete batching;
- Asphalt batching;
- Asphalt product manufacturing;
- Concrete product manufacturing; and
- Clay and clay product processing.

The largest volume of waste from sand and gravel processing operations results from product washing. Many of the sedimentary deposits mined for sand and gravel in the San Diego Region contain a high percentage of silt and clay. Extensive washing is required to remove the fine material. Other waste includes cement truck wash water, sediment separated from the wash water, and rejected product (broken brick, block, pipe etc.).

Recycled wash waters are discharged to storage ponds and can contain high concentrations of total dissolved solids because of evaporation and leaching from product materials. The percolation of these recycled waters can adversely affect ground water quality. It is recognized that the permeability of the ponds receiving the wash waters is low because of the sealing effects of silts and clay sediments in the wash water. Sediment and wash water discharged to surface waters can adversely affect aquatic life through sediment deposition and increases in turbidity.

Many sand and gravel operations are regulated with waste discharge requirements (WDR). The waste discharge requirements prohibit the discharge of sand and gravel wash water to surface waters. The requirements also require that waste holding ponds have 100-year frequency flood protection. Mining Operations may also be subject to “Mining Waste Management” requirements in CCR Title 27 (sections 22470 to 22510).

Sand and gravel mining operations are subject to regulation under section 404 of the Clean Water Act. Before a section 404 permit can be obtained, the discharger must obtain water quality certification pursuant to section 401 of the Clean Water Act. See previous discussion of Water Quality Certification (section 401).

Many mining operations are subject to California's Surface Mining and Reclamation Act (SMARA) of 1975 and the federal Surface Mining Control and Reclamation Act (SMCRA) of 1977. These laws, which have similar provisions, require reclamation of mined lands in order to protect public health and safety and to prevent or minimize adverse environmental effects such as water quality degradation, flooding, erosion, and sedimentation. Additionally, SMCRA requires mine operators to establish baseline hydrologic conditions; in the event that adjacent waters are contaminated, diminished, or interrupted, SMCRA further requires mine operators to replace the water supply.

Under SMARA regulations (California Public Resources Code (section 3505, Article 1), mining operators must:

- Control soil erosion by minimizing removal of vegetation and overburden, managing stockpiles, and constructing erosion control facilities;
- Control water quality by constructing settling ponds and basins and conducting operations in such a way as to prevent siltation of ground water recharge areas;
- Protect fish and wildlife habitat by taking "reasonable measures";
- Protect natural drainage ways by proper placement and control of mine waste rock and overburden piles or dumps; and
- Control erosion and drainage by grading and revegetation, and construction of basins to impound surface runoff, and protection of spillways from erosion.

## *FLOOD CONTROL*

In a natural setting, the dynamic nature of water creates an ever changing stream channel within the floodplain. In the San Diego Region, where rainfall is extremely variable, flood plains which appear to be dry one year, may contain tremendous torrents the following year. Sometimes the dry appearance of the flood plain has made people mistakenly think flood waters do not occur there. The dry appearance of a portion of the flood plain is deceptive. Floods are a natural part of any flood plain. Flood plains cannot be fully protected against floods.

In the past, developments clustered near or within the flood plain. Flood control channels were constructed to protect these properties. Flood control channels were built to constrict the flood plain and to allow maximum development on adjacent lands. These developments increased the amount of impervious area (roads, buildings, parking lots and other structures) and increased local storm runoff. Storm water, which prior to development would have been absorbed into the soil, instead filled local storm drains. Thus, the precipitation which might at one time have caused local flooding caused intensified downstream flooding.

Today, many flood plains have been channelized to protect property. There are a variety of channel designs which have been built. Channel designs vary in range from completely natural to entirely concrete lined with concrete bottoms. Other channel types include natural channels modified to contain a low-flow channel with or without side filling or riprap or concrete; and with or without encroachment by agriculture and/or urban areas.

**Rose Canyon Creek**

## *IMPACTS OF CHANNELIZATION*

To the degree that a natural watercourse is channelized, the negative impacts to the watershed are increased. The following impacts occur with channelization:

(1) Channel modification and channelization of streams induces changes in land use practices. The resulting change in land use practices often results in detrimental changes to surface water quality.

(2) With future increases in the urbanization of an area, the impervious area increases, contributing additional storm water runoff. Flood channels were built to contain a certain design flow and the design flow can be exceeded by additional storm water runoff.

(3) As the flood plain is constricted and confined within a channel, the potential damage from storm runoff is increased.

(4) Channelization reduces ground water recharge.

(5) Impervious channels designed to remove the runoff quickly also transport pollutants down the flood control system just as quickly. Most of the surface water runoff from urban areas flows into flood control channels without any mechanism to control the input of toxics.

(6) Channelization results in the direct loss of instream habitat. Fish and other aquatic life are totally dependent upon the surface waters within floodplains.

(7) Channelization results in the loss of riparian habitat.

(8) Channelization causes an increase in ambient stream temperatures within and downstream from the channelized section. The rise in stream temperature may degrade the habitat for aquatic life.

(9) The loss of riparian areas through channelization results in the loss of wildlife. Riparian areas are the most important habitat for the majority of western wildlife species, and are essential for many wildlife species.

(10) Loss of riparian areas results in a loss of the buffering capacity of the riparian vegetation to moderate flows.

(11) Loss of the riparian areas results in a loss of the natural filtering capacity that these areas provide. The natural filtering capacity of riparian areas reduces the concentration of potentially toxic constituents in storm water runoff. Riparian areas provide an improvement in the quality of water produced from the watershed.

(12) Stream and riparian habitats are needed to provide corridors for fish and wildlife resources. A highly modified concrete channel may not allow for fish or wildlife passage. Even a limited section of concrete channel can disconnect habitats. The separation of habitats reduces the viability of fish and wildlife populations.

## *CONCLUSION*

Channel modifications need to be evaluated for their ultimate consequences for the watershed. In California's past there was inadequate consideration towards the retention of wetlands, riparian systems, and natural flood plains. The economic assessment of flood control alternatives should consider any proposed project in its entirety. Wetlands, riparian systems and natural flood plains accommodate natural stream meandering, aggradation, degradation and overbank flow better than those lands directly encroached upon by development.

Consideration and utilization of methods to reduce storm water runoff and allow infiltration and percolation of storm waters are needed. Methods should include minimizing the further construction of flood control channels, particularly concrete channels, and the retention of riparian areas within floodplains. Riparian areas within flood plains need to be protected in order to allow the natural filtering capacity of the riparian area to improve the quality of storm water produced from the watershed; and to preserve alluvial percolation capacity and aquatic habitat values. When possible riparian areas need to be restored.

Riparian and stream habitats provide natural beauty which is appreciated and valued by people. Riparian and stream habitats, especially in urban areas, are vital to enhancing our quality of life. People are far more likely to respect and be stewards of "natural" reaches of streams than channelized or artificially modified reaches. Riparian lands represent a significant value to society.

**Noble Canyon Creek**

## *FUTURE DIRECTION: WATERSHED-BASED WATER QUALITY CONTROL*

The concept of comprehensive watershed level management of water resources is currently being incorporated into various elements of the State's Nonpoint Source Management Program. The watershed protection approach is an integrated strategy for more effectively protecting and restoring beneficial uses of state waters. By looking at an entire watershed, one can more clearly identify critical areas and practices which need to be targeted for pollution prevention and corrective actions. This approach not only addresses the waterbody itself, but the geographic area which drains to the watercourse. This strategy also integrates both surface and ground waters, inland and coastal waters, and point and nonpoint sources of pollution. Point sources have received most of the regulatory attention in the past, however, significant improvements in point sources,

coupled with continued water quality impairments, have necessitated that the water resources community look at a more integrated approach which considers impacts from both point and nonpoint sources of pollutants.

The Watershed Protection Approach is built on the following three main principles:

- The target watersheds should be those where pollution poses the greatest risk to human health, ecological resources, desirable uses of the water, or a combination of these;

- All parties with a stake in the specific local situation should participate in the analysis of the problems and the creation of solutions; and

- The actions undertaken should draw on the full range of methods and tools available, integrating them into a coordinated, multi-organizational attack on the problems.

Many agencies and organizations concerned with water resources have come to recognize that this type of approach can be very effective in realistically assessing cumulative impacts and formulating workable mitigation strategies. The CZARA, USEPA guidance, and various legislative proposals clearly state the need to consider the implications of land use on water quality. USEPA program managers are re-thinking their approach to the allocation of resources (especially within the Nonpoint Source Program) and will be primarily funding studies that are part of a watershed planning and implementation effort.

The traditional approach to managing pollutant discharges into streams, lakes, and the ocean has evolved over time, often with separate programs to address various aspects of the total water quality problem. Some of these programs have different, overlapping, or conflicting priorities. Moving from the more facility-specific controls of the past to management of water quality on a watershed basis, will entail some growing pains. Many of the programs at our disposal will need to be reshaped and integrated at the watershed level. Some programs will need to be reoriented and integrated, while other programs may not be amenable to the watershed approach. Nonetheless, public agencies and private organizations concerned with water resources have come to recognize that a comprehensive evaluation of pollutant contributions on a watershed scale is the only way to realistically assess cumulative impacts and formulate workable strategies to truly protect our water resources. Both water pollution and habitat degradation problems can best be solved by following a basin-wide approach.

# *REMEDIATION OF POLLUTION*

The Regional Board allocates substantial resources to the investigation of polluted waters and enforcement of corrective actions needed to restore water quality. Specific remediation programs include:

- Underground Storage Tanks Program including the Local Oversight Program;

- Site Cleanup Program;

- Aboveground Petroleum Storage Tank Program; and

- DOD Site Investigations.

**Naval Base Point Loma (submarine facility)**

**California Coastal Record Project www.californiacoastline.org**

The Regional Board sets cleanup goals based on the State's Antidegradation Policy set forth in State Board Resolution No. 68-16 and Resolution No. 92-49 Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code section 13304 and the Cleanup and Abatement Policy discussed later in this chapter. Under these policies, whenever the existing quality of water is better than that needed to protect present and potential beneficial uses, such existing quality will be maintained, with certain exceptions (as described in Chapter 5, Plans and Policies). Accordingly, the Regional Board prescribes cleanup goals that are based upon background concentrations. For those cases where dischargers have demonstrated that cleanup goals based on background concentrations cannot be attained due to technological and economic limitations, the Antidegradation Policy sets forth policy for cleanup and abatement based on the protection of beneficial uses. The Regional Board can, on a case-by-case basis, set cleanup goals as close to background as technologically and economically feasible. Such goals must at a minimum, restore and protect all designated beneficial uses of the waters.

Furthermore, such cleanup levels cannot result in water quality less than that prescribed in the Basin Plan and policies adopted by the State and Regional Board, and must be consistent with maximum benefit to the people of the State.

## *UNDERGROUND STORAGE TANKS*

**Underground storage tank**

The Underground Storage Tank Program was enacted in 1983 and took effect January 1, 1984. The authority for the program is found in the Health and Safety Code, Division 20, Chapter 6.7, and the regulations for the program are found in the CCR, Title 23, Division 3, Chapter 16. The regulations are designed to ensure the integrity of all underground storage tanks (UST), and to detect any leaks.

There are approximately 2,000 known cases of leaking underground storage tanks in the Region. Approximately 35 percent of the cases involve instances where only soil contamination is present, 35 percent involve instances where ground water contamination has been confirmed, and the remaining 30 percent are cases which have been closed. The majority of the releases from these underground storage tanks are gasoline and the constituent of most concern is benzene, a known carcinogen. A smaller percentage of the underground storage tank releases involve chlorinated industrial solvents, which are suspected carcinogens. As anticipated, the majority of the sites where these releases have occurred are automotive service stations. Tanks from industrial facilities contribute a smaller but significant minority. To date, these ground water impacts have affected only a few drinking water supply wells. The Regional Board maintains and regularly updates the Leaking Underground Storage Tank Information System (LUSTIS) database, which identifies all known underground storage tank release sites in the Region.

Implementation of the underground storage tank program includes direct Regional Board oversight of leaking underground storage tank cleanups. It also involves coordination of oversight activities with local agencies under contract with the State Board through the Local Oversight Program. Local agencies have the authority, pursuant to section 25297.1 of the Health and Safety Code to act on behalf of the Regional Board in requiring investigations and cleanup of underground tank cases. The local agencies also implement the permitting, construction, inspections and monitoring portion of the Underground Tank Regulations. The Orange County Health Care Agency, the County of Riverside Department of Environmental Health and San Diego County Department of Health Services, Environmental Health Services handle the vast majority of the active cases in the Region.

Title 23, Division 3, Chapter 16, Article 11 provides that corrective action of releases from underground storage tanks includes one or more of the following phases:

**Preliminary Site Assessment Phase**
This includes, at a minimum, initial site investigation, initial abatement actions and initial site characterization.

**Soil and Water Investigation Phase**
This includes the collection and analysis of data necessary to assess the nature and vertical and lateral extent of the unauthorized release to determine a cost-effective method of cleanup.

**Corrective Action Plan Implementation Phase**
This consists of carrying out the cost-effective alternative selected during the Soil and Water Investigation Phase for remediation or mitigation of the actual or potential adverse effects of the unauthorized release.

**Verification Monitoring Phase**
This includes all activities required to verify implementation of the Corrective Action Plan and evaluate its effectiveness.

Cleanup levels for soil and ground water pollution resulting from leaking underground storage tanks will be established based on the Cleanup and Abatement Policy described later in this chapter.

## *UNDERGROUND STORAGE TANK CLEANUP FUND*

The State Board, Division of Clean Water Programs, administers the Underground Storage Tank Cleanup Fund. The Cleanup Fund can be used as a mechanism to satisfy federal financial responsibility requirements and pay for corrective action and third party liability costs resulting from a leaking petroleum underground storage tank. The Fund can also pay for direct cleanup (by local agency or regional board) of underground storage tank sites requiring emergency and prompt action on abandoned or recalcitrant sites. This Fund, collected by the Board of Equalization, is supported by a 0.6 cent per gallon fee for gasoline. The Fund has been established to provide reimbursement to tank owners or operators for costs of cleanup of the effects of unauthorized releases of petroleum. Up to 1.5 million dollars ($1,500,000) can be provided per site, with the first ten thousand dollars ($10,000) being provided by the claimant. With certain qualifications, expenditures made to remediate an unauthorized petroleum release since January 1, 1988, can be reimbursed and letters of credit can be issued for the funding of ongoing remediation activities.

Owners/operators of petroleum USTs as defined in section 25281(x) of the California Health and Safety Code and owners of petroleum USTs located on residential property who meet the following requirements are eligible for the fund:

- There has been an unauthorized release of petroleum from the UST reported to and confirmed by the regulatory agency.
- As a result of this unauthorized release, the owner/operator must take corrective action as required by a regulatory agency.
- The owner/operator must be in compliance with any applicable financial responsibility requirements and any UST requirements.

Regional boards provide technical support to both applicants who file claims against the underground storage tank Cleanup Fund and State Board staff members who verify the corrective action work that the claims cover. For claims that involve future work, the Regional Board will oversee site investigation and cleanup on cases for which they are the lead agency.

## *SITE CLEANUP*

Reports of unauthorized discharges, such as spills and leaks from above ground storage tanks are investigated through the Regional Board's Site Cleanup Program. This program is not restricted to particular pollutants or environments; rather, the program covers all types of pollutants (such as solvents, petroleum fuels, and heavy metals) and all environments (including surface and ground water, and the vadose zone). Upon confirming that an unauthorized discharge is polluting or threatens to pollute regional waterbodies, the

*Policies and Procedures For Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304*".

Cleanup levels for soil and ground water pollution resulting from sites investigated through the SLIC Program will be established based on the Cleanup and Abatement Policy described later in this chapter.

## *ABOVEGROUND PETROLEUM STORAGE TANKS*

In order to prevent unauthorized discharges from aboveground petroleum storage tanks, the State of California has enacted legislation designed to lower the risk of spills and leaks. The state's Aboveground Petroleum Storage Act was enacted in 1989 and amended in 1991. The Act became effective on January 1, 1990 (Health and Safety Code, Chapter 6.67, section 25270 et. seq.) The Act requires owners or operators of above ground petroleum storage tanks to file a storage statement with the State Board and implement spill prevention measures. Examples of such measures include daily visual inspections of any storage tanks containing crude oil or its fractions, the installation of secondary containment for all tanks with sufficient capacity to hold the contents of the largest tank at the facility plus sufficient volume for rainfall to avoid the overflow, and development of a "Spill Prevention Control and Countermeasure Plan." In the event of an unauthorized release, the owner or operator must notify the Regional Board officials and undertake appropriate monitoring and corrective action. Additionally, annual fees are levied on tank owners. These fees are used to fund aboveground petroleum tank inspections and enforcement.

## *DEPARTMENT OF DEFENSE FACILITIES*

There are twenty-two major Department of Defense (DOD) facilities in the San Diego Region. The following is a list of DOD facilities and the corresponding lead agency for the facility in the Region.

| Department of Defense Facility | Lead Agency |
|---|---|
| United States Marine Corps Base, Camp Pendleton | USEPA |
| Coronado Navy Amphibious Base | DTSC |
| Imperial Beach Auxiliary Landing Field | DTSC |
| Naval Air Station Miramar | DTSC |
| North Island Naval Aviation Depot | DTSC |
| Naval Air Station North Island | DTSC |
| San Diego Fleet Anti-Submarine Warfare Training Center | DTSC |
| San Diego Fleet Combat Training Center | DTSC |
| Marine Corp Recruit Depot, San Diego | DTSC |
| Naval Command, Control and Ocean Surveillance Center | DTSC |
| San Diego Naval Computer and Telecommunications Station | DTSC |
| San Diego Naval Electronics Systems Engineering Center | DTSC |
| San Diego Naval Hospital | DTSC |
| 32 Street Naval Station, San Diego | DTSC |
| Naval Submarine Base, San Diego | DTSC |
| Fleet Industrial Supply Center | DTSC |
| San Diego Naval Training Center | DTSC |
| San Diego Public Works Center | DTSC |
| San Diego Shore Intermediate Maintenance Activity | DTSC |
| Air Force Plant # 19, San Diego | DTSC |
| Fallbrook Naval Weapons Station | DTSC |
| Search, Evade, Resist, Escape Camp, Warner Springs | DTSC |

Significant ground water contamination has been detected at a number of these facilities. Contamination is severe enough at one of these facilities to have it placed on USEPA's National Priorities List (NPL) for remediation under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, commonly referred to as Superfund).

For the National Priority List facility (Camp Pendleton), the USEPA is the lead environmental regulatory agency for oversight of investigation and cleanup. CERCLA requires USEPA to consider applicable or relevant and appropriate state laws and regulations when establishing cleanup standards for remedial activities. To ensure that the state's concerns are properly addressed, two Cal-EPA agencies, the Regional Board and the Department of Toxic Substances Control (DTSC), also perform a significant oversight role in the investigations and cleanup of these facilities.

The USEPA, DOD, DTSC and the Regional Board have signed Federal Facility Agreements (FFA) for the National Priorities List facility. The intent of the FFA is to ensure that:

(1) Environmental impacts are investigated;

(2) Remedial actions are defined;

(3) Procedural framework or schedules are established;

(4) Cooperation among agencies is facilitated;

(5) Adequate assessment is performed; and

(6) Compromise is reached.

The USEPA is not involved in the investigation and cleanup of DOD facilities that are not on the National Priority List (DOD facilities other than Camp Pendleton). However, many of the facilities potentially have significant contamination. In these cases, the Regional Board and DTSC enter into Federal Facility Site Remediation Agreements (FFSRA) with DOD. Federal Facility Site Remediation Agreements are very similar to the above-mentioned Federal Facility Agreements, with the exception that USEPA is not a party.

In the table above showing the DOD facilities in the San Diego Region, the DTSC has been identified as the "lead" agency, and the Regional Board is the "support" agency. A Memorandum of Understanding has been signed by the State Board and DTSC which describes the roles of each agency. The Regional Board's oversight role is with regard to the investigation and cleanup of water resources that have been impacted, or are threatened, by waste discharges from the facilities. The Regional Board's responsibility also extends to source areas (landfills, contaminated soil, etc.) that currently, or may in the future, pose a threat to water quality. DTSC's role is to address all other environmental aspects including health risk assessment, air emissions, community relations, etc.

The State Board and DTSC have entered into a two-year cooperative agreement with the DOD for cleanup and oversight reimbursement. All work performed by the State agencies with regard to the investigation and cleanup of environmental problems at these facilities is fully reimbursed by DOD.

Cleanup levels for soil and ground water pollution resulting from DOD facilities will be established based on the Cleanup and Abatement Policy described later in this chapter.

## *CLEANUP AND ABATEMENT POLICY*

### *I. CONTAMINATED SOIL AND GROUND WATER*

The Regional Board has identified numerous sites where unauthorized waste discharges have resulted in soil and ground water pollution. The majority of these sites have been identified as a result of the Regional Board's implementation of the remediation programs described previously in this Chapter.

The unauthorized waste discharges at many of these sites have resulted in adverse effects on water quality and beneficial uses. In some cases the polluted sites pose a threat to the public health. It is the responsibility of the Regional Board to establish cleanup and abatement goals and objectives for the protection of water quality and the beneficial uses of waters of the state in this Region which are consistent with applicable state and federal statutes and regulations.

Water Code section 13304 authorizes the Regional Board to require cleanup and abatement of soil and ground water pollution. The Cleanup and Abatement Policy described below shall apply to all types of discharges subject to Water Code section 13304.

## *II. PURPOSE OF POLICY*

The purpose of this Cleanup and Abatement Policy is to provide:

A. Guidance to dischargers involved in the investigation, cleanup and abatement of soil and ground water pollution sites to ensure these activities are in conformance with applicable state and federal laws, regulations and policies;

B. Guidance to dischargers on Regional Board methodology for determining cleanup levels at soil and ground water pollution sites; and

C. Consistency and uniformity in Regional Board requirements for investigation, cleanup and abatement of analogous discharges that involve similar wastes, site characteristics, and water quality considerations.

## *III. CLEANUP AND ABATEMENT PRINCIPLES*

A. The Cleanup and Abatement Policy is guided on the following principles, which are based on Water Code sections 13000 and 13304, CCR, Title 23, Division 3, Chapter 15 (hereinafter Chapter 15), CCR, Title 23, Division 3, Chapter 16 (hereinafter Chapter 16), and applicable State Board policies. The Regional Board shall require:

1. Cleanup and abatement actions to conform with the provisions of State Board Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality Waters in California) provided that under no circumstances shall these provisions be interpreted to require cleanup and abatement which achieves water quality conditions that are better than "natural" background conditions;

2. Cleanup and abatement actions to conform with the provisions of State Board Resolution No. 92-49, Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Water Code section 13304;

3. Cleanup and abatement actions to conform with applicable or relevant provisions of Chapter 15 to the extent feasible;

4. Cleanup and abatement actions to implement the applicable provisions of Chapter 16 for investigations and cleanup of hazardous substances from underground storage tanks; and

5. Dischargers to cleanup and abate the effects of discharges in a manner that promotes attainment of either background water quality, or the best water quality which is reasonable if background levels of water quality cannot be restored, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible. Any alternative cleanup levels less stringent than background shall apply section 2550.4 of Chapter 15, or, for cleanup and abatement associated with underground storage tanks, apply section 2725 of Chapter 16, provided that the Regional Board considers the conditions set forth in section 2550.4 of Chapter 15 in setting alternative cleanup levels pursuant to section 2725 of Chapter 16. Any such alternative cleanup level shall:

a. Be consistent with maximum benefit to the people of the State;

b. Not unreasonably affect present and anticipated beneficial use of such water; and

c. Not result in water quality less than prescribed in the Water Quality Control Plans and Policies adopted by the State and this Regional Board.

## *IV. CLEANUP AND ABATEMENT INVESTIGATIONS*

A. The Regional Board shall apply the guidelines described in IV.B. below in overseeing investigations to determine the nature and extent of a discharge and appropriate cleanup and abatement measures. The level and complexity of the investigations, assessments, and feasibility studies of cleanup and abatement alternatives required below shall be determined by the discharge type, the extent of pollution, and any other applicable site-specific characteristic(s).

B. The Regional Board shall require dischargers to:

1. Investigate the nature and extent of the discharge or threatened discharge to ensure that adequate cleanup plans are proposed. The goal of the investigation shall be to adequately characterize the pollutants in the discharge and determine the vertical and horizontal extent of pollution in soil and ground water. The investigation shall determine where concentrations of pollutants reach background levels.The investigation shall extend off-site to any location necessary to determine the source and assess the vertical and horizontal extent of the discharge.

2. Take immediate action to remove, treat, or contain pollution source(s) to the maximum extent practicable. Sources of pollution may include:

a. Ongoing sources of discharge from storage or distribution systems for wastes or hazardous materials;

b. Soils or ground water which are polluted with mobile or immobile concentrations of non-aqueous phase liquids (NAPLs);

c. Soils which are polluted with leachable concentrations of soluble pollutants;

d. Polluted soils which are eroded and transported to storm drains, abandoned or active wells, surface waters, or lands beyond the control of the discharger.

3. Submit the following information for consideration in establishing cleanup levels in accordance with the conditions set forth in Chapter 15, section 2550.4:

a. An assessment of the adverse effects on ground water quality and beneficial uses;

b. A risk assessment to determine impacts and threats to human health and the environment; and

c. A feasibility study of cleanup alternatives which compares effectiveness, relative cost, and time to attain the following alternative cleanup levels:

(1) Background levels;

(2) Levels which meet all applicable water quality objectives and do not pose significant risks to health or the environment; and

(3) An alternate cleanup level in between the cleanup levels described in (1) and (2) above which meets the requirements as specified in section III.A.5. of this Cleanup and Abatement Policy.

4. Provide documentation that plans and reports are prepared by professionals qualified to prepare such reports, and that all investigative, and cleanup and abatement activities are conducted under the direction of appropriately qualified professionals. Professionals should be qualified, licensed where applicable, and competent and proficient in the fields pertinent to the required activities. A statement of qualifications of the responsible lead professionals shall be included in all plans and reports submitted by the discharger.

## *V. APPROVAL of CLEANUP LEVELS*

A. The Regional Board shall approve soil and ground water cleanup levels through the adoption or affirmation of cleanup and abatement orders; or

B. The Executive Officer or a local agency may approve cleanup levels as appropriately delegated by the Regional Board.

## *VI. GROUND WATER CLEANUP LEVELS*

A. Ground water cleanup levels shall be based on:

1. The provisions of State Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California, State Board Resolution No. 88-63, Sources of Drinking Water, and State Board Resolution No. 92-49, Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Water Code section 13304.

2. Applicable narrative and numerical water quality objectives and beneficial uses described in Chapters 2 and 3 of this Basin Plan.

3. Pollutant concentrations which do not pose a significant threat to human health or the environment. Threat to human health and the environment shall be determined through a risk assessment:

a. The Regional Board is not the lead agency for specifying risk assessment procedures. The risk assessment shall be conducted using the most current procedures authorized by the DTSC, Office of Environmental Health Hazard Assessment or the USEPA. The Regional Board will assist the discharger, as necessary, in obtaining the appropriate, most current, procedures from these agencies.

b. In the absence of scientifically valid data to the contrary, theoretical risks from chemical constituents shall be considered additive across all media of exposure, and shall be considered additive for all chemicals having similar toxicological effects or having carcinogenic effects.

c. The Regional Board is not the lead agency for reviewing risk assessments. The Regional Board will rely on the California Department of Toxic Substances Control, Office of Environmental Health Hazard Assessment, or appropriately designated regulatory local health agencies to review and evaluate the adequacy of risk assessments.

d. The discharger shall submit the risk assessment to the Regional Board in accordance with section IV.B.3.b. of this policy. The Regional Board will coordinate the review of the risk assessment in accordance with the following hierarchy:

(1) The Regional Board will first seek the assistance of any appropriate supporting health agency currently involved with the cleanup of the site.

(2) If unsuccessful, the Regional Board will seek the assistance of previously uninvolved appropriate health agencies.

(3) If unsuccessful, the Regional Board will seek the assistance of the DTSC in accordance with the terms and conditions of the *Memorandum of Understanding Between the Department of Health Services and the State Water Resources Control Board, the Regional Water Quality Control Boards for the Cleanup of Hazardous Waste Sites August 1, 1990*.

4. Applicable state and federal statutes and regulations.

5. Relevant standards, criteria, and advisories adopted by other state and federal agencies.

6. Technical and economic feasibility of attaining background concentrations and of attaining concentrations lower than defined by 2 and 3 above. Technical and economic feasibility shall be determined in accordance with the following criteria:

a. Technical feasibility shall be determined by assessing the availability of technologies which have been shown to be effective in reducing the pollutant concentrations to the established cleanup levels. Bench-scale and/or pilot-scale studies may be necessary to make this feasibility assessment.

b. Economic feasibility refers to the objective balancing of the incremental benefit of attaining more stringent cleanup levels compared with the incremental cost of achieving those levels. Economic feasibility does not refer to the subjective measurement of the discharger's ability to pay the costs of cleanup.

c. Applicable factors to be considered in the establishment of cleanup levels greater than background are listed in Chapter 15, section 2550.4.

d. The discharger's ability to pay is one factor to be considered in determining whether the cleanup level is reasonable. However, availability of economic resources to the discharger is primarily considered in establishing reasonable schedules for compliance with cleanup levels.

B. The Regional Board shall set ground water cleanup levels to attain background water quality, unless the discharger demonstrates that it is either technically or economically infeasible to attain background water quality. If the discharger makes such a demonstration to the satisfaction of the Regional Board, cleanup levels are set between background water quality concentrations and concentrations that meet all criteria in items A.2 and A.3 above. Within this concentration range, cleanup levels will be set at the lowest concentrations that are technically and economically feasible to achieve. In no case will cleanup levels be established below natural background conditions.

C. Compliance with cleanup levels must occur at all points throughout the plume or area of contamination to protect potential beneficial uses of water resources as required by Water Code sections 13000 and 13244 and Health and Safety Code section 25356.1 (c).

D. The Regional Board may consider relaxing ground water cleanup levels that were previously established at levels more stringent than applicable water quality objectives, only when a final remedial action plan has been pursued in good faith and all of the following conditions are met:

1. Modified cleanup levels meet the conditions listed in VI.A.1., VI.A.2., and VI.A.3. above; and

2. An approved cleanup program has been fully implemented and operated for a period of time which is adequate to understand the hydrogeology of the site, pollutant dynamics, and the effectiveness of available cleanup technologies; and

3. Adequate source removal and/or isolation is undertaken to eliminate or significantly reduce future migration of pollutants to ground water; and

4. The discharger has demonstrated that no significant pollutant migration will occur to other underlying or adjacent aquifers; and

5. Ground water pollutant concentrations have reached asymptotic levels (i.e., pollutant concentration reductions are no longer significant) using appropriate technology; and

6. Alternative remediation techniques for achieving cleanup levels have been evaluated and are inappropriate or not economically feasible.

## *VII. SOIL CLEANUP LEVELS*

A. Soil pollution can present a health risk and a threat to water quality. The Regional Board designates soil cleanup levels for the unsaturated zone based upon threat to water quality and risk to human health or the environment. Guidance from the USEPA, DTSC, or the Office of Health Hazard Assessment is considered in determining health and environmental risks. Cleanup levels for contaminated soils which threaten water quality, shall be established in accordance with the following criteria:

1. Concentrations of the residual leachable/mobile pollutants shall be equal to background concentrations unless background levels are technically or economically infeasible to achieve.

2. Where background levels are technically or economically infeasible to achieve, soil cleanup levels shall be established to ensure that residual leachable/mobile pollutants will not cause, or threaten to cause, exceedances of applicable ground water cleanup levels or water quality objectives, and do not pose significant risks to health or the environment.

3. Soil cleanup levels less stringent than background may be based on site specific technical evaluations of pollutant fate and transport processes, human health and environmental risk assessment methods as long as such methods are based on site specific field data, technically sound principles, and the criteria described in VII.A.2 above.

B. Where residual leachable/mobile soil pollutants which threaten water quality remain on site the discharger shall:

1. Implement measures as necessary to ensure that soils with residual pollutants are covered or otherwise managed to minimize pollution of surface waters or exposure to the public; and

2. Implement the applicable provisions of Chapter 15 to the extent that it is technologically or economically feasible to do so as described in State Board Resolution No. 92 - 49. This may include, but is not limited to, subsurface barriers or other containment systems, pollutant immobilization, toxicity reduction, and financial assurances.

C. The Regional Board shall generally require sampling to verify soil cleanup and may also require follow-up ground water monitoring. The degree of monitoring will reflect the amount of uncertainty associated with the soil cleanup level selection process. Follow-up ground water monitoring may be limited where residual concentrations of leachable/mobile pollutants in soils are not expected to adversely affect ground water quality.

### *VIII. TIME SCHEDULES*

The Regional Board shall determine schedules for investigation, and cleanup and abatement, taking into account the following factors:

A. The degree of threat or impact of the discharge on water quality and beneficial uses;

B. The obligation to achieve timely compliance with cleanup and abatement goals and objectives that implement the applicable Water Quality Control Plans and Policies adopted by the State and Regional Board;

C. The financial and technical resources available to the discharger; and

D. Minimizing the likelihood of imposing a burden on the people of the state with the expense of cleanup and abatement, where feasible.

# *TOTAL MAXIMUM DAILY LOADS*

A total maximum daily load (TMDL) is the amount of a pollutant that can be discharged into a waterbody and still maintain its water quality standards (i.e., the designated beneficial uses and the adopted water quality objectives that support the beneficial uses). A TMDL must account for seasonal variations and include a margin of safety (MOS) to account for any lack of knowledge concerning the relationship between pollutant loadings and receiving water quality.

Pollutant loadings in excess of the TMDL are expected to have an adverse effect on water quality by causing exceedances of the applicable water quality standards. Allowable pollutant loadings are calculated and assigned to all point source and nonpoint source discharges to ensure that the applicable water quality standards are not exceeded in the receiving water.

A portion of the TMDL may be held explicitly in reserve as the MOS (e.g., MOS = 10 percent of TMDL), or the MOS may be implicitly included (i.e., MOS = 0) by incorporating conservative assumptions in the calculation of the TMDL (i.e., assumptions result in a lower calculated TMDL). The portion of the TMDL not in the MOS is assigned to point sources and nonpoint sources.

Point sources are assigned wasteload allocations (WLAs) and nonpoint sources (including natural and background sources) are assigned load allocations (LAs). The WLAs and LAs may differ for each pollutant source, but the TMDL and MOS do not change. The TMDL for a pollutant in the receiving water, and the WLAs and LAs for a pollutant discharged from different sources into a waterbody are calculated at levels that, when each are met, are expected to result in the attainment of the associated water quality objectives for the pollutant and protection of the applicable beneficial uses in the receiving water.

Establishing TMDLs for waters is required under section 303(d) of the Clean Water Act. Clean Water Act section 303(d) requires that the State establish a priority ranking of waters that do not meet water quality standards after application of technology based controls. The USEPA strongly encourages states to include the priority ranking as part of the Biennial Clean Water Act Sections 303(d), 305(b) and 314 Integrated Report, which is discussed in more detail in Chapter 6.

Waters identified under section 303(d) (a.k.a. the 303(d) List) are designated as Water Quality Limited Segments (WQLSs). In accordance with the priority ranking, TMDLs must be established for pollutants suitable for such calculations. For the purpose of developing information for all waters not identified as WQLSs, states are also required to estimate the TMDLs with seasonal variations and margin of safety.

One or more numeric targets are typically required to calculate TMDLs at levels necessary to attain and maintain applicable narrative and numerical water quality standards in WQLSs. Numeric targets interpret the existing water quality standards (i.e., beneficial uses and the water quality objectives established at levels sufficient to support those uses). After identifying the impaired beneficial uses of a waterbody, the numeric targets are often based on the water quality objectives in Chapter 3. Chapter 3 contains numeric and narrative water quality objectives. If applicable water quality objectives are numeric, the numeric water quality objectives can serve as the basis for the numeric targets. If applicable water quality objectives are narrative, one or more quantifiable target values or measurable indicators must be selected to measure progress and evaluate final attainment and maintenance of the narrative water quality objectives. In WQLSs, when numeric targets are met in the waterbody, the water quality standards should be attained and restored. While numeric targets and TMDLs interpret water quality standards, *numeric targets and TMDLs are not water quality standards.*

TMDLs are not self-implementing or directly enforceable for sources in the watershed. Instead, TMDLs must be implemented through the programs or authorities of the San Diego Water Board and/or other entities to compel dischargers responsible for controllable sources to achieve the pollutant load reductions identified by a TMDL analysis to attain the water quality objectives that will support the designated beneficial uses of a waterbody.

The authorities that are available to the San Diego Water Board to implement TMDLs are given under the Porter-Cologne Water Quality Control Act (Division 7 of the Water Code). The available regulatory authorities include incorporating discharge prohibitions in to the Basin Plan, issuing individual or general waste discharge requirements (WDRs), or issuing individual or general conditional waivers of WDRs. The San Diego Water Board has the authority to enforce Basin Plan prohibitions, WDRs, or conditional waivers of WDRs through the issuance of enforcements actions (e.g., time schedule orders, cleanup and abatement orders, cease and desist orders, administrative civil liabilities). The San Diego Water Board also has the authority to require monitoring and/or technical reports from dischargers, which may be used to support the development, refinement, and/or implementation of TMDLs, WLAs, and/or LAs.

Additionally, the USEPA has delegated responsibility to the State and Regional Boards for implementation of the federal National Pollutant Discharge Elimination System (NPDES) program, which specifically regulates discharges of "pollutants" from point sources to "waters of the United States." The San Diego Water Board regulates discharges from point sources to surface waters with WDRs that implement federal NPDES regulations (NPDES requirements). Federal regulations

require that NPDES requirements incorporate water quality based effluent limitations (WQBELs) that must be consistent with the requirements and assumptions of any available WLAs. WQBELs may be expressed as numeric effluent limitations, when feasible, and/or as a best management practice (BMP) program of expanded or better-tailored BMPs.

Upon establishment of TMDLs by the state or U.S. Environmental Protection Agency (USEPA), the state is required to incorporate TMDLs into the state water quality management plan. This Basin Plan and applicable statewide plans serve as the water quality management plan for the watersheds under the jurisdiction of the Regional Board. TMDLs are programs for the implementation of existing water quality standards, and are established in the Basin Plan subject to the requirements of Water Code section 13242. TMDLs incorporated into the Basin Plan, therefore, are required to include 1) a description of the actions (i.e., programs or authorities) of the Regional Board and/or other entities necessary to achieve the TMDLs, 2) a compliance time schedule by which the TMDLs, and thereby the restoration of the beneficial uses in the receiving waters, are to be achieved, and 3) a description of the monitoring program that is required to determine compliance with TMDLs, WLAs, and LAs in the receiving waters. These elements are referred to as the TMDL Implementation Plan.

TMDLs that have been established for the San Diego Region are provided in Chapter 7.

## *IMPLEMENTATION PROVISIONS FOR INDICATOR BACTERIA WATER QUALITY OBJECTIVES IN THE CONTEXT OF A TMDL*

Water quality objectives for indicator bacteria shall be strictly applied except when otherwise provided for in a TMDL. Within the context of a TMDL, the Regional Board may implement the indicator bacteria water quality objectives by using a "reference system and antidegradation approach" or a "natural sources exclusion approach," as described in Chapter 3 (Water Quality Objectives).

There are natural sources of bacteria which may cause or contribute to exceedances of water quality objectives for indicator bacteria. It is not the intent of the Regional Board to require treatment or diversion of natural water bodies or to require treatment of natural sources of bacteria. Such requirements, if imposed by the Regional Board, could adversely affect valuable aquatic life and wildlife beneficial uses supported by water bodies in the Region.

Implementation of indicator bacteria water quality objectives using the reference system and antidegradation approach requires control of indicator bacteria from anthropogenic sources so that bacteriological water quality in the targeted waterbody is consistent with that of a reference system. The reference system and antidegradation approach also requires that no degradation of existing bacteriological water quality in the targeted water body occurs when the existing bacteriological water quality is better than that of a water body in a reference system. A reference system is a watershed and the beach to which the watershed discharges that is minimally impacted by anthropogenic activities that can affect bacterial densities in the water body. Under the reference system and antidegradation approach, a certain frequency of exceedances of the indicator bacteria water quality objectives is allowed. The allowed frequencies of exceedances are either the observed frequency of exceedances in the selected reference system or the targeted water body, whichever is less.

Under the natural sources exclusion approach, dischargers must demonstrate they have implemented all appropriate best management practices to control all anthropogenic sources of indicator bacteria to the target water body such that they do not cause or contribute to exceedances of the indicator bacteria water quality objectives. The requirement to control all sources of anthropogenic indicator bacteria does not mean the complete elimination of all anthropogenic sources of bacteria as this is both impractical as well as impossible. Dischargers must also demonstrate that the residual indicator bacteria densities are not indicative of a human health risk. After all anthropogenic sources of indicator bacteria have been controlled such that they do not cause exceedances of the indicator bacteria

water quality objectives, and natural sources have been identified and quantified, exceedances of the indicator bacteria water quality objectives may be allowed based on the residual exceedances in the target water body. The residual exceedances shall define the background level of exceedance due to natural sources.

The Regional Board will evaluate the appropriateness of these approaches and the specific exceedances or exceedance frequencies to be allowed under each within the context of TMDL development or recalculation for a specific water body. If appropriate, the Regional Board may select to use one or both of these approaches during initial TMDL calculation or during subsequent recalculation following TMDL implementation.

These implementation provisions may only be used within the context of a TMDL addressing municipal storm water (including discharges regulated under statewide municipal NPDES waste discharge requirements), discharges from concentrated animal feeding operations, and discharges from non-point sources. These implementation provisions shall not be applied within the context of a TMDL addressing individual industrial storm water discharges, or general industrial and construction storm water discharges.

# *OTHER PROGRAMS*

## *GROUND WATER MANAGEMENT*

Ground water management programs can both enhance water quality and protect beneficial uses of ground water in the larger basins of the San Diego Region. These management programs consist of measures for the periodic monitoring and assessment of ground water levels and quality; the planned extraction and export of poor quality ground water with recharge of better quality water from an outside source; controls established on the use of ground water within the basin; and controls on inflow of poor quality water from outside the basin.

Because of the limited amount of natural recharge, the use of reclaimed water for ground water recharge must be considered in any effective ground water management program in the San Diego Region. For this reason, agencies involved in wastewater disposal play a vital role in the development of these programs. Several local and state agencies, as well as some private consultants have been studying ways to encourage this approach for protecting the Region's ground water basins. Proponents have noted that there are many advantages in storing water and reclaimed water in ground water aquifers as opposed to surface water reservoirs. Underground facilities are less costly than surface storage facilities and they are less land intensive than surface water reservoirs. Also, the ground water aquifers can serve as distribution systems, minimizing the need for surface water transport facilities. In addition, reclaimed water stored in ground water aquifers are not subject to evaporative losses.

Filtration through the soils in the basin can provide additional treatment of the reclaimed water, and injection of reclaimed water along the coastal strip can be used to help combat seawater intrusion.

Ninety percent of the potable water supply for the San Diego Region comes from two major sources of imported water. Water from the Colorado River is imported through the Colorado River Aqueduct and water from northern California is imported through the State Water Project. Both sources are blended to form San Diego Region's water supply. Additionally, approximately ten percent of the water supply comes from local reservoirs. The quality of the imported water has been showing increases in mineral content, particularly boron, percent sodium and TDS. Direct use of this supply reflects the mineral content of Colorado River water. Each additional use of the water (reclaimed from this supply) for irrigation and ground water recharge incrementally increases the dissolved mineral content.

Water reclamation activities should, then, be focused on local benefits and impacts on ground water quality. Proposed projects should be examined in terms of:

- Areas with high reclaimed water demands;
- Constituent concentrations in relation to basin plan objectives;
- Assimilative capacity of receiving basins; and
- Potential for improving ground water quality in near-surface and deep aquifers.

The major basins in San Diego County that have been studied for the implementation of a ground water management plan are the San Juan Creek, Upper Santa Margarita River Basin, Lower San Luis Rey Valley, Lower San Dieguito River Valley, San Pasqual Valley, Santee, Lower Sweetwater River Basin, and the Lower Tijuana River Basin. A goal of these management plans is to rejuvenate the quality of the ground water in these basins to meet basin objectives. The general plan is to pump the poor quality ground water from these basins to the ocean, and recharge the basins with reclaimed and natural run off waters, which will then be extracted for beneficial use when water quality objectives are met. The following is a description of the proposed programs.

## *SAN JUAN CREEK*

In Orange County, a management plan is underway in the San Juan Creek Basin. Ground water supplies are limited in this basin due to low recharge and poor quality. The capacity of the San Juan Creek Basin is approximately 90,000 acre-feet. With proper management of the ground water basin, approximately 50,000 AF/Y could be utilized. The basin currently provides approximately 5,000 AF/Y of usable ground water - less than 2,000 AF/Y is used for urban supply and approximately 3,000 AF/Y is used for agricultural and irrigation purposes. The only ground water that meets drinking water standards and most agricultural requirements is found in the highlands of the northeasternmost portion of the basin. Ground water quality data indicate that the TDS concentration ranges from 300 mg/l (in the northeasternmost portion of the basin) to 1,850 mg/l (in the lower and western portion of the basin). Approximately 3.0 MGD of treated wastewater is being reclaimed for irrigation of a golf course, park, greenbelt and landscaping. In addition, reuse is proposed for effluent from Moulton-Niguel Water District's Water Reclamation Plant 3A, which has been expanded from a capacity of 0.5 MGD to 2.4 MGD, and for effluent from Trabuco Canyon Water District's Robinson Ranch Wastewater Reclamation Plant, which has a capacity of 0.25 MGD. The TDS concentration in secondary effluent in the basin ranges from 500 to 900 mg/l. Reclaimed water could be used to enhance surface water flows and quality or to improve ground water quality in the lower and western parts of the basin. The use of reclaimed water for urban or agricultural irrigation could help reduce demands for ground and imported water. A ground water monitoring plan for the San Juan Creek Basin has been proposed by the Department of Water Resources which would identify any basinwide changes that may occur in water quality that could affect current and potential beneficial uses. This program would provide an early warning that ground water supplies may be endangered.

## *UPPER SANTA MARGARITA RIVER BASIN*

In Riverside County, the upper Santa Margarita River Basin contains several million acre-feet of high quality ground water in the Pauba/ Temecula aquifer system. The Rancho California Water District is considering a plan that will implement the use of reclaimed water for beneficial uses and for ground water recharge. Some changes in basin plan water quality objectives are needed to develop this project. The Santa Rosa SBR Water Reclamation Facility, near Temecula, percolates reclaimed waters through highly permeable alluvium, which recharge and mix with ground water in an upper aquifer. A tentative projection calls for 5 MGD of reclaimed water production by the year 2000.

## *LOWER SAN LUIS REY VALLEY*

Imported water comprises almost the entire supply for this basin. Ground water use is limited due to deteriorated water quality. There are four operating wastewater treatment facilities in this basin that could supply over 12,000 acre-feet per year (AF/Y) of treated wastewater that could be used for ground water recharge or other beneficial uses. At the present time reclaimed water is only being used for freeway landscape irrigation. Many springs and wells that used to be ephemeral, now flow all year long with imported irrigation return water. In many areas of this basin, reclaimed water is of higher quality than the existing ground water quality. Use of reclaimed water can be utilized to improve the conditions of the ground water quality.

## *LOWER SAN DIEGUITO RIVER VALLEY*

The San Dieguito ground water management plan includes the utilization of approximately 2,000 to 4,000 AF/Y of recharge of reclaimed water. The reclaimed water will initially be used for irrigation, rejuvenation of non-potable ground water resources and for creating a fresh water barrier near Interstate 5. Water from the City of Escondido's Hale Avenue Reclamation Facility will be treated to tertiary treatment standards and pumped to the reclamation area in the San Dieguito Valley, where it will undergo recharge to replace poor quality water pumped to the ocean or desalted and treated to potable water standards. This reclaimed water will be used for agriculture and landscape irrigation. As the ground water quality improves, this basin could supply water to areas outside the basin, such as La Jolla Valley and North City West for landscape irrigation. The San Dieguito Basin lacks a centralized wastewater collection system. Water services are provided by four different governmental agencies, and sewer service is provided by eight governmental agencies. There are plans to interconnect the existing and proposed treatment facilities into an integrated system which can supply reclaimed water throughout the basin. The benefits of a ground water management plan in this basin include inexpensive storage and distribution of excess reclaimed water flows available during low irrigation months. This ground water management plan will result in improved ground water quality and will provide an efficient use of available water resources.

## *SAN PASQUAL VALLEY*

The San Pasqual ground water management plan would utilize between 5,000 and 8,000 AF/Y of reclaimed water for agricultural irrigation and ground water recharge, thus reducing the need for this amount of imported water. The reclaimed water is available from the City of Escondido Hale Avenue Wastewater treatment plant, which presently discharges directly to the ocean. The City of San Diego owns 7,436 acres of land in the San Pasqual Valley which has been set aside as an agricultural preserve. There is 38,000 acre-feet of usable ground water in the valley. The western portion of the valley has degraded ground water quality, and has been designated as the reclamation basin. There is a plan to pump this poor quality ground water to the ocean and recharge the basin with reclaimed water of higher quality, to provide a positive salt balance. When the ground water quality improves, it will be used for irrigation of parks and golf courses, the Wild Animal Park and for landscape and freeway irrigation. There is a large and continued demand for irrigation water in the area. The eastern portion of the basin is designated as potable, and efforts will be made to keep the quality of the ground water from degrading. A third part of the basin, called the Narrows, is located between the San Pasqual reclamation basin and the Hodges basin. It has a very small capacity and will be used to prevent surface and ground water flows of reclaimed water from entering Lake Hodges Reservoir, a potable storage reservoir for the City of San Diego.

## *SANTEE*

The Padre Dam Municipal Water District is reviewing the feasibility of a comprehensive ground water management plan for Santee basin. Ground water from the eastern part of the basin is used for domestic, agricultural and stock watering purposes, and generally has TDS concentrations of 260-1,310 mg/l. The ground water in the main portion of the Santee basin has TDS concentrations of up to 2,990 mg/l. In times of drought, this water

could supplement imported water supplies. At the present time, reclaimed water is used only for recreational purposes at Santee Lakes Campground, and Park. The Padre Dam Municipal Water Districts 1.0 MGD tertiary and 2.0 MGD secondary capacity treatment facility provides 1,200 AC/Y of reclaimed water which is used for the Santee Lakes. Water from Lake No. 1 is used to irrigate the landscaping of the surrounding the lakes. Currently only 1 MGD of the plant's capacity is being utilized. All flows over 1 MGD are sent to the Metropolitan Sewer System. Future water reuse projects include another 1,200 AF/Y projected need for the Santee Town Center and city park and approximately 1,400 AF/Y for industrial use. High quality reclaimed water could provide a potential source for recharging the ground water basin and improve existing water quality. Careful management of the basin could mitigate impacts of a high water table to prevent resurfacing of reclaimed water.

## *LOWER SWEETWATER RIVER BASIN*

The Sweetwater Authority completed initial ground water basin studies of the Lower Sweetwater River Basin in June, 1993. As part of the agency's water resources program, the Sweetwater Authority is reviewing the feasibility of using ground water from the Lower Sweetwater Basin to augment its potable water supply.

The Lower Sweetwater Basin extends along the Sweetwater River from the Sweetwater Reservoir Dam approximately eight miles to San Diego Bay. It consists of an alluvial aquifer and the underlying San Diego Formation aquifer. Current use of ground water within the basin is limited, with turf irrigation the predominate use. The Basin is recharged from natural runoff and water from the upstream urban runoff diversion system which, in part, surrounds the Sweetwater Reservoir and spills over the Sweetwater Dam. Water quality data indicate that the ground water is moderately saline with TDS concentrations averaging 1,400 mg/l.

The Sweetwater Authority is currently evaluating the feasibility of constructing ground water extraction wells, a water treatment facility, a brackish water pipeline from each well to the treatment facility, a product water delivery pipeline and pump station, and a brine disposal pipeline. Preliminary findings indicate that extraction and treatment (to potable water standards) of 1,600 to 3,600 AF/Y of ground water from the Lower Sweetwater River Basin is feasible. Some additional production and/or ground water storage may be available in the San Diego Formation aquifer. San Diego Formation hydrogeological studies are ongoing; however preliminary findings indicate that the managed storage potential in the aquifer may be significant.

## *LOWER TIJUANA RIVER BASIN*

The Tijuana Valley County Water District adopted a Resolution of Intention to prepare a Ground Water Management Plan in accordance with Water Code sections 10750 - 10755 in February, 1993. The stated goals of the District are summarized as follows:

- Protect ground water quality and quantity in the Tijuana River Basin for existing and future property owners, agricultural and recreational users;

- Develop the ground water basin into a sub-regional water supply reservoir;

- Provide water to Valley customers and sell excess ground water to customers outside the Basin;

- Implement measures for ground water recharge with surface floodwater containment and runoff control facilities, and reclaimed water, if available; and

- Work with the City and County of San Diego and appropriate state and federal agencies, to propose a workable international floodwater and wastewater control solution for the Valley.

The District's current plans include development of ground water management alternatives for the production and treatment of approximately 2,500 AF/Y of potable ground water.

## *SALT BALANCE*

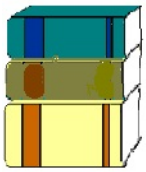
Salt balance is a theoretical concept where the total mass of dissolved minerals entering a ground water basin system from all sources is equal to the total mass of dissolved minerals leaving the system, either through extraction or natural outflow. It is preferable to have a balance of the salt inflows and outflows to maintain water quality in a basin.

Utilizing the following management measures would enhance the prospects for salt balance for ground water basins in the Region. These measures include:

- Limiting ground water extractions from basins to perennial-yield levels;
- Increasing the efficiency of irrigation practices;
- Reducing fertilizer application;
- Improving the quality of imported water used for irrigation;
- Use storm water runoff for ground water recharge, since storm water is low in TDS;
- Extract and demineralize poor quality ground water when this option becomes economically feasible; and
- Utilize intrusion barriers and regulate ground water pumpage to prevent and reverse problems of salt water intrusion.

## *SOLE SOURCE AQUIFER PROGRAM*

The Safe Drinking Water Act of 1974 provides for a sole source aquifer program. Under this program, USEPA may designate an aquifer as a sole source if it provides more than half of the drinking water for a given area, and no other affordable sources of drinking water exist. The Act provides that, when certain criteria are met, a group may petition the USEPA to designate a sole source aquifer. Thus, in May of 1993, a local citizens' group, Backcountry Against Dumps petitioned the USEPA to designate the Campo/ Cottonwood Creek aquifer as the sole source of drinking water in a 400 square-mile area. The Campo/Cottonwood aquifer is bordered by Mexico to the south, and includes within its borders reservations for the Campo, La Posta, Manzanita, and Cuyapaipe Indian tribes. The aquifer lies about 20 miles east of El Cajon, California. This designation means the USEPA may review proposed projects in the aquifer area which receive partial federal funding and which could contaminate the aquifer or endanger public health. Examples of projects potentially subject to review include construction or renovation of housing projects, airports, and highways. Projects that do not receive some federal funds would not be reviewed.



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# CHAPTER 5

# PLANS AND POLICIES

# PHOTOS

# 5. PLANS AND POLICIES

## *INTRODUCTION*

The State Board has adopted several statewide Water Quality Control Plans that are incorporated by reference into the Regional Board Basin Plan. Additionally, both the State and Regional Boards adopt policies, separate from the plans, that provide detailed direction on the implementation of certain plan provisions. In the event that inconsistencies exist among various plans and policies, the more stringent provisions apply.

This update of the San Diego Region's Basin Plan has been revised to be consistent with all State and Regional Board plans and policies adopted to date. All of the Regional Board plans and policies which implement, interpret, or make specific the Basin Plan and which are listed later in this chapter have been incorporated in this Basin Plan and are superseded. Following are summaries of these plans and policies.

## *STATE BOARD PLANS AND POLICIES*

### *ANTIDEGRADATION POLICY (RESOLUTION NO. 68-16)*

One of the most significant water quality control policies with respect to the protection of water quality is the *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (State Board Resolution No. 68-16), also known as the State Antidegradation Policy. This policy was adopted on October 28, 1968. It satisfies the federal Clean Water Act antidegradation policy requirement (40 Code of Federal Regulations (CFR) 131.12). The State Antidegradation Policy requires that high quality waters of the state are maintained to the maximum extent possible, even where that quality is better than needed to protect beneficial uses. Specific findings must be made in order to allow any changes in water quality. Changes in water quality are allowed only if the change is consistent with maximum benefit to the people of the State, does not unreasonably affect present and anticipated beneficial uses, and does not result in water quality less than that prescribed in water quality control plans or policies.

Actions which may adversely affect surface water quality must satisfy both Resolution No. 68-16 and the federal antidegradation policy (40 CFR 131.12). The requirements of the two policies are similar: the federal policy requires that existing instream uses and the level of water quality necessary to protect them must be maintained and protected. In addition, a reduction in water quality can be allowed only if there is a demonstration that such a reduction is necessary to accommodate important economic or social development.

### *STATE POLICY FOR WATER QUALITY CONTROL*

The *State Policy for Water Quality Control* serves as the general basis for water quality control policies and was adopted by the State Board on July 6, 1972. The policy declares the State Board's intent to protect water quality through the implementation of water resources management programs.

The policy provides that water quality control plans adopted by the State Board will include minimum requirements for effluent quality. Water quality control plans will also specifically define the maximum constituent levels acceptable for discharge to various waters of the State. However, the policy allows discretion in the application of the latest available technology for the design and operation of wastewater treatment systems. The policy states that secondary treatment systems are the minimum acceptable level of treatment and that advanced treatment systems will be required where necessary to meet water quality objectives.

The policy contains twelve general principles to implement the provisions and intent of the Porter-Cologne Act. These principles are listed below:

(1) Water rights and quality control decisions must assure protection of available fresh water and marine water resources for maximum beneficial use.

(2) Municipal, agricultural, and industrial wastewaters must be considered as a potential integral part of the total available fresh water resource.

(3) Coordinated management of water supplies and wastewaters on a regional basis must be promoted to achieve efficient utilization of water.

(4) Efficient wastewater management is dependent upon a balanced program of source control of environmentally hazardous substances, treatment of wastewaters, reuse of reclaimed water, and proper disposal of effluents and residuals.

(5) Substances not amenable to removal by treatment systems presently available or planned for the immediate future must be prevented from entering sewer systems in quantities which would be harmful to the aquatic environment, adversely affect beneficial uses of water, or affect treatment plant operation. Persons responsible for the management of waste collection, treatment, and disposal systems must actively pursue the implementation of their objective of source control for environmentally hazardous substances. Such substances must be disposed of such that environmental damage does not result.

(6) Wastewater treatment systems must provide sufficient removal of environmentally hazardous substances which cannot be controlled at the source to assure against adverse effects on beneficial uses and aquatic communities.

(7) Wastewater collection and treatment facilities must be consolidated in all cases where feasible and desirable to implement sound water quality management programs based upon long-range economic and water quality benefits to an entire basin.

(8) Institutional and financial programs for implementation of consolidated wastewater management systems must be tailored to serve each particular area in an equitable manner.

(9) Wastewater reclamation and reuse systems which assure maximum benefit from available fresh water resources shall be encouraged. Reclamation systems must be an appropriate integral part of the long-range solution to the water resource needs of an area and incorporate provisions for salinity control and disposal of non-reclaimable residues.

(10) Wastewater management systems must be designed and operated to achieve maximum long-term benefit from the funds expended.

(11) Water quality control must be based on the latest scientific findings. Criteria must be continually refined as additional knowledge becomes available.

(12) Monitoring programs must be provided to determine the effects of discharges on all beneficial water uses including effects on aquatic life and its diversity and seasonal fluctuations.

## *AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE AND STATE WATER QUALITY PROTECTION AREAS (RESOLUTION NO. 74-28)*

The Regional Boards were required to select areas in coastal waters which contain "*biological communities of such extraordinary, even though unquantifiable, value that no acceptable risk of change in their environments as a result of man's activities can be entertained."* These areas are known as 'Areas of Special Biological Significance' (ASBS).

ASBS are those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All ASBS are also classified as subset of State Water Quality Protection Areas (SWQPAs).

SWQPAs are defined in Public Resources Code, section 36700(f) as "a non-terrestrial marine or estuarine area designated to protect marine species or biological communities from an undesirable alteration in natural water quality, including, but not limited to, areas of special biological significance that have been designated by the State Water Resources Control Board through its water quality control planning process."

In the San Diego Region, Areas of Special Biological Significance ASBS/SWQPAs include the following:

### *Irvine Coast, Orange County*

Ocean waters within that portion of California state tide and submerged lands adjoining the Newport Beach Marine Life Refuge bounded by a line beginning at the intersection of the southwesterly extension of Lot 141, Tract No. 3357, as shown on a map recorded in Book 107, Page 1 of Miscellaneous Maps on file in the office of the County Recorder, Orange County and the line of ordinary high tide; thence, southeasterly along the line of ordinary high tide approximately 20,000 feet to its intersection with the southwesterly extension of the northwesterly boundary line of the City of Laguna Beach; thence, southwesterly along such southwesterly extension 1,000 feet or to the 100-foot isobath, whichever distance from shore is greater; thence northwesterly along a line parallel to and 1,000 feet or to the 100-foot isobath, whichever distance from shore is greater southwesterly of the line of ordinary high tide to the southwesterly extension of said Lot 141; thence northeasterly along such southwesterly extension to the point of beginning.

### *Heisler Park, Orange County*

Ocean waters within a line beginning at the intersection of the line of mean high tide with the westerly boundary line of Heisler Park, as described in a deed to the City of Laguna Beach, recorded in book 1666, page 144, Official Records Orange County, California; thence south 16o 21' west 800 feet more or less to the line of the Laguna Beach Marine Life Refuge, as per Division 7, Chapter 1, Article 2, section 10904, State of California Fish and Game Code; thence along said marine life refuge south 73o 39' east, 2,400 feet more or less to the easterly boundary of said refuge; thence along said easterly boundary north 14o 58' west, 700 feet more or less to the line of mean high tide in a westerly direction to the point of beginning.

### *San Diego - Scripps, San Diego County*

Ocean waters within that portion of Fish and Game District 19 consisting of that certain strip of land lying between the westerly edge of Pueblo Lot No. 1298 of the Pueblo Lands of the City of San Diego, according to the official map of said pueblo lands as made by James Pascoe, and filed in the office of the County Recorder of said County of San Diego, and the mean high tide line opposite to and west of said pueblo lot, which said strip of land is bounded on the north by the northerly boundary line of said pueblo lot extended westerly and on the south by the southerly boundary line of said pueblo lot extended westerly; together with the state waters of the

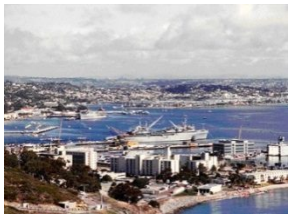
State of California adjacent thereto, being those state waters which lie between said extended northerly and southerly boundaries of said pueblo lot and extend westerly from said mean high tide line for a distance of 1,000 feet.

### *La Jolla, San Diego County*

Ocean waters within the boundaries of the City of San Diego, County of San Diego, State of California, as follows: beginning at the most northerly point of Goldfish Point as shown on La Jolla Park Map No. 352 filed in the office of the County Recorder of said county, thence in a northerly direction to a point being the intersection of longitude 117o 16' 15" west with the easterly prolongation of the southerly line of Pueblo Lot 1298 as shown on the map of Pueblo Lands of San Diego made by James Pascoe known as miscellaneous map No. 36 filed in the office of the County Recorder as said county, thence easterly along said prolongation of the southerly line of Pueblo Lot 1298 to the intersection with the mean high tide line, thence in a generally southerly direction along said mean high tide line to the point of beginning.

The impact of the adoption of ASBS and SWQPAs on the Basin Plan is that discharges of wastewaters and/or heat must be sufficiently removed spatially from these areas to assure the maintenance of natural water quality conditions in these areas. Existing wastewater and/or heat discharges which influence the natural water quality in these areas shall be prohibited and phased out as promptly as possible, or limited by the imposition of special conditions in accordance with the Porter-Cologne Water Quality Control Act and implementing regulations, including, but not limited to the California Ocean Plan and the California Thermal Plan.

## *ENCLOSED BAYS AND ESTUARIES POLICY (RESOLUTION NO. 74-43)*



**San Diego Bay**

The *Water Quality Control Policy for Enclosed Bays and Estuaries of California* (Enclosed Bays and Estuaries Policy) was adopted by State Board Resolution No. 74-43 on May 16, 1974. This policy is designed to prevent water quality degradation and protect beneficial uses in enclosed bays and estuaries. The policy outlines water quality principles and guidelines to achieve these objectives. Decisions by the Regional Board must be consistent with the provisions designed to prevent water quality degradation.

The policy lists principles of management that include the State Board's desire to phase out all discharges of municipal wastewaters and industrial process waters (exclusive of cooling waters) to enclosed bays and estuaries as soon as practicable. Exceptions to this provision may be granted by a Regional Board only when the Regional Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of the receiving waters above that which would occur in the absence of the discharge. Discharge prohibitions are placed on the following:

- New discharges of municipal wastewaters and industrial process waters (exclusive of cooling water, treated ballast water and innocuous non-municipal wastewater discharges, such as clear brines, wash water and pool drains) which are not consistently treated and discharged in a manner that would enhance the quality of the receiving waters as defined in the Policy;

- Municipal and industrial waste sludge and untreated sludge digester supernatant, centrate, or filtrate;

- Rubbish or refuse into surface waters or at any place where they would be eventually transported to enclosed bays and estuaries;

- Silt, sand, soil, clay, or other earthen materials from onshore operations including mining, construction, and lumbering in quantities which unreasonably affect or threaten to affect beneficial uses;

- Materials of petroleum origin in sufficient quantities to be visible or in violation of waste discharge requirements (except for scientific purposes);

- Radiological, chemical, or biological warfare agent or high-level radioactive waste; and

- Discharge or by-pass of untreated waste.

## *POLICY ON THE USE AND DISPOSAL OF INLAND WATERS USED FOR POWERPLANT COOLING (RESOLUTION NO. 75 58)*

The *Water Quality Control Policy on the Use and Disposal of Inland Waters Used for Powerplant Cooling* (Policy on the Use and Disposal of Inland Waters Used for Powerplant Cooling) was adopted by State Board Resolution No. 75-58 on June 19, 1975. The purpose of the policy is to provide consistent statewide water quality principles and guidance for adoption of discharge requirements, and implementation actions for powerplants which depend upon inland waters for cooling. In addition, this policy is intended to protect the beneficial uses of the State's water resources by keeping the consumptive use of freshwater for powerplant cooling to a minimum. The Regional Board is responsible for the enforcement of this policy.

The policy is based on the seven principles listed below:

(1) It is the State Board's position that from a water quantity and quality standpoint the source of powerplant cooling water should come from the following sources in this order of priority depending on site specifics such as environmental, technical, and economic feasibility consideration:

   - Wastewater being discharged to the ocean;

   - Ocean;

   - Brackish water from natural sources or irrigation return flow;

   - Inland wastewaters of low TDS; and

   - Other inland waters.

(2) Where the State Board has jurisdiction, use of fresh inland waters for powerplant cooling will be approved by the Board only when it is demonstrated that the use of other water supply sources or other methods of cooling would be environmentally undesirable or economically unsound.

(3) In considering issuance of a permit or license to appropriate water for powerplant cooling, the Board will consider the reasonableness of the proposed water use when compared with other present and future needs for the water source and when viewed in the context of alternative water sources that could be used for the purpose. The Board will give great weight to the results of studies made pursuant to the Warren-Alquist State Energy Resources Conservation and Development Act and carefully evaluate studies by the Department of Water Resources made pursuant to sections 237 and 462, Division 1 of the California Water Code.

(4) The discharge of blowdown water from cooling towers or return flows from once-through cooling shall not cause a violation of water quality objectives or waste discharge requirements established by the Regional Boards.

(5) The use of unlined evaporation ponds to concentrate salts from blowdown waters will be permitted only at salt sinks approved by the Regional and State Boards. Proposals to utilize unlined evaporation ponds for final disposal of blowdown waters must include studies of alternative methods of disposal. These studies must show that the geologic strata underlying the proposed ponds or salt sink will protect usable groundwater.

(6) Studies of availability of inland waters for use in powerplant cooling facilities to be constructed in Central Valley basins, the South Coastal Basins or other areas which receive supplemental water from Central Valley streams as for all major new uses must include an analysis of the impact of such use on Delta outflow and Delta water quality objectives. The studies associated with powerplants should include an analysis of the cost and water use associated with the use of alternative cooling facilities employing dry, or wet/dry modes of operation.

(7) The State Board encourages water supply agencies and power generating utilities and agencies to study the feasibility of using wastewater for powerplant cooling. The State Board encourages the use of wastewater for powerplant cooling where it is appropriate. Furthermore, section 25601(d) of the Warren-Alquist Energy Resources Conservation and Development Act directs the water and other advances in powerplant cooling and section 462 of the Waste Water Reuse Law directs the Department of Water Resources to "...*conduct studies and investigations on the availability and quality of waste water and uses of reclaimed waste water for beneficial purposes including, but not limited to ... and cooling for thermal electric powerplants.*"

In addition, the policy contains three discharge prohibitions. The prohibitions are listed below:

(1) The discharge to land disposal sites of blowdown waters from inland powerplant cooling facilities shall be prohibited except to salt sinks or to lined facilities approved by the Regional and State Boards for the reception of such wastes.

(2) The discharge of wastewaters from once-through inland powerplant cooling facilities shall be prohibited unless the discharger can show that such a practice will maintain the existing water quality and aquatic environments of the State's water resources.

(3) The Regional Boards may grant exceptions to these discharge prohibitions on a case-by-case basis in accordance with exception procedures included in the *Water Quality Control Plan for Control of Temperature In the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California.*

## *THERMAL PLAN (RESOLUTION NO. 75-89)*

The *Water Quality Control Plan for the Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan) was adopted by the State Board in 1971, revised in 1972 and revised again on September 18, 1975. The Thermal Plan specifies water quality objectives and general water quality provisions for new and existing discharges into enclosed bays, estuaries, cold interstate waters, warm interstate waters and coastal waters. The State and Regional Boards administer the plan by establishing waste discharge requirements for elevated temperature wastes. Existing and future dischargers of thermal waste are required to conduct studies to define the effect of the discharge on beneficial uses and, for existing discharges, determine design and operating changes which would be necessary to achieve compliance with the provisions of the Thermal Plan.

Existing waste discharge requirements are required to be reviewed to determine any necessary revisions, changes in monitoring programs and the need for studies of the effect of the thermal discharge on beneficial uses. Proposed thermal dischargers may be required to submit studies prior to the establishment of WDRs. Appropriate post discharge studies are also required by the Regional Board. The Thermal Plan specifies that the Regional Board shall outline the scope and design of any necessary studies to include the following as applicable:

(1) Existing conditions in the aquatic environment;

(2) Effects of the existing discharge on beneficial uses;

(3) Predicted conditions in the aquatic environment with waste discharge facilities designed and operated in compliance with the provisions of the plan;

(4) Predicted effects of the proposed discharge on beneficial uses;

(5) An analysis of costs and benefits of various design alternatives; and

(6) The extent to which intake and outfall structures are located and designed so that the intake of planktonic organisms is at a minimum, waste plumes are prevented from touching the ocean substrate or shorelines, and the waste is dispersed into an area of pronounced along-shore or offshore currents.

The Thermal Plan further specifies that WDRs adopted for discharges of thermal wastes shall be monitored in order to determine compliance with effluent or receiving water temperature requirements. For significant thermal discharges, the State or Regional Boards shall require expanded monitoring programs to assess whether the thermal discharge continues to provide adequate protection to the beneficial uses of the water. The State or Regional Board may require the discharger(s) to pay a public agency or other appropriate person an amount sufficient to carry out the expanded monitoring program if:

(1) The discharger has previously failed to carry out a monitoring program satisfactory to the State or Regional Board; or

(2) More than a single facility, under separate ownerships, may significantly affect the thermal characteristics of the body of water, and the owners of such facilities are unable to reach agreement on a cooperative program within a reasonable time period specified by the State or Regional Board.

## *POLICY WITH RESPECT TO WATER RECLAMATION IN CALIFORNIA (RESOLUTION NO. 77 1)*

The *Policy with Respect to Water Reclamation in California* (Reclamation Policy) was adopted by the State Board on January 6, 1977. The Reclamation Policy provides that the water resources of the State be put to beneficial use to the fullest extent of which they are capable. The policy provides that water resources shall not be wasted, nor be put to an unreasonable use, nor be used in an unreasonable method.

This policy commits both the State and Regional Board to support reclamation and to undertake all possible steps to encourage the development of water reclamation facilities to reclaim water to supplement existing surface and ground water supplies. It requires the Regional Board to conduct reclamation surveys and specifies actions to be implemented by the State and Regional Board and other agencies.

The State Board adopted the four following principles in order to implement the Reclamation Policy. These principles are listed below:

(2) Surface or ground waters which have been contaminated and cannot be reasonably treated for domestic use using either Best Management Practices or best economically achievable treatment practices;

(3) Surface or ground waters which do not provide sufficient water for extraction of 200 gallons per day;

(4) Surface waters which are in systems designed or modified to carry municipal, industrial, agricultural or mining wastewaters, or storm water runoff;

(5) Surface waters in systems designed or modified for the primary purpose of conveying or holding agricultural drainage waters, provided that the discharge from such systems is monitored to assure compliance with all relevant water quality objectives as required by the Regional Boards; and

(6) Ground waters where the aquifer is regulated as a geothermal energy producing source or has been exempted administratively pursuant to 40 CFR, section 146.4 for the purpose of underground injection of fluids associated with the production of hydrocarbon or geothermal energy, provided that these fluids do not constitute a hazardous waste under 40 CFR, section 261.3. This resolution has been reprinted at the end of this Chapter.

## *NONPOINT SOURCE MANAGEMENT PLAN (RESOLUTION NO. 88-123)*

The *Nonpoint Source Management Plan* was adopted by the State Board on November 15, 1988, pursuant to section 319 of the federal Clean Water Act. Section 319 requires each state to prepare a Nonpoint Source Management Plan and to conduct an assessment of the impact nonpoint sources have on the state's waterbodies. In response to these requirements, the State Board adopted the Nonpoint Source Management Plan (NPSMP) in 1988 and the Water Quality Assessment in 1990. The NPSMP established a statewide policy for managing polluted runoff in California. The plan identifies three management approaches which are used by the State and Regional Boards to address nonpoint source problems:

(1) Voluntary implementation of best management practices;

(2) Regulatory-based encouragement of best management practices; and

(3) Effluent requirements.

The primary goal of the program is to measurably improve water quality and/or implementation of Best Management Practices by meeting several objectives specified in the plan.

The Nonpoint Source Management Plan outlines steps to initiate systematic management of nonpoint sources in California. These steps include:

(1) An explicit long-term commitment by the State and Regional Board;

(2) More effective coordination of existing State and Regional Board nonpoint-source related programs;

(3) Greater use of Regional Board regulatory authorities coupled with non-regulatory programs;

(4) Stronger links between the local, State and Federal agencies which have powers that can be used to manage nonpoint sources;

(5) Development of new funding sources; and

(6) Implementation of the requirements of the 1990 Reauthorization of the Coastal Zone Management Act (CZMA) which requires the State Board and the California Coastal Commission to develop and implement an enforceable nonpoint source program in the coastal zone.

The reauthorization of the CZMA, together with specific guidance from the USEPA and the National Oceanic & Atmospheric Administration (NOAA), requires coastal states to develop coastal nonpoint pollution control programs. These programs are to implement management measures for the control of land uses which contribute nonpoint source pollution to coastal waters. Management measures, which include specific measures for mitigating water quality impacts, are specified for the following land uses: agriculture; grazing; confined animal facilities; forestry; urban development; roads; marinas and recreational boating; hydromodification; and mines. The state's coastal program is to be considered for approval by the USEPA and NOAA in July 1995.

Revision of the State Nonpoint Source Management Plan (NPSMP) has been initiated. The State Board intends to consider the requirements of the Coastal Zone Act Reauthorization Amendments (CZARA) during the review and revision of the NPSMP. There will also be more of an emphasis placed on watershed based nonpoint source controls in the revised NPSMP. To develop these management measures, the State Board is forming Task Force Committees composed of experts in the various nonpoint source categories. The management measures developed by the Task Force Committees will be reviewed by an Oversight Committee made up of State and Regional Board staff prior to inclusion in the revised NPSMP. The anticipated date of completion of the revised NPSMP is in 1995.

The plan describes an implementation project entitled the "Southern California Coastal Lagoon Urban Runoff Management." This project requires land developers to incorporate low flow sand filters into project designs and to implement street sweeping programs. The performance of the filters and programs are monitored to incorporate design modifications as needed to improve performance.

Other implementation actions specified in the plan for Region 9 include the following regulatory and non-regulatory program(s).

## *REGULATORY PROGRAMS*

### *Dairies*

The Regional Board issues Waste Discharge Requirements which limit the amount of manure that can be applied per acre to agricultural land.

### *Erosion Control*

The Regional Board implements policies requiring cities and counties to adopt erosion control ordinances. Thus, the Regional Board adopted Resolution No. 92-21, *A Resolution Concerning the Agreement Between the California Regional Water Quality Control Board, San Diego Region, and the Resource Conservation Districts of San Diego County Regarding the Erosion and Sediment Control Policy* (Resource Conservation Districts of San Diego County Erosion and Sediment Control Policy. In addition, staff reviews ordinances and assists with enforcement.

### *Subsurface Disposal Policy*

Regional Board staff will develop criteria for minimum lot sizes for septic systems.

## *NON-REGULATORY PROGRAM*

### *San Diego Bay Study*

The Regional Board will continue a five year study to identify the sources and extent of water quality pollution in San Diego Bay. Possible nonpoint sources such as storm water runoff and past point source pollutants now bound to bottom sediments will be investigated.

## *CALIFORNIA OCEAN PLAN (RESOLUTION NO. 90-27)*

**Pacific Ocean, Scripps Pier**

The *Water Quality Control Plan for Ocean Waters of California* (California Ocean Plan) was adopted by the State Board in 1972, and later revised in 1978, 1983, 1988 and 1990. The revision in effect at the time of this writing is Resolution No. 90 27, which was adopted by the State Board on March 22, 1990. The California Ocean Plan is applicable to all point source discharges to the ocean.

The California Ocean Plan is designed to protect the quality of the ocean waters for use and enjoyment by the people through the control of waste discharges to the ocean. The plan sets forth water quality objectives for ocean waters which impose limits on bacteriological, physical, chemical, biological, toxic, and radioactive characteristics for ocean waters in numerical and descriptive terms to ensure the reasonable protection of beneficial uses and the prevention of nuisance. Also, the plan describes requirements for management and design of systems discharging wastewaters to the ocean and effluent quality requirements for discharges. Systems must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community. In addition, discharge prohibitions are placed on hazardous substances, warfare agents and high level radioactive wastes, sludge and digester supernatant, and bypassed untreated waste discharges. Furthermore, the plan states that "*Areas of Special Biological Significance*" shall be designated by the State Board. In these areas, the maintenance of natural water quality conditions must be assured. Waste discharges to ASBS are prohibited unless the State Board finds that there would be no adverse impact to beneficial uses. Lastly, discharge requirements within the California Ocean Plan include the maximum allowable monthly mass emission rates for each effluent quality constituent included therein.

The California Ocean Plan declares the State Board's intent to require continual monitoring of the marine environment to assure that the California Ocean Plan reflects the latest available data and that the water quality objectives are adequate to fully protect indigenous marine species and to protect human health.

## *CALIFORNIA WETLANDS CONSERVATION POLICY*

The California Wetlands Conservation Policy was established by the Governor on August 23, 1993. The goal of the California Wetlands Conservation Policy is to establish a policy framework and strategy that will:

- Ensure no overall net loss and achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property;

- Reduce procedural complexity in the administration of State and Federal wetlands conservation programs; and

- Encourage partnerships to make landowner incentive programs and cooperative planning efforts the primary focus of wetlands conservation and restoration.

Three measures are identified to achieve these objectives, these include: (1) statewide policy initiatives; (2) regional strategies; and an (3) interagency wetlands task force.

### *Statewide Policy Initiative*

These policy initiatives include a statewide wetlands inventory, support for wetlands planning, improved administration of existing wetland's regulatory programs, development and adoption of a consistent wetlands definition for state regulatory programs, development and adoption of a state policy regarding Army Corps of Engineers nationwide permits, development and adoption of consistent wetlands standards and guidelines, enhancing efficiency of and coordination in the wetland permitting process, encouragement of

regulatory flexibility in situations in which wetlands are created unintentionally or incidentally to other activities, encouragement of regulatory flexibility to allow public agencies and water districts to create wetlands but later remove them if the wetlands are found to conflict with the primary purpose to which the property is devoted, strengthened landowner incentives to protect wetlands, support for mitigation banking, development and expansion of other wetlands programs, and integration of wetlands policy and planning with other environmental and land use processes.

### *Regional Strategies*

These include three geographically based regional strategies in which wetlands programs can be implemented, refined, and combined in unique ways to achieve the goals and objectives of the wetlands policy. These three strategies are to be implemented in the Central Valley, the San Francisco Bay area, and Southern California. For Southern California, the regional strategy is to initiate better coordination and communication among diverse interests in southern California by establishing a "*Southern California Wetlands Joint Venture.*" This group would set long-term goals and priorities for the conservation of wetlands and develop a policy to achieve those goals, and would encourage a variety of demonstration projects designed to enhance the State's ability to constructively address regional wetlands issues.

### *Interagency Wetlands Task Force*

This task force is to be created to direct and coordinate administration and implementation of the Wetlands Policy. This task force will be advisory to the Governor and help resolve inter-agency conflicts on wetlands. The task force will appoint an advisory committee of stakeholders and may seek additional technical advice as necessary.

## *CLEANUP AND ABATEMENT POLICIES AND PROCEDURES (RESOLUTION NO. 92-49)*

The *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code section 13304* (Cleanup and Abatement Policies and Procedures) was adopted by State Board Resolution No. 92-49 on June 18, 1992, and amended on April 21, 1994. The Policy describes the procedures the State Board and the Regional Board follow in making decisions on investigations to determine the vertical and horizontal extent of a discharge, and the appropriate cleanup and abatement methods. The Policy applies to all investigations and cleanup and abatement activities, for all types of discharges subject to California Water Code (Water Code) section 13304.

Section 13304 applies to any person who discharges or who has discharged waste into waters of the State in violation of any waste discharge requirement or other order or prohibition issued by a Regional Board or the State Board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the State and creates, or threatens to create, a condition of pollution or nuisance. Section 13304 authorizes the Regional Board to require complete cleanup of all waste discharged and to require restoration of affected water to background conditions (i.e., the water quality that existed before the discharge). The Policy requires dischargers to clean up and abate the effects of discharges in a manner that promotes attainment of either background water quality, or the best water quality which is reasonable, if background levels of water quality cannot be restored. Cleanup levels prescribed by the State Board or Regional Boards must:

- Be consistent with maximum benefit to the people of the State; and
- Be established in a manner consistent with CCR, Title 23, Chapter 15 regulations.

## WATER QUALITY ENFORCEMENT POLICY

The *Water Quality Enforcement Policy* became effective on May 20, 2010. This Policy addresses the enforcement component (i.e. actions that take place in response to a violation) of the Regional and State Boards' regulatory framework, which is a critical element of a successful regulatory program. Without a strong enforcement program to follow through on non-compliance, the entire regulatory framework would be in jeopardy. Enforcement is a critical ingredient in creating the deterrence needed to encourage the regulated community to anticipate, identify, and correct violations. The Policy includes a process for ranking of enforcement priorities, a methodology for calculating civil liability, and requires recording and reporting of enforcement data to the public and regulated community.

## POLICY ON SUPPLEMENTAL ENVIRONMENTAL PROJECTS

The *Policy on Supplemental Environmental Projects* became effective on February 3, 2009. This Policy guides the process of the Regional or State Board accepting a Supplemental Environmental Project (SEP) that may allow a discharger to satisfy part of the monetary assessment imposed in an administrative civil liability (ACL). California Water Code section 13385(i) allows limited use of SEPs associated with mandatory minimum penalties and provides criteria and reporting requirements for qualifying SEPs.

## ONSITE WASTEWATER TREATMENT SYSTEMS POLICY (RESOLUTION NO. 2012-0032)

The purpose of the *Water Quality Control Policy for Siting, Design, and Maintenance of Onsite Wastewater Treatment Systems*[1] (OWTS Policy) is to allow the continued use of OWTS, while protecting water quality and public health. The OWTS Policy was adopted by the State Board on June 19, 2012. The OWTS Policy recognizes that responsible local agencies can provide the most effective means to manage OWTS on a routine basis. It is the intent of the OWTS Policy to efficiently utilize and improve coordination between the State and local agencies to improve the implementation of the OWTS Policy for the protection of water quality. To accomplish this purpose, the OWTS Policy establishes a statewide, risk-based, tiered approach for the regulation and management of OWTS installations and replacements, and sets the level of performance and protection expected from OWTS. The OWTS Policy also allows Regional Boards to conditionally waive issuing Waste Discharge Requirements (WDRs) for OWTS that meet requirements specified in the Policy.

The regulation of OWTS is organized into five separate implementation tiers (tiers outlined in Chapter 4). An OWTS that meets the criteria of one of the five tiers is eligible for the conditional waiver of WDRs, with regulation of the qualifying OWTS deferred to the appropriate local agency.

[1]OWTS Policy can be found online at http://www.waterboards.ca.gov/

The main goals of the Recycled Water Policy are to provide direction to the Regional Boards, proponents of recycled water projects, and the public regarding the appropriate criteria to be used in issuing permits for recycled water projects; increase the use of recycled water from municipal wastewater sources; and streamline and expedite permitting of recycled water projects by the Regional Boards. These goals will help promote long-term protection of regional groundwater supplies. The Recycled Water Policy[2] was adopted by the State Board on February 9, 2009 and amended on January 22, 2013.

The Policy requires that by May 2014 individual salt and nutrient management plans (SNMPs) be developed for every groundwater basin in California. The SNMPs required by the Recycled Water Policy are to be developed by local stakeholder driven processes led mainly local water purveyors and wastewater agencies. The development of SNMPs allows for a more comprehensive approach to management of all contributors of salt and nutrient loading to groundwater on a basin-wide or watershed-basis; and in a manner that ensures attainment of water quality objectives and protection of beneficial uses.

The Recycled Water Policy specifies permitting criteria for landscape irrigation and groundwater recharge projects, and includes criteria for streamlined permitting. Irrigation projects that meet criteria specified in the Recycled Water Policy are entitled to a streamlined permitting process. The Recycled Water Policy also establishes a program to evaluate the risks of constituents of emerging concern to public health and the environment; and promotes incentives to encourage and facilitate recycled water use.

[2] Recycled Water Policy can be found online at: http://www.waterboards.ca.gov/

# *REGIONAL BOARD RESOLUTIONS*

The San Diego Regional Board has adopted many resolutions which, in addition to the State Board Resolutions described previously, are important to the Regional Board's implementation of the Basin Plan. The Regional Board Resolutions that implement, interpret, or make specific the Basin Plan are incorporated into the Basin Plan are listed below.

**Resolution No. 78-6**
Adopted February 27 1978. *A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region.* This resolution deleted water quality objectives and beneficial uses for certain portions of basins 1.10, 1.20, 1.30, 1.40, 1.50, 2.10, 3.10, 4.10, 4.20, 4.30, 4.40, 4.50, 4.60, 5.10, 6.10, 7.10, and 11.10.

**Resolution No. 79-25**
Adopted March 26, 1979. *A Resolution Concerning the 'Agreement Between the California Regional Water Quality Control Board, San Diego Region and the Elsinore-Murrieta-Anza Resource Conservation District Regarding the Sediment Control Ordinance*.'

**Resolution No. 79-44**
Adopted June 25, 1979. *A Resolution Concerning 'Guidelines for New Community and Individual Sewerage Facilities.'*

**Resolution No. 80-48**
Adopted September 22, 1980. *A Resolution Concerning the San Diego County Department of Health Services Minimum Criteria for the Design and Construction of Evapotranspiration and Evapotranspiration-Infiltration Systems.*

**Resolution No. 81-16**
Adopted March 23, 1981. *A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region.* This resolution amended the beneficial uses and water quality objectives for the Aliso, Carlsbad, Agua Hedionda, Batiquitos and Telegraph hydrographic subareas.

**Resolution No. 83-04**
Adopted January 24, 1983. *A Resolution Adopting an Amendment to the Comprehensive Water Quality Control Plan for the San Diego Region.* This resolution amended the water quality objectives for nutrients in coastal lagoons.

**Resolution No. 83-27**
Adopted October 3, 1983. *A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region, San Elijo Hydrographic Subarea.*

**Resolution No. 83-28**
Adopted August 29, 1983. *A Resolution Supporting the County of San Diego's Moratorium on Subsurface Disposal Systems in the Valley Center Area.*

**Resolution No. 84-20**
Adopted August 27, 1984. *A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region, Mission San Diego Hydrographic Subarea.*

**Resolution No. 85-89**
Adopted December 16, 1985. *A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region, Mission San Diego Hydrographic Subarea and Sycamore Canyon Subarea, and a portion of the Santee Hydrographic Subarea.*

**Resolution No. 85-92**
Adopted December 16, 1985. *Designation of Class III Landfills Within the San Diego Region to Accept Shredder Wastes as Required by Section 25143.6 of the Health and Safety Code.*

**Resolution No. 86-06**
Adopted March 24, 1986. *A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region.* This resolution established a goal and action plan for encouraging and promoting water reclamation.

**Resolution No. 87-71**
Adopted November 16, 1987. *A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region.* This resolution established a policy on dairy waste management.

**Resolution No. 87-91**
Adopted December 21, 1987. *A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region.* This resolution established a policy on erosion and sediment control.

**Resolution No. 88-06**
Adopted February 8, 1988. *Policy on the Disposal of Shredder Waste*. The policy specifies the shredder waste must not exceed PCB levels of 50 milligrams per kilogram (mg/kg). Also, the shredder waste must be disposed on the last and highest lift in a closed disposal cell or in an isolated cell solely designated for the disposal of shredder waste.

**Resolution No. 88-25**
Adopted March 14, 1988. *A Resolution Regarding the Proposed State Water Resources Control Board Policy for Water Quality Control Defining 'Sources of Drinking Water' for the Purposes of Discharge Prohibitions.*

**Resolution No. 88-49**
Adopted April 25, 1988. *A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region for a Portion of the Otay Hydrographic Subunit.*

**Resolution No. 88-97**
Adopted October 3, 1988. *A Resolution Supporting the Proposed Interim Solution to the Tijuana Sewage Problem Consisting of a Sewage Treatment Plant Within the United States and an Ocean Outfall.*

**Resolution No. 89-33.**
Adopted April 10, 1989. *Incorporation of 'Sources of Drinking Water' Policy into the Water Quality Control Plan (Basin Plan) of the San Diego Region.*

**Resolution No. 89-53**
Adopted July 10, 1989. *Addition of Portions of the Otay Valley Hydrologic Area to the List of Waters Excepted From the 'Sources of Drinking Water' Policy.*

**Resolution No. 90-27**
Adopted April 23, 1990. *A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region, for the Mission San Diego and a Portion of the Santee Hydrologic Subareas.* This resolution establishes a biostimulatory substances water quality compliance methodology for part of the San Diego River.

**Resolution No. 90-28**
Adopted March 12, 1990. *A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region, for a Portion of the San Clemente Hydrologic Subunit.*

**Resolution No. 90-53**
Adopted September 24, 1990. *A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for Portions of the Santa Margarita Hydrologic Unit (2.00), San Diego Region.* This resolution establishes a biostimulatory substances water quality compliance methodology for part of the Santa Margarita River.

**Resolution No. 90-61**
Adopted November 5, 1990. *A Resolution Amending Resolution No. 90-40, A Regionwide Groundwater Amendment to the Comprehensive Water quality Control Plan for the San Diego Region.* This resolution revised the language regarding use of reclaimed water contained in Resolution No. 90-40, *A Resolution Reconsidering and Amending Resolution No. 90-26, 'A Regionwide Groundwater Amendment to the Comprehensive Water Quality Control Plan for the San Diego Region'*, and Resolution No. 90-26, *A Resolution Adopting A Regionwide Groundwater Amendment to the Comprehensive Water Quality Control Plan for the San Diego Region.*

**Resolution No. 91-23**
Adopted March 11, 1991. *A Resolution Amending Resolution No. 90-27, 'A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region, for the Mission San Diego and a Portion of the Santee Hydrologic Subareas.'*

**Resolution No. 91-46**
Adopted May 20, 1991. *A Resolution Rescinding and Replacing Resolution No. 88-91 and Addenda, and Establishing a Regional Board Drought Policy.*

**Resolution No. 91-79**
Adopted December 9, 1991. *A Resolution Amending Resolution No. 90-55, 'Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region.'* This resolution establishes revised Basin Plan chapters for beneficial uses and water quality objectives.

**Resolution No. 92-21**
Adopted April 6, 1992. *A Resolution Concerning the Agreement Between the California Regional Water Quality Control Board, San Diego Region, and the Resource Conservation Districts of San Diego County Regarding the Erosion and Sediment Control Policy.*

**Resolution No. 93-02**
Adopted February 1, 1993. *A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region for the Escondido Hydrologic Subarea (4.62).*

**Resolution No. 94-09**
Adopted February 10, 1994. *A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region, Portions of the Pauba (2.51) and Wolf (2.52) Hydrologic Subareas.*

**Resolution No. 94-10**
Adopted September 8, 1994. *A Resolution Adopting an Update to the Water Quality Control Plan for the San Diego Basin.*

**Resolution No. 94-25**
Adopted February 10, 1994. *A Resolution Adopting Amendments to the Comprehensive Water Quality Control Plan for the San Diego Region for the Laguna (1.10), Mission Viejo (1.20), and San Clemente (1.30) Hydrologic Areas.*

**Resolution No. 94-139**
Adopted October 13, 1994. *A Resolution Adopting Amendments to the Water Quality Control Plan for a portion of the Poway Hydrologic Area (6.20).*

**Resolution No. 95-48**
Adopted May 16, 1995. *A Resolution Adopting Amendments to the Water Quality Control Plan for the Alluvial Aquifer of the Moosa (903.13) and the Valley Center (903.14) Hydrologic Subareas.*

**Resolution No. 95-115**
Adopted October 12, 1995. *A Resolution Adopting Amendments to the Water Quality Control Plan for the San Diego Basin (9), Table 4-4. Types of Discharges Identified for Conditional Waiver of Waste Discharge Requirements.*

**Resolution No. 96-30**
Adopted May 9, 1996*. A Resolution Adopting an Amendment to the Water Quality Control Plan for the San Diego Region.* This resolution provides an Exception to the Prohibition of Discharges of Recycled Wastewater to Surface Water Bodies Used for Municipal Water Supply.

**Resolution No. 96-34**
Adopted August 8, 1996. *A Resolution Adopting an Amendment to the Water Quality Control Plan for the San Diego Region, Table 4-4, Item 24, Composting and Processing, Mulching, or Grinding Waste Management Units.*

**Resolution No. 97-04**
Adopted March 12, 1997. *A Resolution Adopting Amendments to the Water Quality Control Plan for the San Diego Basin for the Designation of COLD and SPWN Beneficial Uses.*

**Resolution No. R9-2002-0123**
Adopted August 14, 2002. *Total Maximum Daily Load (TMDL) for Diazinon in Chollas Creek Watershed, San Diego County.*

**Resolution No. R9-2005-0019**
Adopted February 9, 2005. *Total Maximum Daily Load for Dissolved Copper in the Shelter Island Yacht Basin, San Diego Bay*.

**Resolution No. R9-2005-0036**
Adopted February 9, 2005. *A Resolution Adopting an Amendment to the Water Quality Control Plan for the San Diego Region (9) to Incorporate Total Maximum Daily Loads (TMDLs) for Total Nitrogen and Total Phosphorus in the Rainbow Creek Watershed, San Diego County.*

**Resolution No. R9-2005-0238**
Adopted November 9, 2005. *Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Authorization for Compliance Time Schedules in National Pollutant Discharge Elimination System Requirements (Basin Plan Issue No. 6).*

**Resolution No. R9-2005-0239**
Adopted November 9, 2005. *A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Add Unnamed or Unidentified Waterbodies to the Beneficial Use Tables and Make Water Quality Objective Table Corrections (Basin Plan Issue No. 3).*

**Resolution No. R9-2006-0029**
Adopted April 12, 2006. *Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Edit and Reformat Text, and Update Graphics; and Reinstating Text on "Controllable Water Quality Factors" (Basin Plan Issue No. 1)*

**Resolution No. R9-2007-0043**
Adopted June 13, 2007. *A Resolution Adopting an Amendment to the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Total Maximum Daily Loads for Dissolved Copper, Lead and Zinc in Chollas Creek, Tributary to San Diego Bay, and to Revise the Toxic Pollutants Section of Chapter 3 to Reference the California Toxics Rule.*

**Resolution No. R9-2008-0027**
Adopted June 11, 2008. *A Resolution to Adopt an Amendment to the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay.*

**Resolution No. R9-2008-0028.**
Adopted May 14, 2008. *A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Implementation Provisions for Indicator Bacteria Water Quality Objectives to Account for Loading from Natural Uncontrollable Sources within the Context of a Total Maximum Daily Load.*

**Resolution No. R9-2010-0001**
Adopted February 10, 2010. *A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek).*

**Resolution No. R9-2012-0033**
Adopted June 13, 2012. *A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Incorporate the Total Maximum Daily Load for Sedimentation in Los Peñasquitos Lagoon.*

# *REPRINT OF RESOLUTION NO. 77-1*

**STATE WATER RESOURCES CONTROL BOARD**

**RESOLUTION NO. 77-1**

**POLICY WITH RESPECT TO WATER RECLAMATION IN CALIFORNIA**

**WHEREAS:**

1. The California Constitution provides that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that waste or unreasonable use or unreasonable method of use of water be prevented, and that conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare;

2. The California Legislature has declared that the State Water Resources Control Board and each Regional Water Quality Control Board shall be the principal state agencies with primary responsibility for the coordination and control of water quality;

3. The California Legislature has declared that the people of the State have a primary interest in the development of facilities to reclaim water containing waste to supplement existing surface and underground water supplies;

4. The California Legislature has declared that the State shall undertake all possible steps to encourage the development of water reclamation facilities so that reclaimed water may be made available to help meet the growing water requirements of the State;

5. The Board has reviewed the document entitled "*Policy and Action Plan for Water Reclamation in California*," dated December 1976. This document recommends a variety of actions to encourage the development of water reclamation facilities and the use of reclaimed water. Some of these actions require direct implementation by the Board; others require implementation by the Executive Officer and the Regional Boards. In addition, this document recognizes that action by many other state, local, and federal agencies and the California State Legislature would also encourage construction of water reclamation facilities and the use of reclaimed water. Accordingly, the Board recommends for its consideration a number of actions intended to coordinate with the program of this Board;

6. The Board must concentrate its efforts to encourage and promote reclamation in water-short areas of the State where reclaimed water can supplement or replace other water supplies without interfering with water rights or instream beneficial uses or placing an unreasonable burden on present water supply systems; and

7. In order to coordinate the development of reclamation potential in California, the Board must develop a data collection, research, planning, and implementation Program for water reclamation and reclaimed water uses.

**THEREFORE, BE IT RESOLVED:**

1. That the State Board adopts the following Principles:

    I. The State Board and the Regional Boards shall encourage, and consider or recommend for funding, water reclamation projects which meet Condition 1, 2, or 3 below and which do not adversely impact vested water rights or unreasonably impair instream beneficial uses or place an unreasonable burden on present water supply systems;

(1) Beneficial use will be made of wastewaters that would otherwise be discharged to marine or brackish receiving waters or evaporation ponds,

(2) Reclaimed water will replace or supplement the use of fresh water or better quality water,

(3) Reclaimed water will be used to preserve, restore, or enhance instream beneficial uses which include, but are not limited to, fish, wildlife, recreation and esthetics associated with any surface water or wetlands.

II. The State Board and the Regional Boards shall (1) encourage reclamation and reuse of water in water-short areas of the State, (2) encourage water conservation measures which further extend the water resources of the State, and (3) encourage other agencies, in particular the Department of Water Resources, to assist in implementing this policy.

III. The State Board and the Regional Boards recognize the need to protect the public health including potential vector problems and the environment in the implementation of reclamation projects.

IV. In implementing the foregoing Principles, the State Board or the Regional Boards, as the case may be, shall take appropriate actions, recommend legislation, and recommend actions by other agencies in the areas of (1) planning, (2) project funding, (3) water rights, (4) regulation and enforcement, (5) research and demonstration, and (6) public involvement and information.

2. That, in order to implement the foregoing Principles, the State Board:

(a) Approves Planning Program Guidance Memorandum No. 9, "*PLANNING FOR WASTEWATER RECLAMATION*,"

(b) Adopts amendments and additions to Title 23, California Administrative Code sections 654.4, 761, 764.9, 783, 2101, 2102, 2107, 2109, 2109.1, 2109.2, 2119, 2121, 2133(b)(2), and 2133(b)(3),

(c) Approves Grants Management Memorandum No. 9.01, "*WASTEWATER RECLAMATION*,"

(d) Approves the Division of Planning and Research, Procedures and Criteria for the Selection of Wastewater Reclamation Research and Demonstration Project,

(e) Approves "*GUIDELINES FOR REGULATION OF WATER RECLAMATION*,"

(f) Approves the Plan of Action contained in Part III of the document identified in Finding Five above,

(g) Directs the Executive Officer to establish an Interagency Water Reclamation Policy Advisory Committee. Such Committee shall examine trends, analyze implementation problems, and report annually to the Board the results of the implementation of this policy, and

(h) Authorizes the Chairperson of the Board and directs the Executive Officer to implement the foregoing Principles and the Plan of Action contained in Part III of the document identified in Finding Five above, as appropriate.

3. That not later than July 1, 1978, the Board shall review this policy and actions taken to implement it, along with the report prepared by the Interagency Water Reclamation Policy Advisory Committee, to determine whether modifications to this policy are appropriate to more effectively encourage water reclamation in California.

4. That the Chairperson of the Board shall transmit to the California Legislature a complete copy of the "*Policy and Action Plan for Water Reclamation in California*."

**CERTIFICATION**

The undersigned, Executive Officer of the State Water Resources Control Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a special meeting of the State Water Resources Control Board held on January 6, 1977.

Original signed by

Bill B. Dendy

Executive Officer

State Water Resources Control Board

# *REPRINT OF RESOLUTION NO. 88-63*

**STATE WATER RESOURCES CONTROL BOARD**

**RESOLUTION NO. 88-63**

**ADOPTION OF POLICY ENTITLED "*SOURCES OF DRINKING WATER*"**

**WHEREAS:**

1. California Water Code section 13140 provides that the State Board shall formulate and adopt State Policy for Water Quality Control; and,

2. California Water Code section 13240 provides that Water Quality Control Plans "*shall conform*" to any State Policy for Water Quality Control; and,

3. The Regional Boards can conform the Water Quality Control Plans to this policy by amending the plans to incorporate the policy; and,

4. The State Board must approve any conforming amendments pursuant to Water Code section 13245; and,

5. "*Sources of drinking water*" shall be defined in Water Quality Control Plans as those water bodies with beneficial uses designated as suitable, or potentially suitable, for municipal or domestic water supply (MUN); and,

6. The Water Quality Control Plans do not provide sufficient detail in the description of water bodies designated MUN to judge clearly what is, or is not, a source of drinking water for various purposes.

**THEREFORE BE IT RESOLVED:**

All surface and ground waters of the state are considered to be suitable, or potentially suitable, for municipal or domestic water supply and should be so designated by the Regional Boards 1 with the exception of:

1. Surface and ground waters where:

    a. The total dissolved solids (TDS) exceed 3,000 mg/l (5,000 µS/cm, electrical conductivity) and it is not reasonably expected by Regional Boards to supply a public water system, or

    b. There is contamination, either by natural processes or by human activity (unrelated to a specific pollution incident), that cannot reasonably be treated for domestic use using either Best Management Practices or best economically achievable treatment practices, or

    c. The water source does not provide sufficient water to supply a single well capable of producing an average sustained yield of 200 gallons per day.

2. Surface waters where:

    a. The water is in systems designed or modified to collect or treat municipal or industrial wastewaters, process waters, mining wastewaters, or storm water runoff, provided that the discharge from such systems is monitored to assure compliance with all relevant water quality objectives as required by the Regional Boards; or,

b. The water is in systems designed or modified for the primary purpose of conveying or holding agricultural drainage waters, provided that the discharge from such systems is monitored to assure compliance with all relevant water quality objectives as required by the Regional Boards.

3. Ground water where:

The aquifer is regulated as a geothermal energy producing source or has been exempted administratively pursuant to 40 CFR, section 146.4 for the purpose of underground injection of fluids associated with the production of hydrocarbon or geothermal energy, provided that these fluids do not constitute a hazardous waste under 40 CFR, section 261.3.

4. Regional Board Authority to Amend Use Designations:

Any body of water which has a current specific designation previously assigned to it by a Regional Board in Water Quality Control Plans may retain that designation at the Regional Board's discretion. Where a body of water is not currently designated as MUN but, in the opinion of a Regional Board, is presently or potentially suitable for MUN, the Regional Board shall include MUN in the beneficial use designation.

The Regional Boards shall also assure that the beneficial uses of municipal and domestic supply are designated for protection wherever those uses are presently being attained, and assure that any changes in beneficial use designations for waters of the State are consistent with all applicable regulations adopted by the Environmental Protection Agency.

The Regional Boards shall review and revise the Water Quality Control Plans to incorporate this policy.

**CERTIFICATION**

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a policy duly and regularly adopted at a meeting of the State Water Resources Control Board held on May 19, 1988.

Original signed by

Maureen Marche

Administrative Assistant to the Board

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[1] This policy does not affect any determination of what is a potential source of drinking water for the limited purposes of maintaining a surface impoundment after June 30, 1988, pursuant to section 25208.4 of the Health and Safety Code.

# CHAPTER 6
# SURVEILLANCE, MONITORING AND ASSESSMENT



# TABLES

# PHOTOS

# 6. SURVEILLANCE, MONITORING AND ASSESSMENT

## *INTRODUCTION*


Laboratory

California's well-being is linked to the health of its water. To protect and preserve this basic resource, the State Board and the Regional Board closely monitor water quality throughout the state. A comprehensive surveillance and monitoring program provides basic information needed to evaluate the effectiveness of California's water quality control program.

Historically, a wide variety of interested state, federal, and local agencies have sampled, analyzed, and tracked water quality. The State Board monitoring program coordinates existing information, and supplements it where necessary to meet data needs.

The Porter-Cologne Water Quality Control Act delegates primary responsibility for coordination and control of water quality in California to the State Board. Section 13163 of the Act states that in conducting this mission, the State Board shall coordinate water quality investigations, recognizing that other state agencies may have primary statutory responsibility for such investigations, and shall consult with the concerned Regional Boards in implementing this section.

Pursuant to these mandates, the State Board in 1976 established a coordinated Primary Water Quality Monitoring Network for California. Participants in the coordinated Primary Network included the California Departments of Fish and Game (DFG), Water Resources (DWR), and Health Services (DHS) as well as the Federal Bureau of Reclamation, United States Geologic Survey (USGS), and the United States Environmental Protection Agency (USEPA).

The goal of the Primary Network has been to provide an overall, continuous assessment of water quality in the State. This goal is to be achieved by statewide monitoring of water quality parameters that can affect beneficial uses of state waters.

This chapter contains a discussion of the objectives and various elements of the State and Regional Board's surveillance and monitoring programs. Not all of these programs are currently active in the San Diego Region, as many are unfunded at this time.

## *STATE SURVEILLANCE AND MONITORING PROGRAMS*

The State's surveillance and monitoring programs are designed to assure the collection of data necessary to:

- Establish and review water quality standards, goals, and objectives;
- Determine maximum daily loadings, waste load allocations, and effluent limitations;
- Perform segment classifications and ranking; and
- Establish the relationship between water quality and individual point and nonpoint sources of pollutants.

These data must be verified and properly interpreted to evaluate water quality trends and to make the necessary changes in the enforcement and/or planning programs to carry out program objectives. Output based upon data obtained from this program is used to prepare reports satisfying the requirements of federal Clean Water Act, sections 104, 106, 208, 301, 303, 304, 305, 307, 308, 314, 402, and the applicable portions of the State's Porter-Cologne Water Quality Control Act.

The overall objectives of the State's surveillance and monitoring program are:

- To measure the achievement of water quality goals and objectives specified in the Basin Plan;
- To measure specific effects of water quality changes on the established beneficial uses;

- To measure background conditions of water quality and determine long-term trends in water quality;

- To locate and identify sources of water pollution that pose an acute, accumulative, and/or chronic threat to the environment;

- To provide information needed to relate receiving water quality to mass emissions of pollutants by waste dischargers;

- To provide data for determining compliance with permit conditions;

- To provide the documentation necessary to support the enforcement of permit conditions and waste discharge requirements;

- To measure waste loads discharged to receiving waters and to identify the limits of their effects, and in water quality limited segments, to prepare waste load allocations necessary to achieve water quality control;

- To provide data needed to carry on the continuing planning process;

- To provide a clearinghouse for the collection and dissemination of water quality data gathered by other agencies and private parties cooperating in the program;

- To measure the effects of water rights decisions on water quality and to guide the State Board in its responsibility to regulate unappropriated water for the control of quality; and

- To prepare reports on water quality conditions as required by federal and state regulations and other users requesting water quality data.

The surveillance and monitoring program is designed to meet the objectives set forth above. An optimum surveillance and monitoring program requires flexibility and must be able to respond to needs specified in the Basin Plan as it is implemented and revised. To ensure that the surveillance and monitoring program is flexible and adapts to change, statewide water quality assessments are performed every two years to provide a timely cycle to evaluate the program's effectiveness and make appropriate changes.

The surveillance and monitoring program provides for collection and analysis of samples and the reporting of water quality data. It includes laboratory support and quality assurance, storage of data for rapid and systematic retrieval, and preparation of reports and data summaries. Most importantly, it includes interpretation and evaluation of data leading to recommendations for action.

Surveillance and monitoring at the State level is made up of three programs. These are the Toxic Substance Monitoring, State Mussel Watch and Bay Protection and Toxic Cleanup Programs.

San Mateo Creek steelhead trout

## *TOXIC SUBSTANCE MONITORING PROGRAM*

One method of monitoring for toxic substances (toxic elements and organic compounds) is to collect and analyze water samples. A major problem with this approach is that toxic discharges are likely to occur in an intermittent fashion and thus are likely to be missed with "*grab*" sampling of the water. Another limitation to analyzing water samples is that generally, harmful toxicants are present in low concentrations in the water. Toxicants are concentrated through the aquatic food chain through the process of bioaccumulation. Thus, in the Toxic Substances Monitoring Program, the flesh of fish and other aquatic organisms is analyzed for toxic metals and synthetic organic compounds.

Streams and lakes in the region are sampled according to their importance to the State in terms of water quality. Priority is given to waters where contaminants are suspected and/or to waters where no other source of water quality information is available. Routine chemical and biological water monitoring is performed by the DWR and/or USGS; and toxic substances monitoring of resident organisms is performed by the DFG.

The objectives of the Toxic Substance Monitoring program are:

- To develop statewide baseline data and to demonstrate trends in the occurrence of toxic elements and organic substances in the aquatic biota;
- To assess impacts of accumulated toxicant upon the usability of State waters by man;
- To assess impacts of accumulated toxicant upon the aquatic biota; and
- Where problem concentrations of toxicant are detected, to attempt to identify sources of toxicant and to relate concentrations found in the biota to concentrations found in the water.

The samples collected in the Toxic Substance Monitoring program are benthic invertebrates and fish. The flesh of bivalve mollusks or crayfish tailflesh and fish livers are analyzed for important metals, including arsenic, cadmium, chromium, copper, lead, nickel, silver, and zinc; fish flesh is analyzed for mercury. In addition, both invertebrate and fish flesh samples are analyzed for 55 synthetic organic compounds, most of which are pesticides. Toxic Substance Monitoring reports have been published annually since 1977.

## *STATE MUSSEL WATCH PROGRAM*

The State Mussel Watch (Mussel Watch) program provides documentation of the quality of coastal marine and estuarine waters. The Mussel Watch program fulfills the goal of providing the state with long-term trends in the quality of these waters. Mussels were chosen as the indicator organism for trace metals and synthetic organic compounds in the coastal and estuarine waters. Although the mussel populations of bays and estuaries are of a different species than those found in the open coast; their suitability as sentinels for monitoring the presence of toxic pollutants stems from several factors including: (1) their ubiquity along the California coast; (2) their ability to concentrate pollutants above ambient sea water levels and to provide a time-averaged sample; and (3) their non-motile nature which permits a localized measurement of water quality. The trace metals analyzed for in mussel tissues include aluminum, cadmium, chromium, copper, lead, manganese, mercury, nickel, silver, and zinc. Synthetic organic compounds analyzed for are summarized in Table 6-1.

**TABLE 6 - 1. SYNTHETIC ORGANIC COMPOUNDS ANALYZED IN THE STATE MUSSEL WATCH AND TOXIC SUBSTANCES MONITORING PROGRAMS**

| | | | |
|---|---|---|---|
| Aldrin | P, P'- DDE | Endosulfan [2] | Methyl Parathion |
| Chlorbenside | O, P'- DDE | Endosulfan Sulfate | Oxadiazon [2] |
| alpha Chlordane | P, P'- DDD | Total Endosulfan | PCB 1248 |
| gamma Chlordane | O, P'- DDD | Ethyl Parathion | PCB 1254 |
| cis Chlordane | P, P'- DDMS | Heptachlor | PCB 1260 |
| trans Chlordane | P, P'- DDMU | Heptachlor Epoxide | Total PCB |
| Oxychlordane | O, P'- DDT | Heptachlorobenzene | Pentachlorophenol [1] |
| Total Chlordane | P, P'- DDT | alpha Lindane | Phenol [1] |
| cis Nonachlor | Total DDT | beta Lindane | Ronnel [1] |
| trans Nonachlor | Diazinon | gamma Lindane | Tetrachlorphenol [1] |
| Chlorpyrifos | Dieldrin | delta Lindane | Tetradifon [1] |
| Dacthal | Endrin | Total Lindane [2] | Toxaphene |
| Dicofol [2] | Endosulfan [1] | Methoxychlor | Tributylin [1] |

[1] These constituents only sampled in the State Mussel Watch Program.
[2] These constituents only sampled in the Toxic Substances Monitoring Program.

When compared with alternative sampling designs such as seawater and sediment sampling, the Mussel Watch program is a more cost effective program. Mussel Watch reports have been published annually since 1978.

During the 1977 and 1978 sampling periods, the focus of the Mussel Watch program was, for the most part, on open coast monitoring of sites outside the vicinity of known pollutant sources. Monitoring of water quality in the State Board's designated Areas of Special Biological Significance (ASBS), to establish baseline conditions relating to the range of typical conditions in water, sediment and biota, was given prime importance in the early years of the program.

Based on the identification of "*hot spot*" areas during 1977 and 1978, intensive sampling of these areas was implemented in 1979. Such a sampling strategy was intended to confirm previous findings, establish the magnitude of the potential problem and identify pollutant sources. The program has since evolved to include transplanting *Mytilus californianus* mussels into select California bays and estuaries at selected sites to confirm potential toxic substance pollution (i.e., in the vicinity of dischargers).

San Diego Bay

## *BAY PROTECTION AND TOXIC CLEANUP PROGRAM*

California Water Code, Division 7, Chapter 5.6 established a comprehensive program within the State Board to protect the existing and future beneficial uses of California's bays and estuaries. The Bay Protection and Toxic Cleanup Program (BPTCP) provides focus on the State Board and regional boards efforts to control pollution of the State's bays and estuaries. The BPTCP also establishes a program to identify toxic hot spots and plan for their cleanup. Chapter 5.6, sections 13390 through 13396.5 were added to Division 7 of the California Water Code by SB 475 (Stats. 1989, Chapter 269), SB 1845 (Stats. 1990, Chapter 1294), and AB 41 (Stats. 1989, Chapter 1032). New legislation (SB 1084 Calderon; Stats. 1993, Chapter 1157) extends program funding through 1998. The BPTCP is a statewide program which is coordinated with the DFG and California Environmental Protection Agency's (Cal-EPA's) Office of Environmental Health Hazard Assessment. The program was established: (1) to provide protection for existing and future beneficial uses of bay and estuarine waters; (2) to provide a plan for remedial action at toxic hot spots; (3) to further compliance with federal law pertaining to the identification of waters where the protection and propagation of shellfish, fish, and wildlife are threatened by toxic pollutants and contribute to the development of effective strategies to control these pollutants; and (4) to allow these programs to be structured and maintained in a manner which allows the State and Regional Boards to make maximum use of any federal funds which may be available for the program. To attain the goals of the program, the State and Regional Boards are required to do the following:

- Develop and maintain a program to identify toxic hot spots, plan for their cleanup or mitigation, and amend water quality control plans and policies to abate toxic hot spots;
- Formulate and adopt a water quality control plan for enclosed bays and estuaries;
- Review and, if necessary, revise waste discharge requirements to conform to the plan;
- Develop a database of toxic hot spots;
- Develop an ongoing monitoring and surveillance program;
- Develop sediment quality objectives;
- Develop criteria for the assessment and priority ranking of toxic hot spots; and
- Fund the program through fees on point and nonpoint dischargers (Title 17 California Code of Regulations section 2236).

Program accomplishments include:

- Adoption of an approach for establishing sediment quality objectives;
- Installation of a computer system for a consolidated database of information being collected to identify toxic hot spots;

- Implementation of regional monitoring program;

- Development of draft site ranking criteria to be used for priority ranking of toxic hot spots; and

- Implementation of a fee system supporting the program.

The development of regional and statewide cleanup plans is ongoing. For the period July, 1992 through June, 1994 there are two main sediment sampling and analysis efforts for the BPTCP. The first includes toxicity screening where the primary goal is to determine bioassay protocols, establish reference sites and a consolidated database. The second is measurement of the bioeffects associated with toxicants. This includes a survey of sediment contamination and toxicity; two independent toxicity tests including ten-day solid phase amphipod survival, and pore-water test of sea urchin egg fertilization; chemical analyses of sediment samples including trace metals, pesticides, hydrocarbons, tributyltin, acid volatile sulfides and selected normalizers (such as grain size and total organics). Surveillance and monitoring sites in this region are located in the Pacific Ocean, Tijuana River, San Diego Bay, and Mission Bay.

In addition, the San Diego Region BPTCP includes an Underwater Hull Cleaning (UHC) study and a water circulation study for San Diego Bay. The components of the UHC study includes surveys, water sampling and recommendations. The results of the UHC study should assist the Regional Board to determine appropriate regulations for underwater hull cleaners.

# *REGIONAL SURVEILLANCE AND MONITORING PROGRAMS*

The Regional Board participates in the implementation of the following surveillance and monitoring programs:

- Compliance Inspections and Monitoring;
- Complaint Investigation;
- Intensive Surveys;
- Municipal Storm Water Monitoring;
- Water Quality Assessment Activities; and
- Quality Assurance and Quality Control.

## *COMPLIANCE INSPECTIONS AND MONITORING*

The Regional Board ensures compliance with the Water Quality Control Plan, NPDES permits and WDRs through implementation of a comprehensive self monitoring program and compliance inspection program.

### *COMPLIANCE MONITORING*

Compliance monitoring provides data which is used to determine compliance with discharge requirements and receiving water standards and to support enforcement actions. Data are collected from self monitoring reports generated by waste dischargers.

Self monitoring reports submitted to the Regional Board are reviewed, and if violations are noted, appropriate action is taken, ranging from administrative enforcement to judicial abatement depending on the circumstances. Self monitoring data have also been used to develop pollutant loadings and to indicate the general improvement noted in the receiving water.

Self monitoring report requirements are dependent on the type and quantity of effluent discharged. For example, the City of San Diego, Water Utilities Department, conducts an Ocean Monitoring Program as part of the environmental monitoring requirements for the Point Loma Sewage Outfall. The program includes chemical and biological testing of ocean waters, sediments, fish, and benthic infauna. Most of the monitoring stations are in close vicinity to the Point Loma Sewage Outfall; however, stations range geographically from the shoreline to six miles offshore and from La Jolla to the Mexican border.

### *COMPLIANCE INSPECTIONS*

Regional Board staff periodically conducts inspections of all dischargers regulated under an NPDES permit or waste discharge requirements. Treatment, storage, and discharge facilities are inspected to determine compliance with the permit. Compliance inspection reports are written

based on staff inspections of a particular site and include observations made by staff and/or results of analyses performed on samples collected by staff. During the inspections facts and information are gathered to assess the degree of compliance with the following NPDES permit or WDR provisions:

- Effluent and receiving water limitations;
- Self-monitoring reports;
- Record keeping and reporting;
- Compliance time schedules, if applicable;
- Best management plans, if applicable; and
- Other conditions, provisions and prohibitions.

During some inspections, samples are collected to further determine compliance. Inspections can be either announced or unannounced. Announced inspections facilitate direct communication with the discharger to review procedures and operations. Unannounced inspections have the advantage that staff can witness normal day-to-day operations without giving the discharger the opportunity to prepare for the visit. Upon discovery of a noncompliance the procedures discussed in the enforcement section of Chapter 4 are followed to gain correction.

## *COMPLAINT INVESTIGATIONS*

This task involves investigation of complaints of citizens and public or governmental agencies on the discharge of pollutants or creation of nuisance conditions. It is a Regional Board responsibility to prepare reports or letters and follow-up actions to document observed conditions and to institute appropriate corrective actions. In instances where the Regional Board cannot respond to a complaint because of resource limitations, the Regional Board notifies other agencies if it falls within their jurisdiction.

The Regional Board strives to ensure that responses to complaints involving threats to water quality be made in an expedient manner, as resources allow. For the purpose of this policy, response includes the following three components: (1) Thorough documentation of complaints; (2) Appropriate follow-up including site inspections, referral to, or notification of, other regulatory agencies, corrective actions, enforcement actions, etc.; and (3) Notification to complainant, as appropriate, of findings and subsequent actions.

### *DEFINITION OF ACTIVITIES*

Complaint activities include all activities necessary to respond to a complaint or incident including the following: (1) Receiving and documenting complaints/incidents (e.g., spills); (2) Any follow-up activities to gather additional information (e.g., research, telephone contacts, coordination with other agencies, etc.); (3) Preparation for any field inspections necessary to investigate a complaint/incident; (4) Field inspections, including travel; (5) Sampling of spill and/or receiving waters for documentation, if appropriate; and (6) Documenting findings and responding to complainant.

### *NOTIFICATION TO OTHER AGENCIES*

The Regional Board notifies other responsible regulatory agencies (e.g., Public Health, DHS, DFG, Department of Food and Agriculture, Integrated Solid Waste Management Board) of the content of a complaint if it falls within said agency's jurisdiction.

Except for a discharge in compliance with waste discharge requirements, any person who causes or permits any reportable quantity of hazardous substance or sewage to be discharged in or on any waters of the State, or discharged or deposited where it is or probably will be discharged in or on any waters of the State, shall, as soon as possible, notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan. The person shall also immediately notify the State Board or appropriate Regional Board of the discharge (Water Code section 13271).

Similarly, any person who discharges any oil or petroleum product under the above-stated conditions shall, as soon as possible, notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State oil spill contingency plan. Immediate notification of an appropriate agency of the federal government, or of the appropriate Regional Board (in accordance with the reporting requirements set under Water Code section 13267 or 13383) shall satisfy the oil spill notification requirements of this paragraph (Water Code section 13272).

### *REPORTABLE QUANTITIES OF HAZARDOUS WASTE AND SEWAGE DISCHARGES*

Water Code section 13271 requires that the State Board and the DHS adopt regulations establishing reportable quantities for substances listed as hazardous wastes or hazardous materials pursuant to section 25140 of the Health and Safety Code. Reportable quantities are those which should be reported because they may pose a risk to public health or the environment if discharged to ground or surface water.

Similarly, the State Board was required to adopt regulations establishing reportable quantities for sewage. These regulations for sewage and hazardous materials discharge do not supercede waste discharge requirements or water quality objectives.

The State Board adopted regulations for reportable quantities are included in subchapter 9.2 of the California Code of Regulations.

### *INSPECTION IN RESPONSE TO COMPLAINTS*

The Regional or State Board may inspect the facilities of any discharger at any time pursuant to Water Code, section 13267. Such inspections should normally be conducted with consent of the occupant and/or owner of the facilities. If an inspection request is refused by any occupant of the premises, an effort to gain access should be made with the owner of the premises. The Clean Water Act and California Water Code provide that a credentialed inspector must be allowed entry to the facilities subject to regulation under these laws. Regional Board staff do not inspect sites which pose a threat to their health or safety. For sites which could involve toxic and hazardous materials field work, a Health Evaluation Plan (HEP) is completed.

If all attempts to obtain consent fail, the inspection may be made pursuant to a warrant in accordance with the procedure set forth in Title 13, section 13267(c). In all cases where an inspection warrant is required, staff of the State Board's Office of Chief Counsel is consulted relative to procedures.

An inspection is permitted without consent and without a warrant when there is an emergency which affects the public health or safety. Advice from the State Board's Office of Chief Counsel is sought before making such an inspection.

When an inspection is done in response to a complaint, and the inspector may be entering an *"unknown"* situation, every safety precaution is taken. Again, in no instance does staff make an inspection of a site which may pose a threat to their health and safety. Thorough notes and documentation are made during the inspection, including photographs, if appropriate. After an inspection is completed, an inspection report is prepared describing what was found.

### *FINDINGS OF NONCOMPLIANCE*

If during the course of a complaint investigation, a noncompliance is discovered, procedures as outlined in the enforcement section of Chapter 4 (Implementation chapter) are followed.

## *INTENSIVE SURVEYS*

Intensive monitoring surveys provide detailed water quality data to locate and evaluate violations of receiving water standards, to develop waste load allocations and to assess the water quality condition.

They usually involve localized, intermittent sampling at a higher than normal frequency. Intensive surveys should be repeated at appropriate intervals depending on the parameters involved, the variability of conditions, and changes in hydrologic or effluent regimes.

## *MUNICIPAL STORM WATER MONITORING*

The storm water permitting program has been established to protect water quality of the water bodies which receive storm water runoff. (For a complete description of this program, refer to Chapter 4, Implementation chapter). Sampling of storm water runoff has indicated that storm water discharges contain significant amounts of pollutants. Therefore, the Region's municipal storm water permits requires the permittee to develop comprehensive management and monitoring programs. Because each permit generally covers a large number of water bodies, the required monitoring program is in two phases.

Phase I requires the discharger to sample storm water discharges and to sample those receiving waters where the beneficial uses are threatened or impaired due to runoff of storm water and urban nuisance water. Phase I requires both a dry and wet weather monitoring program. San Diego copermittees are required to sample two major types of runoff stations: (1) mass loading; and (2) land use stations. The dry weather monitoring program requires periodic colorimetric field tests and visual inspections of the storm water conveyance system to detect non-storm water flows. Under Phase II the dischargers will be required to develop storm water management and monitoring programs for the remaining water bodies included under the permit.

Storm water discharges from urbanized areas consist mainly of surface runoff emanating from residential, commercial, and industrial areas. In addition, there are storm water discharges from agricultural and other land uses. The constituents of concern in these discharges include: total and fecal coliform, *enterococcus*, total suspended solids, biochemical oxygen demand, chemical oxygen demand, total organic carbon, oil and grease, heavy metals, nutrients, base/neutral and acid extractables, pesticides, herbicides, petroleum hydrocarbon products, and/or those causing extremely high or low pH.

The objectives of the storm water monitoring program are to: (1) define the type, magnitude, and sources of pollutants in the storm water discharges within the permittee's jurisdiction so that appropriate pollution prevention and correction measures can be identified; (2) evaluate the effectiveness of pollution prevention and correction measures; and (3) evaluate compliance with water quality objectives established for the storm water system or its components.


Sampling biota

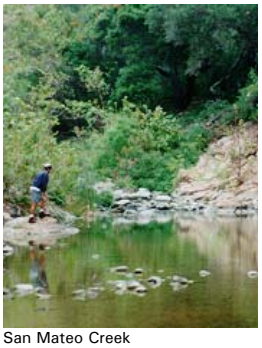
## *BIENNIAL CLEAN WATER ACT SECTIONS 303(D), 305(B), AND 314 INTEGRATED REPORT*

Every two years states are required to provide an assessment of the quality of all their waters and a list of those waters that are impaired or threatened, in accordance with the following sections of the Clean Water Act:

Section 303(d): Requires states to identify waters for which technology based effluent limitation are not stringent enough to meet applicable water quality standards. States must establish a priority ranking for such waters and must establish TMDLs for all such waters in accordance with the priority ranking. Waters identified and prioritized for TMDL development under section 303(d) (a.k.a. the 303(d) List) are designated as Water Quality Limited Segments (WQLSs).

Section 305(b): Requires states to prepare a description of the water quality of all navigable waters of the state; an analysis of the extent to which navigable waters provide protection and propagation of a balanced population of shellfish, fish, and wildlife and allow recreational activities in and on the water; an analysis of the extent to which elimination of the discharge of pollutants has been achieved; an estimate of the environmental impact, the economic, and social costs necessary to achieve the objective of the Clean Water Act, the economic and social benefits of the achievement, and the date of such achievement; and, a description of the nature and the extent of nonpoint sources of pollutants and recommendations as to the programs which must be taken to control them, with estimates of cost.

Section 314: Requires states to identify and classify all publicly owned lakes in the state according to eutrophic condition. States must list and describe those publicly owned lakes known to be impaired and assess the status and trends of water quality. This information is required to be submitted as part of the section 305(b) report.


San Mateo Creek

The USEPA strongly encourages states to submit a single Integrated Report that satisfies the reporting requirements for each of these sections. Each Regional Board prepares an Integrated Report for its Region, using data collected by regional planning, permitting, surveillance, and enforcement programs. The regional Integrated Reports contain inventories of the major water bodies in the region, including

rivers and streams, lakes and reservoirs, bays and harbors, estuaries, coastal waters, wetlands, and ground water.

The regional Integrated Report presents the results of the assessment of the waterbodies in the Region, and the waters are categorized as one or more of the following:

Category 1: All designated uses are supported, no use is threatened.

Category 2: Available data and/or information indicate that some, but not all of the designated uses are supported.

Category 3: There are insufficient available data and/or information to make a use support determination.

Category 4: Available data and/or information indicate that at least one designated use is not being supported or is threatened, but a TMDL is not needed.

Category 5: Available data and/or information indicate that at least one designated use is not being supported or is threatened and a TMDL is needed.

Upon adoption of the regional Integrated Reports by respective Regional Boards, the reports are compiled into a statewide report. Upon adoption of this statewide report by the State Board, the report is submitted to the USEPA to satisfy the reporting requirements of Clean Water Act sections 303(d), 305(b) and 314. Subsequently, the USEPA submits the Integrated Reports from the states to the United States Congress, which serves as the primary vehicle for informing Congress and the public about general water quality conditions in the United States.

## *CLEAN WATER STRATEGY*

The Clean Water Strategy (CWS) is a process that the State Board implemented to assure that staff and fiscal resources are directed at the highest priority water quality issues throughout California. The primary objective of the CWS is to more effectively define and respond to priorities as revealed by the best available water quality information.

The CWS relies on the Water Quality Assessment condition ratings to provide the technical information necessary to identify water bodies needing protection or prevention actions, additional assessment, or cleanup activities. In addition to the Water Quality Assessment, the regions determined the relative resource value of their water bodies to recognize the relative importance of individual waters when compared to each other. The regions developed priority water body lists which are based upon the severity of their water quality problems or needs and relative resource values, from which the State Board assembled a statewide priority list based upon the same criteria.

There are six phases involved in implementing the Clean Water Strategy. As of this date, phase 1 and 2 have been completed. The State Board has begun a pilot study to determine the feasibility of phases 3 through 6.

***Phase 1:*** Obtain the best information;

***Phase 2:*** Compare and prioritize water body concerns;

***Phase 3:*** Prioritize actions to address concerns;

***Phase 4:*** Allocate new resources;

***Phase 5:*** Implement strategy goals; and

***Phase 6:*** Review results.

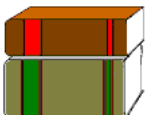
## *QUALITY ASSURANCE AND QUALITY CONTROL*

The statewide Quality Assurance (QA) program was developed to ensure that data generated from environmental studies are technically sound, scientifically valid, and legally defensible. A federal regulation (USEPA Order 5360.1) requiring the State to develop and implement a Quality Assurance Program Plan (QAPP) was adopted in April 1993. The program mandate is identified in 40 CFR 30.503 (July 1, 1987).

The State Board has appointed a QA Program manager to direct, coordinate, and administer the State QAPP. Independently, each Regional Board has appointed a QA officer to administer its Regional responsibilities. The State and Regional Boards jointly administer the program, however the State Board has lead responsibility for managing the overall program and reporting to the USEPA. The duties of the Regional Board QA officer include overseeing and implementing QA procedures conducted in the Regional Board laboratory, interacting with project managers on the required preparation of QA Project Plans, and evaluating compliance inspection data on all major dischargers.

# *OTHER MONITORING PROGRAMS*

In addition to the State's surveillance and monitoring program, several other agencies monitor water quality, complementing the State's efforts. These agencies are usually local health departments or water supply agencies.



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California Water Resources Control Board. 1992. Water Quality Assessment. State Board Resolution No. 92-4, State Water Resources Control Board, Sacramento.

California Water Resources Control Board, Division of Water Quality. 1988. California State Mussel Watch: Ten Year Data Summary (1977-1987). State Water Resources Control Board, Sacramento. Water Quality Monitoring Report No. 87-3. 313 pp + appendices.

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# *INDEX – CHAPTER 6*

# CHAPTER 7
# TOTAL MAXIMUM DAILY LOADS

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# 7. TOTAL MAXIMUM DAILY LOADS

## *INTRODUCTION*

This chapter contains the Total Maximum Daily Loads (TMDLs) that have been adopted by the Regional Water Quality Control Board, San Diego Region (RWQCB), approved by the State Water Resources Control Board (SWRCB) and Office of Administrative Law (OAL), and/or adopted/approved by the United State Environmental Protection Agency (USEPA). Table 7-1 lists the adopted and approved TMDLs that have been incorporated into the Basin Plan.

**Table 7-1. Adopted and Approved Total Maximum Daily Loads in the San Diego Region**

| | | | | |
|---|---|---|---|---|
| Total Maximum Daily Load for Diazinon, Chollas Creek Watershed, San Diego County | 8/14/02 | 7/16/03 | 9/11/03 | 11/3/03 |
| Total Maximum Daily Load for Dissolved Copper, Shelter Island Yacht Basin, San Diego Bay | 2/9/05 | 9/22/05 | 12/2/05 | 2/8/06 |
| Total Maximum Daily Loads for Total Nitrogen and Total Phosphorus in the Rainbow Creek Watershed | 2/9/05 | 11/16/05 | 2/1/06 | 3/22/06 |
| Total Maximum Daily Loads for Copper, Lead, and Zinc in Chollas Creek | 6/13/07 | 7/15/08 | 10/22/08 | 12/18/08 |
| Total Maximum Daily Loads for Indicator Bacteria, Project I – Beaches and Creeks in the San Diego Region | 12/17/07 | --[a] | -- | -- |
| Total Maximum Daily Loads for Indicator Bacteria, Baby Beach and Shelter Island Shoreline Park Shorelines | 6/11/08 | 6/16/09 | 9/15/09 | 10/26/09 |
| Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek) | 2/10/10 | 12/14/10 | 4/4/11 | 6/22/11 |
| Total Maximum Daily Loads for Sediment in Los Peñasquitos Lagoon | 6/13/12 | 1/21/14 | 7/14/14 | 10/30/14 |

[a] Withdrawn by the RWQCB on December 18, 2008 from SWRCB consideration for revision. See Revised Total Maximum Daily Loads for Indicator Bacteria Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek).

# *TOTAL MAXIMUM DAILY LOAD FOR DIAZINON, CHOLLAS CREEK WATERSHED, SAN DIEGO COUNTY*

On August 14, 2002 the Regional Board adopted Resolution No. R9-2002–0123, Total Maximum Daily Load (TMDL) For Diazinon In Chollas Creek Watershed, San Diego County. The terms and conditions of Resolution No. R9-2002–0123 are incorporated into the Basin Plan. This amendment establishes the TMDL of diazinon which Chollas Creek can receive and still attain applicable water quality objectives and support beneficial uses. This TMDL is allocated to all contributing sources of diazinon in the watershed by establishing Waste Load Allocations for all point sources and Load Allocations for all nonpoint sources in the watershed. This TMDL includes a margin of safety. The TMDL Implementation Plan and Monitoring Plan are presented below.

## *NECESSITY STANDARD [GOVERNMENT CODE SECTION 11353(B)]*

Amendment of the Basin Plan to establish and implement a Total Maximum Daily Load for Chollas Creek is necessary because water quality in Chollas Creek cannot satisfy applicable water quality objectives for **"**Toxicity**"** and **"**Pesticides**"** even with implementation of waste discharge requirements containing technology-based effluent limits or water quality-based effluent limits for discharges of pollutants to Chollas Creek and its tributaries. Clean Water Act section 303(d) requires the Regional Board to develop an implement a TMDL under the conditions that exist in Chollas Creek. This TMDL for diazinon is necessary to ensure attainment of applicable water quality objectives and restoration of beneficial uses designated for Chollas Creek.

## *CLEAN WATER ACT SECTION 303(D)*

Chollas Creek is currently identified on the Clean Water Act section 303(d) list of impaired waters due to toxicity during storm events. Results from toxicity identification evaluations (TIEs) indicate that the insecticide diazinon in Chollas Creek has in part caused the toxicity during storm events.

## *BENEFICIAL USE IMPAIRMENTS*

Chollas Creek supports several beneficial uses. The most sensitive beneficial uses are those designated for protection of aquatic life and aquatic dependent wildlife as described in the Basin Plan definition of the warm freshwater habitat (WARM) and wildlife habitat (WILD) beneficial uses. The WARM and WILD beneficial uses of Chollas Creek are adversely affected by toxicity due to diazinon.

## *WATER QUALITY OBJECTIVES*

Diazinon levels in Chollas Creek cause toxicity during storm events. The Basin Plan does not contain a specific water quality objective for diazinon. The Basin Plan establishes narrative water quality objectives for "Toxicity" and "Pesticides" to ensure the protection of the WARM and WILD beneficial uses.

## *WATER QUALITY OBJECTIVE VIOLATIONS*

Toxicity tests using the water flea *Ceriodaphnia dubia* indicate that Chollas Creek storm water flows are toxic. Toxicity Identification Evaluations (TIEs) show that diazinon is responsible for the toxicity to the water flea. Accordingly diazinon concentrations in Chollas Creek cause violations of the "Toxicity" and "Pesticide" water quality objectives during storm events. The average concentration of diazinon in Chollas Creek during storm events is 0.46 micrograms per liter (µg/L). Chollas Creek waters also contain metals that are responsible for toxicity to a marine invertebrate. A separate TMDL is under development to address metals in Chollas Creek.

## *SOURCES OF DIAZINON*

Urban storm water flows represent the most significant source of diazinon to the Chollas Creek watershed.

## *CONCENTRATION-BASED TMDL*

Because aquatic toxicity is the most significant adverse effect of diazinon and because aquatic toxicity is a function of water column concentrations, this TMDL is a concentration-based, rather than mass emission-based TMDL. The Numeric Targets, TMDL (Loading Capacity), and Waste Load and Load Allocations are all defined in terms of concentrations.

## *NUMERIC TARGETS*

The TMDL Numeric Targets, which are derived from the water quality objectives, identify the specific water column, sediment, or tissue concentrations (or other endpoints) which equate to attainment of the Basin Plan water quality objectives and the protection of designated beneficial uses. Therefore, if the Numeric Targets are appropriately selected (for all causative pollutants), attainment of the Numeric Targets will result in attainment of the underlying water quality objectives and beneficial use protection.

The Numeric Targets for diazinon in Chollas Creek are set equal to the California Department of Fish and Game freshwater Water Quality Criteria for diazinon. The acute Water Quality Criterion of 0.08 µg/L diazinon protects aquatic life from short-term exposure to diazinon, while the chronic criterion of 0.05 µg/L diazinon protects aquatic life from long-term diazinon exposure.

**Table 7-2. Numeric Targets for Diazinon in Chollas Creek [1]**

| Exposure Duration | Numeric Target | Averaging Period | Frequency of Allowed Exceedance |
|---|---|---|---|
| **Acute** | 0.08 µg/L | One-hour average | Once every three years on the average |
| **Chronic** | 0.05 µg/L | Four-day average | Once every three years on the average |

[1] For the purpose of evaluating if the Numeric Targets have been attained, sample results shall be used as follows:
1. If only one sample is collected during the time period associated with the numeric target (e.g., one-hour average or four-day average), the single measurement shall be used to determine attainment of the numeric target for the entire time period.
2. The one-hour average shall be the moving arithmetic mean of grab samples over the specified one-hour period.
3. The four-day average shall apply to flow-weighted composite samples for the duration of the storm, or shall be the moving arithmetic mean of flow weighted 24-hour composite samples or grab samples.

## *TOTAL MAXIMUM DAILY LOAD*

The term TMDL, or Loading Capacity, is defined as the maximum amount of a pollutant that a waterbody can receive and still attain water quality objectives and protection of designated beneficial uses. The concentration-based Loading Capacity for diazinon in Chollas Creek is set at exactly the same concentrations as the Numeric Targets.

**Table 7.3. TMDL (Loading Capacity) for Diazinon in Chollas Creek**

| Exposure Duration | TMDL | Averaging Period |
|---|---|---|
| **Acute** | 0.08 µg/L | One-hour average |
| **Chronic** | 0.05 µg/L | Four-day average |

## *LINKAGE ANALYSIS*

The purpose of the linkage analysis is to confirm that the TMDL will result in the attainment of applicable water quality objectives and beneficial use protection. With respect to diazinon, this TMDL will result in the attainment of the "Toxicity" and "Pesticide" water quality objectives and the restoration of the WARM and WILD beneficial uses in the Chollas Creek watershed.[1] This is because the Numeric Targets are set equal to the diazinon Water Quality Criteria which are based on toxicity testing and are specifically established at levels to ensure the protection of aquatic life from acute and chronic exposure to diazinon. The Water Quality Criteria protect all aquatic life stages including the most sensitive stages.

## *WASTE LOAD AND LOAD ALLOCATIONS*

The concentration-based Waste Load and Load allocations of this TMDL are applied equally to all diazinon discharge sources in the Chollas Creek watershed. All allocations are set at 90% of the Numeric Targets resulting in a diazinon allocation equal to 0.072 µg/L under acute exposure conditions and a diazinon allocation of 0.045 µg/L under chronic exposure conditions. These allocations include an explicit 10% margin of safety to account for uncertainties in the TMDL analysis. This concentration-based TMDL and its allocations apply year-round and will be protective during all flow conditions and seasons.

**Table 7.4. Waste Load and Load Allocations for Diazinon in Chollas Creek**

| Exposure Duration | Numeric Targets | Margin of Safety | Waste Load and Load Allocations |
|---|---|---|---|
| **Acute** | 0.08 µg/L | 0.008 µg/L | 0.072 µg/L |
| **Chronic** | 0.05 µg/L | 0.005 µg/L | 0.045 µg/L |

[1] MULTIPLE POLLUTANTS: The attainment of water quality standards is qualified with the words "with respect to diazinon" because there are multiple pollutants causing toxicity. Toxicity conditions in Chollas Creek are caused by metals and diazinon. Successful implementation of both the Chollas Creek diazinon TMDL and the Chollas Creek metals TMDL is expected to result in full attainment of the "Toxicity" water quality objectives, and of the WARM and WILD beneficial uses

## *DIAZINON LOAD REDUCTIONS NEEDED*

The current average concentration of diazinon in Chollas Creek measured during storm events was 0.46 µg/L during the monitoring period 1998 through 2001. An 84% reduction of current diazinon concentration–based loads is needed to attain the acute diazinon allocations set forth in this TMDL. A 90% reduction of current diazinon concentration–based loads is needed to attain the chronic diazinon allocations set forth in this TMDL.

**Table 7.5 Needed Load Reductions in Chollas Creek**

| Average Diazinon Concentration | Allocation | | Reduction Needed | |
|---|---|---|---|---|
| | Chronic | Acute | Chronic | Acute |
| 0.46 µg/L | 0.045 µg/L | 0.072 µg/L | 90% | 84% |

**Chollas Creek at Federal Boulevard crossing.**

**Chollas Creek streamside**

## *SEASONAL VARIATIONS AND CRITICAL CONDITIONS*

This concentration–based diazinon TMDL and allocations apply year round and will be protective during all flow conditions and seasons.

## *RESPONSIBLE PARTIES*

As dischargers of diazinon in urban storm water flows to Chollas Creek, the City of San Diego, City of Lemon Grove, City of La Mesa, San Diego Unified Port District, County of San Diego, and the California Department of Transportation (Caltrans) are responsible for implementation of this TMDL. These entities are regulated as municipal Copermittees under the San Diego MS4 Permit or the statewide Caltrans MS4 Permit.

# *TMDL IMPLEMENTATION PLAN*

The three most important mechanisms to implement the diazinon waste load reductions required by this TMDL are (1) USEPA's ongoing diazinon phase-out and elimination program; (2) modification of the San Diego Municipal Storm Water Permit (MS4 Permit)[1] as needed for consistency with this TMDL; and (3) activities by the municipal Copermittees in the Chollas Creek watershed to reduce diazinon discharges pursuant to the MS4 Permit and Water Code section 13267.

**(1) USEPA's Diazinon Phase-Out and Elimination Program**

The single most important action to implement this TMDL is USEPA's national ongoing Diazinon Phase-Out and Elimination Program. In January 2001, USEPA reached an agreement with registrants (manufacturers) of diazinon to phase-out most uses (USEPA 2002). Under the agreement, all indoor uses will be terminated, and all outdoor non-agricultural uses will be phased-out over the next few years.

Specifically, the terms of the agreement implement the following phase out schedules:

- For the indoor household use, the registration will be canceled on March 2001, and all retail sales will stop by December 2002.

- For all lawn, garden and turf uses, manufacturing stops in June 2003; all sales and distribution to retailers ends in August 2003. Further, the manufacturers will implement a product recovery program in 2004 to complete the phase-out of the product.

- Additionally, as part of the phase-out, for all lawn, garden, and turf uses, the agreement ratchets down the manufacturing amounts. Specifically, for 2002, there will be a 25 percent decrease in production; and for 2003, there will be a 50 percent decrease in production.

- Also, the agreement begins the process to cancel around 20 different uses on food crops.

In summary, the phase-out is designed to reduce diazinon use and sales, availability, and to increase its proper disposal. As a result of the phase-out, USEPA expects, on a national basis, that these actions will end over 90% of current diazinon uses. In the Chollas Creek watershed, since agricultural use is negligible, the phase-out should reduce current source loadings of diazinon, and the resulting aquatic toxicity, to negligible levels over time. For these reasons, the diazinon phase-out is by far the single most significant mechanism by which this TMDL will be implemented. The remaining TMDL implementation actions described below are designed to reduce the discharge of diazinon to the Chollas Creek watershed due to interim (during the phase-out) and residual (post phase-out) diazinon sales, use, and disposal. It should be noted that actions taken by the municipalities and other stakeholders to reduce diazinon discharges to the Chollas Creek watershed will likely be effective in reducing the discharges of alternative pesticides in the long-term as well.

**(2) Modification of Existing Waste Discharge Requirements / NPDES Permits**

The Regional Board's San Diego Municipal Storm Water Permit, also known as the San Diego MS4 Permit (Regional Board Order No. 2001-01 NPDES No. CAS0108758) is the primary broad-based NPDES permit which directly regulates most pollutant discharges, including diazinon, in the Chollas Creek watershed. Federal regulations require that NPDES permits contain effluent limitations that are consistent with Waste Load Allocations developed under a TMDL [40 CFR 122.44 (d)(vii)(B)]. The Regional Board will revise existing waste discharge requirements / NPDES permits to incorporate effluent limitations in conformance with the Waste Load Allocations for diazinon as specified above. Modifications to the MS4 Permit can occur when the permit is reopened or during scheduled permit reissuance.

[1] Regional Board Order No. 2001-01 NPDES No. CAS0108758, Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego, and the San Diego Unified Port District.

Compliance with numeric limitations for diazinon will be required in accordance with a phased schedule of compliance. The compliance schedule will be jointly developed by the Regional Board and the Chollas Creek stakeholders and will be finalized no later than one year following adoption of this TMDL by the Regional Board. The phased compliance schedule will apply only to attainment of numeric limitations for diazinon. All other requirements of this TMDL will be immediately effective upon incorporation into applicable NPDES permits.

**(3) Activities By Municipal Copermittees Pursuant to MS4 Permit and CWC Section 13267**

Pursuant to the MS4 Permit and under the authority of Water Code section 13267, the Regional Board will direct the municipal Copermittees in the Chollas Creek watershed to do the following:

a. **Legal Authority:** Enforce existing local ordinances, or adopt new legal authority, as needed to ensure Copermittee compliance with the Waste Load Allocations specified in this TMDL;

b. **Diazinon Toxicity Control Plan:** Develop and implement a "Diazinon Toxicity Control Plan" to promote Copermittee compliance with the Waste Load Allocations specified in this TMDL. The Plan should consist of pollution prevention and source control BMPs designed to reduce the discharge of diazinon to Chollas Creek.

c. **Diazinon Public Outreach / Education Program:** Develop and implement a focused Public Outreach / Education program designed to reduce the discharge of diazinon to the Chollas Creek watershed. By reducing the discharge of diazinon, the Program will promote Copermittee compliance with the Waste Load Allocations specified in this TMDL. The Program should contain the components described in the Regional Board Technical Report, Total Maximum Daily Load for Diazinon in Chollas Creek Watershed San Diego County, dated August 14, 2002, or equivalent components. The diazinon public outreach / education program may be incorporated into the Diazinon Toxicity Control Plan.

**(4) Compliance with MS4 Permit**

The municipal Copermittees in the Chollas Creek watershed shall implement the requirements of the MS4 Permit.

**(5) Compliance with Existing Waste Discharge Prohibitions**

Prohibitions against discharges of waste that cause pollution or nuisance, described in the Basin Plan, including discharges of diazinon that cause or contribute to violation of water quality objectives are applicable to the urban land users and land owners in the Chollas Creek watershed. Dischargers of diazinon in the watershed shall also comply with all other applicable waste discharge prohibitions contained in the Basin Plan.

**(6) Enforcement Authority of Regional Board**

The Regional Board will use its enforcement authority as necessary to ensure compliance with applicable waste discharge requirements and Basin Plan waste discharge prohibitions.

**(7) Modification of Other Existing Waste Discharge Requirements**

The State Board has issued three additional NPDES storm water permits that regulate the discharge of pollutants including diazinon in the Chollas Creek watershed. These permits are the statewide Caltrans Municipal Storm Water Permit (State Board Order No. 99-06-DWQ NPDES No. CAS 000003), the statewide General Industrial Storm Water Permit (State Board Order No. 97-03-DWQ NPDES No. CAS 000001), and the statewide General Construction Storm Water Permit (State Board Order No. 99-08-DWQ NPDES No. CAS 000002) which directly regulate discharges from Caltrans owned and operated facilities, and from industrial and construction sites respectively, located within the Chollas Creek watershed. Discharges from industrial and construction sites in the Chollas Creek watershed are also indirectly regulated under the MS4 Permit which holds each municipal Copermittee ultimately responsible for all discharges from industrial and construction sites within its jurisdiction. The Regional Board will request the State Board to amend each of these three statewide permits as needed for consistency with this TMDL. Modifications to waste discharge requirements can occur when permits are reopened or reissued.

In addition to the broad-based regulation of discharges under the MS4 Permit, the discharge of pollutants, including diazinon, from utility companies and utility vaults is directly regulated under the State Board's General Permit for Utility Vaults (State Board Order No. 2001-11-DWQ NPDES No. CAG 990002). The Regional Board will request the State Board to also revise the General Permit for Utility Vaults as needed for consistency with this TMDL.

**(8) Adoption of New Waste Discharge Requirements / NPDES Permits**

The Regional Board may adopt new waste discharge requirements / NPDES permits for any significant source(s) of diazinon identified by the municipal Copermittees or the Regional Board.

**(9) Additional Investigations and Reports Pursuant to CWC Section 13225**

The Regional Board may use its authority under Water Code section 13225 to request the municipalities in the Chollas Creek watershed to conduct additional investigations which are beyond the purview of the MS4 permit and to report on the findings of such investigations. Any such investigations will address diazinon-related issues in the Chollas Creek watershed for the ultimate purpose of reducing diazinon discharges to the watershed.

**(10)Monitoring Plan**

Pursuant to the MS4 permit and under the authority of Water Code section 13267, the Regional Board will direct the municipal Copermittees in the Chollas Creek watershed to develop and implement a Monitoring Plan. The Plan shall be designed to assess the effectiveness of this TMDL, its implementation measures, and progress towards the attainment of applicable water quality standards in the Chollas Creek watershed. The Plan should contain the components described in the Regional Board Technical Report, Total Maximum Daily Load for Diazinon in Chollas Creek Watershed San Diego County, dated August 14, 2002, or equivalent components.

**(11)Schedule of Implementation**

As described in Provision 2 above, Modification of Existing Waste Discharge Requirements/ NPDES Permits, compliance with numeric limitations for diazinon will be required in accordance with a phased schedule of compliance. All other requirements of this TMDL will be immediately effective upon incorporation into applicable NPDES permits as described below

.

**Table 7.6. Schedule of Implementation**

| Schedule of Implementation | | | |
|---|---|---|---|
| **Action** | **Description** | **Responsible Parties** | **Due Date** |
| USEPA cancels registration for indoor household uses of diazinon | | USEPA | March 31, 2001 |
| IPM Workshop(s) | Conduct first workshop | Chollas Creek watershed municipal copermitees | Within 1 year after USEPA approves TMDL and annually thereafter |
| Monitoring Plan | Initiate Monitoring Plan | Chollas Creek watershed municipal copermitees | 30-days after USEPA approves TMDL |
| Diazinon Toxicity Control Plan (DTCP) | Initiate DTCP | Chollas Creek watershed municipal copermittees | 30-days after USEPA approves TMDL |
| Retail sales of diazinon (indoor uses) end | | USEPA | December 31, 2002 |
| Manufacturing of diazinon for all lawn, garden and turf uses end | | USEPA | June 31, 2003 |
| Sales and distribution to retailers ends | | USEPA | August 31, 2003 |
| Phase out and eliminate diazinon usage and sales in the Chollas Creek watershed. Ensure proper disposal. | | USEPA | 2003 for non-agriculture uses |
| Modify MS4 permit for consistency with TMDL | | Regional Board | No later than 2006 |
| Implement legal authority to reduce diazinon discharges in the Chollas Creek watershed. | | Chollas Creek watershed municipal copermittees | 6 months after USEPA approves TMDL |
| Compliance with MS4 permit | | Chollas Creek watershed municipal copermittees | Ongoing |
| Compliance with existing Waste Discharge prohibitions | | Diazinon dischargers | Ongoing |
| Enforcement authority of Regional Board | | Regional Board | Ongoing |
| Modification of other existing Waste Discharge Requirements | | Regional and State Board | No later than next reissuance |
| Adoption of new WDRs / NPDES permits | For significant diazinon sources only. | Regional Board | As needed |
| Additional investigations and reports pursuant to CWC section 13225 | | Diazinon dischargers | As needed |
| Submit Annual Reports | Effectiveness reports and monitoring reports | Chollas Creek watershed municipal copermittees | January 31 of each year. |

# *TOTAL MAXIMUM DAILY LOAD FOR DISSOLVED COPPER, SHELTER ISLAND YACHT BASIN, SAN DIEGO BAY*

**Shelter Island Yacht Basin, San Diego Bay**

On February 9, 2005, the Regional Board adopted Resolution No. R9-2005-0019, *A Resolution Adopting an Amendment to the Water Quality Control Plan for the San Diego Region to Incorporate a Total Maximum Daily Load for Dissolved Copper in the Shelter Island Yacht Basin, San Diego Bay*. The TMDL Basin Plan Amendment was subsequently approved by the State Water Resources Control Board on September 22, 2005, the Office of Administrative Law on December 2, 2005, and the United States Environmental Protection Agency on February 8, 2006. The TMDL is described in the *Total Maximum Daily Load for Dissolved Copper in Shelter Island Yacht Basin, San Diego Bay*, Technical Report dated February 9, 2006.

## *PROBLEM STATEMENT*

Dissolved copper levels in Shelter Island Yacht Basin (SIYB) waters violate water quality objectives for copper, toxicity, and pesticides. Dissolved copper concentrations in SIYB threaten and impair the designated beneficial uses of marine habitat (MAR), and wildlife habitat (WILD).

## *NUMERIC TARGET*

The TMDL Numeric Targets for copper, toxicity and pesticides are set equal to the numeric water quality objectives for dissolved copper as defined in the California Toxics Rule (CTR) and shown below.

**Table 7-7. TMDL Numeric Targets**

| Exposure | Water Quality Objective* | Numeric Target* |
|---|---|---|
| Continuous or Chronic (4 day average) | 3.1 μg/L** of copper (Cu) | 3.1 μg/L** of Cu |
| Maximum or Acute (1 hour average) | 4.8 μg/L** of Cu | 4.8 μg/L** of Cu |

* Concentrations should not be exceeded more than once every three years.
** micrograms/liter (μg/L)

If the water quality objectives for dissolved copper in SIYB are modified in the future, as in the case of a site-specific objective, then the numeric targets will be set equal to the new water quality objectives.

## *SOURCE ANALYSIS*

Approximately 98 percent of all copper loading to SIYB is attributable to copper-based antifouling paints applied to the hulls of recreational boats. The passive leaching of copper from antifouling paint is 93 percent of the total loading. The remaining five percent of total copper loading results from underwater hull cleaning operations in SIYB.

**Table 7-8. Summary of Dissolved Copper Sources to SIYB**

| Source | Mass Load (kg/year) | Percent Contribution (% Cu) |
|---|---|---|
| Passive Leaching | 2,000 | 93 |
| Hull Cleaning | 100 | 5 |
| Urban Runoff | 30 | 1 |
| Background | 30 | 1 |
| Direct Atmospheric Deposition | 3 | <1 |
| Sediment | 0 | 0 |
| **Combined Sources** | **2,163** | **100** |

## *TOTAL MAXIMUM DAILY LOAD*

The TMDL or loading capacity for dissolved copper discharges into SIYB is 1.6 kilograms/day (kg/day) or 567 kilograms/year (kg/year).

## *MARGIN OF SAFETY*

The TMDL includes an explicit and implicit margin of safety (MOS). Ten percent of the loading capacity was reserved as an explicit MOS and calculated to be 57 kg/year. The implicit MOS was incorporated into the TMDL source analysis through numerous conservative assumptions.

## *ALLOCATIONS AND REDUCTIONS*

A 76 percent overall reduction of residual copper loading to SIYB is required to meet the TMDL of 567 kg/year as shown in the table below. The assigned allocations from each source translate into a percent reduction of dissolved copper from current loading. Loading due to passive leaching must be reduced by 81 percent from current loading. Loading due to underwater hull cleaning must be reduced by 28 percent from current loading. From an overall perspective, passive leaching loading must be reduced by 75 percent from the combined total loading of all sources to SIYB. Underwater hull cleaning loading must be reduced by one percent from the combined total loading of all sources to SIYB.

**Table 7-9. TMDL and Allocation Summary**

| Source | Current Load (kg/year of Cu) | Percent Contribution (% Cu) | Allocation (kg/year of Cu) | Percent Reduction from Current Source Load (%) | Percent Reduction from Total Loading to SIYB (%) |
|---|---|---|---|---|---|
| **Passive Leaching** | 2,000 | 93 | 375 | 81 | 75 |
| **Hull Cleaning** | 100 | 5 | 72 | 28 | 1 |
| **Urban Runoff** | 30 | 1 | 30 | 0 | 0 |
| **Background** | 30 | 1 | 30 | 0 | 0 |
| **Direct Atmospheric Deposition** | 3 | <1 | 3 | 0 | 0 |
| **Sediment** | 0 | 0 | 0 | 0 | 0 |
| **Current Mass Load** | 2,163 | 100 | | | 0 |
| **Margin of Safety** | | | 57 | | 0 |
| **TMDL** | | | 567 | | 0 |
| **Total Load Reduction** | | | | 76 | 76 |

## *RECALCULATIONS IF WATER QUALITY OBJECTIVES CHANGE*

If the water quality objectives for dissolved copper in SIYB are changed in the future, then the MOS, TMDL and allocations will be recalculated using the method shown below in the section titled, *Method for Recalculation of the Total Maximum Daily Load for Dissolved Copper in the Shelter Island Yacht Basin, San Diego Bay*.

## *TMDL IMPLEMENTATION PLAN*

The TMDL will be implemented as follows:

The Regional Board will coordinate with governmental agencies having legal authority over the use of copper-based antifouling paints to protect water quality from the adverse effects of copper-based antifouling paints in SIYB; and

The Regional Board will regulate discharges of copper to SIYB through the issuance of Waste Discharge Requirements (WDRs), Waivers of WDRs (waivers), or adoption of Waste Discharge Prohibitions. WDRs could build upon pollution control programs developed by discharger organizations or the Port. Likewise, waivers or prohibitions could be conditioned on implementation of pollution control programs through third party agreements between the Regional Board and discharger organizations, and/or other agencies.

The Regional Board will amend Order No. 2001-01, **"**Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm /Sewer System**"** to require that discharges of copper into SIYB waters via the City's municipal separate storm/sewer system not exceed a 30 mg/kg wasteload for copper.

The dischargers will be required to monitor SIYB waters and provide monitoring reports to the Regional Board for the purpose of assessing the effectiveness of the alternatives implemented.

## *COMPLIANCE SCHEDULE*

Copper load and wasteload reductions are required over a 17-year staged compliance schedule period. The first stage consists of an initial 2-year orientation period during which no copper load reductions are required. The subsequent 15-year reduction period is comprised of three stages during which incremental copper load and wasteload reductions are required as shown below.

**Table 7-10. Interim Loading Targets for Attainment of the TMDL**

| Stage | Time Period | Percent Reduction from Current Estimated Loading | Reduction to be Attained by End of Year | Estimated Interim Target Loading (kg/year of dissolved Cu) |
|---|---|---|---|---|
| Stage 1 | Years 1-2 | 0% | N/A | N/A |
| Stage 2 | Years 2-7 | 10% | 7 | 1,900 |
| Stage 3 | Years 7-12 | 40% | 12 | 1,300 |
| Stage 4 | Years 12-17 | 76% | 17 | 567 |

## *METHOD FOR RECALCULATION OF THE TOTAL MAXIMUM DAILY LOAD FOR DISSOLVED COPPER IN THE SHELTER ISLAND YACHT BASIN, SAN DIEGO BAY*

This section describes the method for recalculating the Shelter Island Yacht Basin TMDL for dissolved copper if the water quality objectives for dissolved copper are modified in the future.

**Numeric Target**

The numeric targets are set equal to the new water quality objectives.

**Margin of Safety**

The explicit margin of safety (MOS) equals ten percent of the loading capacity. The equation to calculate the loading capacity is given below.

**Total Maximum Daily Load**

The TMDL or loading capacity is recalculated using equations 1 through 4 below.

The loading capacity is recalculated according to equation 1 below:

$$(1) \quad R_S = C_2\left(\frac{KA_c}{\Delta x} + k_L V_2\right) - A_c C_1\left(\frac{eA_s}{A_c} + \frac{K}{\Delta x}\right)$$

where $C_1$ = average background concentration of copper measured in the area of San Diego Bay adjacent to SIYB, expressed as total copper, (0.05 μg/L)

$C_2$ = average target concentration for copper in the SIYB (expressed as total copper) when the maximum concentration of copper in SIYB is equal to or less than the numeric target (mass/volume)

$K$ = dispersion coefficient calculated from salinity measurements and mixing length approximation (15.3 $m^2$/sec)

$A_c$ = cross-sectional area of entrance to SIYB (1,000 $m^2$)

$A_s$ = surface area of SIYB (740,000 $m^2$)

$\Delta x$ = average mixing length between SIYB and adjacent area; estimated distance between the endpoints for $S_1$ and $S_2$ (2,000 m)

$V_2$ = volume of SIYB (31,000,000 $m^3$)

$e$ = evaporation rate (0.43 cm/day)

$k_l$ = rate of total copper loss to sediment (7%/day)

$R_S$ = loading capacity, expressed as total copper (mass/time); $R_S$ is calculated iteratively to find the maximum possible value that does not cause $C_2$ to exceed the numeric target.

The dispersion coefficient K is calculated using equation 2 below:

$$(2) \quad K \cong \frac{eA_s S_1 \Delta x}{A_c (S_2 - S_1)}$$

where $S_1$, $S_2$ =salinity data obtained in SIYB and San Diego Bay adjoining SIYB (33.62 practical salinity units (psu) and 33.46 psu, respectively).

μg/L / 8 μg/L]

To convert $C_2$ from dissolved copper concentration to total copper concentration, the number calculated from equation 3 is multiplied by the ratio of dissolved copper to total copper in seawater. If site-specific data are not available, the ratio of 0.83 can be used. This is the USEPA's conversion factor for saltwater acute criteria.[4]

Finally, the TMDL is calculated according to equation 4 below:

(4) TMDL = Rs - MOS

**Allocations**

Equation 5 is used to determine the new allocation for passive leaching. In equation 5, the only variable is the allocation for passive leaching (Ap), while the other source allocations are constants. The allocation for hull cleaning remains the same, since it was based on the assumption that all of the divers will use Management Practices (MPs) to clean boat hulls that have copper bottom paints. Allocations for the other sources, namely urban runoff, background and sediment will not be recalculated because these sources of copper are insignificant.

(5) TMDL = Wasteload Allocation + Load Allocations + MOS

TMDL = Au + Ap + Ah + As + Ab + Aa + MOS

where:

Au = allocation for urban runoff = 30 kg/year
Ap = allocation for passive leaching
Ah = allocation for hull cleaning = 72 kg/year
As = allocation for sediment = load from sediment = 0 kg/year
Ab = allocation for background = load from background = 30 kg/year
Aa = allocation for direct atmospheric deposition = load from direct atmospheric deposition = 3 kg/year

[4] USEPA. 2000. Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Rule. 40 CFR Part 131. May 18, 2000.

# TOTAL MAXIMUM DAILY LOADS (TMDLS) FOR TOTAL NITROGEN AND TOTAL PHOSPHORUS IN THE RAINBOW CREEK WATERSHED

Rainbow Valley, California

On February 9, 2005, the Regional Board adopted Resolution No. R9-2005-0036, *A Resolution Adopting an Amendment to the Water Quality Control Plan for the San Diego Region (9) to Incorporate Total Maximum Daily Loads (TMDLs) for Total Nitrogen and Total Phosphorus in the Rainbow Creek Watershed, San Diego County*. The Basin Plan amendment was subsequently approved by the State Water Resources Control Board on November 16, 2005, the Office of Administrative Law on February 1, 2006, and the United States Environmental Protection Agency on March 22, 2006. The TMDL is described in the Basin Plan Amendment and Technical Report for Total Nitrogen and Total Phosphorus Total Maximum Daily Loads for Rainbow Creek, dated February 9, 2005.

## PROBLEM STATEMENT

Nitrate, total nitrogen, and total phosphorus concentrations in Rainbow Creek exceed the Inorganic Chemicals nitrate and Biostimulatory Substances water quality objectives. These exceedances threaten to unreasonably impair the municipal supply (MUN), warm freshwater habitat (WARM), cold freshwater habitat (COLD), and wildlife habitat (WILD) beneficial uses of Rainbow Creek. Excessive nutrient levels in Rainbow Creek promote the growth of algae in localized areas, creating a nuisance condition, that unreasonably interferes with aesthetics and contact and non-contact water recreation (REC1, REC2) and threatens to impair WARM, COLD and WILD beneficial uses. State highways, agricultural fields and orchards, commercial nurseries, residential and urban areas, and septic tank disposal systems contribute to increased nutrient levels in Rainbow Creek as a result of storm water runoff, irrigation return flows, and ground water contributions to the creek.

## NUMERIC TARGETS

The Numeric Targets for nitrate, total nitrogen, and total phosphorus are set equal to the Inorganic Chemicals nitrate water quality objective for municipal water supply and the numeric goals of the Biostimulatory Substances water quality objective as defined in the Basin Plan and shown below.

**Table 7-11. Rainbow Creek Nitrate, Total Nitrogen, and Total Phosphorus Numeric Targets**

| | | |
|---|---|---|
| Nitrate (as nitrogen) | 10 mg $NO_3$-N/L | 10 mg $NO_3$-N/L |
| Total Nitrogen | 1.0 mg N/L | 1.0 mg N/L |
| Total Phosphorus | 0.1 mg P/L | 0.1 mg P/L |

If the Inorganic Chemicals nitrate and Biostimulatory Substances water quality objectives in Rainbow Creek are modified in the future then the TMDL will be recalculated and the numeric targets will be set equal to the new water quality objectives.

## SOURCE ASSESSMENT

Seventy-nine percent (79%) and seventy percent (70%) of total nitrogen and total phosphorus mass loading, respectively, are attributable to controllable sources, which include certain land use activities, septic tank disposal systems (total nitrogen only), and Interstate 15 (I-15). The land use activities include commercial nurseries, agricultural fields, orchards, residential areas, urban areas, and park areas.

Background and direct atmospheric deposition are not considered to be controllable sources.

**Table 7-12. Summary of Total Nitrogen and Total Phosphorus Sources to Rainbow Creek**

| Source | Total Nitrogen Mass Load (kg N/yr) | Percent Contribution (% N) | Total Phosphorus Mass Load (kg P/yr) | Percent Contribution (% P) |
|---|---|---|---|---|
| Land Uses Runoff | 2,662 | 69 | 262 | 66 |
| Background | 779 | 20 | 116 | 29 |
| Septic Tank Disposal Systems | 200 | 5 | 0 | 0 |
| I-15 Runoff (Caltrans) | 153 | 4 | 14 | 4 |
| Direct Atmospheric Deposition | 40 | 1 | 2 | 1 |
| **Combined Sources** | **3,834** | **100** | **394** | **100** |

## TOTAL MAXIMUM DAILY LOADS OR LOADING CAPACITY

The TMDLs for nutrients in Rainbow Creek are 1,658 kg N/yr for total nitrogen and 165 kg P/yr for total phosphorus in order to attain and maintain the Inorganic Chemicals – Nitrate and Biostimulatory Substances water quality objective in Rainbow Creek waters.

The annual loading limit of total nitrogen and total phosphorus to Rainbow Creek shall be reduced incrementally from the current load of 3,834 kg/yr and 394 kg/yr, respectively, to 1,658 kg/yr and 165 kg/yr, respectively, by no later than December 31, 2021. The annual nutrient loading limits to be attained by December 31, 2021 is listed in Table 7-13.

**Table 7-13. Annual Nutrient Loading Capacity and Compliance Date**

| TMDL | December 31, 2021[1] | |
|---|---|---|
| Total Nitrogen – Annual Load | 1,658 kg/yr | 3,648 lbs/yr |
| Total Phosphorus – Annual Load | 154 kg/yr | 365 lbs/yr |

[1] Compliance to be achieved no later than this date. The Regional Board may require earlier compliance with these targets when it is reasonable and feasible.

## MARGIN OF SAFETY

Explicit and implicit margins of safety (MOS) were considered for these TMDLs. An explicit MOS of 5% is reserved to account for uncertainties and calculated to be 83 kg/year total nitrogen and 8 kg/year total phosphorus. An implicit MOS has been incorporated through conservative assumptions in the analysis.

## *LOAD ALLOCATIONS AND WASTELOAD ALLOCATIONS*

A seventy-four percent (74%) and an eighty-five percent (85%) overall reduction of total nitrogen and total phosphorus loading, respectively, to Rainbow Creek is required to meet the TMDLs described in Table 7.13.

The load allocations for the initial annual loading are provided in Table 7-14 and 7-15, below. A margin of safety (MOS) of 5% is subtracted from this nutrient TMDL to account for unknowns, errors in assumptions, and potential future development in the watershed. This 5% is reserved for unknowns and is not allocated to any source. Allocations (other than for background and margin of safety) will be further reduced by 20% every 4 years until the biostimulatory targets for nitrogen and phosphorus are met. In the event that a nonpoint source becomes a permitted discharge, the portion of the load allocation that is associated with the source can become a wasteload allocation.

**Table 7–14. Annual Total Nitrogen Allocations for Rainbow Creek**

| | | | | |
|---|---|---|---|---|
| Load Allocations (LA) | | | | |
| Commercial nurseries | 390 | 299 | 196 | 116 |
| Agricultural fields | 504 | 386 | 253 | 151 |
| Orchards | 607 | 465 | 305 | 182 |
| Park | 5 | 3 | 3 | 3 |
| Residential areas | 507 | 390 | 260 | 149 |
| Urban areas | 40 | 27 | 27 | 27 |
| Septic tank disposal systems | 200 | 100 | 46 | 46 |
| Air deposition | 40 | 40 | 40 | 40 |
| Wasteload Allocations (WLA) | | | | |
| Caltrans highway runoff | 118 | 90 | 59 | 49 |
| Unidentified & future point sources | 33 | 33 | 33 | 33 |
| **Total LA & WLA** | **2,444** | **1,833** | **1,222** | **796** |
| Background | 779 | 779 | 779 | 779 |
| Margin of Safety (not allocated) | 83 | 83 | 83 | 83 |
| **Total** | **3,306** | **2,695** | **2,084** | **1,658** |

[1] To calculate pounds per year, multiply by 2.2.
[2] Background is calculated based on reference concentrations in San Diego streams and Rainbow Creek annual flow volumes.

**Table 7-15. Annual Total Phosphorus Allocations for Rainbow Creek**

| | | | | |
|---|---|---|---|---|
| Load Allocations (LA) | | | | |
| Commercial nurseries | 20 | 16 | 10 | 3 |
| Agricultural fields | 28 | 21 | 14 | 4 |
| Orchards | 50 | 37 | 24 | 6 |
| Park | 0.15 | 0.10 | 0.10 | 0.10 |
| Residential areas | 99 | 74 | 47 | 12 |
| Urban areas | 9 | 6 | 6 | 6 |
| Air deposition | 2 | 2 | 2 | 2 |
| Wasteload Allocations (WLA) | | | | |
| Caltrans highway runoff | 11 | 8 | 5 | 5 |
| Unidentified & future point sources | 3 | 3 | 3 | 3 |
| **Total LA & WLA** | **223** | **116** | **111** | **41** |
| Background | 116 | 116 | 116 | 116 |
| Margin of Safety (not allocated) | 8 | 8 | 8 | 8 |
| **Total** | **346** | **291** | **235** | **165** |

[1] To calculate pounds per year, multiply by 2.2.
[2] Background is calculated based on reference concentrations in San Diego streams and Rainbow Creek annual flow volumes.

## *RECALCULATIONS IF WATER QUALITY OBJECTIVES CHANGE*

If the water quality objectives for Biostimulatory Substances are changed in the future, then the MOS, TMDL and allocations and reductions will be recalculated using the method shown below in the section titled, *Method for Recalculation of the Total Maximum Daily Loads for Nitrogen and Phosphorus in Rainbow Creek*.

## *TMDL IMPLEMENTATION ACTION PLAN*

The necessary actions to implement the TMDLs are described in section 9 of the *Technical Report for Total Nitrogen and Total Phosphorus Total Maximum Daily Loads (TMDLs) in Rainbow Creek*, dated February 9, 2005 and listed below.

### A. Regional Board Actions

#### 1. Caltrans – Incorporate Wasteload Allocations in NPDES Storm Water Permit

The Regional Board shall request that the State Water Resources Control Board amend the Caltrans statewide NPDES storm water permit[5] to include the following requirements:

[5] The term "statewide NPDES storm water permit" refers to Order No. 99-06-DWQ, NPDES No. CAS000003, *National Pollutant Discharge Elimination System Permit, Statewide Storm Water Permit, and Waste Discharge Requirements for the State of California, Department of Transportation (Caltrans)* or subsequent superceding NPDES renewal Orders.

a. MS4 discharges to Rainbow Creek shall not exceed the following wasteloads for nitrogen and phosphorus:

**Table 7-16. Wasteloads for nitrogen and phosphorus**

| Nitrogen Wasteload | Phosphorus Wasteload | Compliance Due Date |
|---|---|---|
| 118 kg N/yr[1] | 11 kg P/yr[1] | Dec. 31, 2009 |
| 90 kg N/yr[1] | 8 kg P/yr[1] | Dec. 31, 2013 |
| 59 kg N/yr[1] | 5 kg P/yr[1] | Dec. 31, 2017 |
| 49 kg N/yr[1] | 5 kg P/yr[1] | Dec. 31, 2021 |

b. A directive to submit annual progress reports to the Regional Board detailing progress made on attaining the nutrient wasteload reductions in Rainbow Creek. The report shall be due on April 1 of each year shall be incorporated within section 2, Program Management of Caltrans MS4 Order No. 99-06-DWQ, NPDES No. CAS000003. Reporting shall continue on an annual basis until the nutrient water quality objective is attained in Rainbow Creek.

**2. County of San Diego – Issue Water Code Governmental Water Quality Investigation Request Order for Nutrient Reduction and Management Plan**

The Regional Board shall issue an Order under Water Code section 13225 requiring the County of San Diego to investigate excessive levels of nutrients in Rainbow Creek and feasible management strategies to reduce nutrient loading in Rainbow Creek. A Nutrient Reduction and Management Plan (NRMP) for the Rainbow Creek watershed containing the elements described below in section C, County of San Diego Nutrient Reduction Management Plan Elements, would satisfy such an Order. The County may submit alternative or additional elements equivalent to those described in section C that would result in equivalent protection from, or prevention of, nutrient discharges to Rainbow Creek.

**3. County of San Diego – Establish Management Agency Agreement (MAA)**

The Regional Board shall consider, following concurrence with the County of San Diego's Nutrient Reduction and Management Plan (NRMP) for Rainbow Creek, entering into a Management Agency Agreement (MAA) with the County of San Diego. The MAA shall set forth the commitment of both parties to undertake various oversight responsibilities for the nonpoint source nutrient load reduction component of this TMDL, and the County's commitments to implement the NRMP.

**4. County of San Diego – Issue Water Code Governmental Water Quality Investigation Request for Groundwater Investigation and Characterization Report**

The Regional Board could issue an Order under Water Code section 13225 directing the County of San Diego to prepare and submit a workplan and report described below in section B, County of San Diego Actions, Item 3 Submit Groundwater Investigation and Characterization Workplan and Item 4 Groundwater Investigation and Characterization Report.

**5. California Department of Forestry and Fire Protection – Issue Water Code Section 13267 Order**

The Regional Board shall issue a Water Code section 13267 order directing the California Department of Forestry and Fire Protection, Rainbow Conservation Camp (CDFFP) to submit any additional technical information needed to 1) evaluate whether CDFFP's discharge is surfacing and/or contributing to the impairment of Rainbow Creek; and 2) estimate the actual nutrient load originating from the septic tank and percolation ponds to Rainbow Creek via groundwater flow. Based on the review of this information the Regional Board may further direct the CDFFP to implement an alternate means of wastewater disposal or additional treatment necessary to attain and maintain nutrient water quality objectives in Rainbow Creek.

### 6. Establish Memorandum of Understanding (MOU) with Agencies or Organizations

The Regional Board shall consider entering into a memorandum of understanding (MOU) to document cooperative agreements with other agencies or organizations that are able to provide information, technical assistance, or financial assistance to dischargers to support the Regional Board's goals of attaining the nutrient load reductions required under this TMDL and compliance with the nutrient water quality objective. These agencies and organizations include, but are not limited to, the United States Department of Agriculture, Natural Resources Conservation Service (NRCS), Mission Resource Conservation District (MRCD), and the University of California Cooperative Extension (UCCE).

### 7. Adopt Waste Discharge Requirements (WDRs), Waivers, and Discharge Prohibitions

In conjunction with an MAA or MOU with another third-party representative, organization, or government agency describing an adequate NPS pollution control implementation program, the Regional Board shall adopt individual or general waivers or waste discharge requirements (WDRs) for NPS discharges in the Rainbow Creek watershed. The waivers or WDRs shall require NPS dischargers to either participate in the third party NPS program or, alternatively, submit individual pollution prevention plans that detail how they will comply with the waivers and WDRs. Alternatively, the Regional Board may adopt a discharge prohibition, which includes exceptions for those discharges that are adequately addressed in an acceptable third-party MAA or MOU NPS pollution control implementation program.

### 8. Take Enforcement Actions

The Regional Board shall take enforcement action[6], as necessary, against any discharger failing to comply with applicable waiver conditions, waste discharge requirements (WDRs), discharge prohibitions, or take enforcement action, as necessary, to control the discharge of nutrients to Rainbow Creek, to attain compliance with the nutrient wasteload and load reductions specified in this TMDL, or to attain compliance with the nutrient water quality objectives. The Regional Board may also terminate the applicability of waivers and issue waste discharge requirements or take other appropriate action against any discharger(s) failing to comply with the waiver conditions.

### 9. Review and Revise Existing Waste Discharge Requirements

The Regional Board shall review and, if necessary, update existing waste discharge requirements for discharges to land as well as groundwater in the Rainbow Creek watershed to incorporate effluent limitations for nutrients consistent with applicable nutrient groundwater quality objectives and surface water quality objectives.[7]

### 10. Recommend High Priority for Grant Funds

The Regional Board shall recommend that the State Board assign a high priority to awarding grant funding[8] for projects to implement the Rainbow Creek nutrient TMDLs. Special emphasis will be given to projects that can achieve quantifiable nutrient load reductions consistent with the specific nutrient TMDL load allocations.

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[6] An enforcement action is any formal or informal action taken to address an incidence of actual or threatened noncompliance with existing regulations or provisions designed to protect water quality. Potential enforcement actions include a notice of violation (NOV), notices to comply (NTC), imposition of time schedules (TSO), issuance of cease and desist orders (CDOs) and cleanup and abatement orders (CAOs), administrative civil liability (ACL), and referral to the attorney general (AG) or district attorney (DA). The Regional Board generally implements enforcement through an escalating series of actions to: (1) assist cooperative dischargers in achieving compliance; (2) compel compliance for repeat violations and recalcitrant violators; and (3) provide a disincentive for noncompliance.

[7] There are currently three dischargers in the Rainbow Creek watershed regulated under waste discharge requirements for the discharge of waste to land or groundwaters: Oak Crest Mobile Estates (Order No. 1993-69), Rainbow Conservation Camp (Order No. 1995-20), and Temecula Truck Inspection Facility (Order No. 1992-56). The Rainbow Truck Weigh and Inspection Facility, discharges under the terms of a waiver of waste discharge requirements (Order No. 2000-235).

[8] The State Water Resources Control Board administers the awarding of grants funded from Proposition 13, Proposition 50, Clean Water Act 319(h) and other federal appropriations to projects that can result in measurable improvements in water quality, watershed condition, and/or capacity for effective watershed management. Many of these grant fund programs have specific set-asides for expenditures in the areas of watershed management and TMDL implementation for NPS pollution.

### 11. Incorporate Water Code Section 13291 Regulations in Basin Plan

The Regional Board shall incorporate regulations currently under development by the State Water Resources Control Board pertaining to onsite wastewater treatment systems[9] into the Basin Plan as soon as practicable upon their adoption by the State Board.[10]

## B. County of San Diego Actions

### 1. Control MS4 Discharges to Rainbow Creek

For nutrient discharges to or from Municipal Separate Storm Sewer Systems (MS4) within the Rainbow Creek watershed, the County has an existing obligation under the NPDES requirements for MS4s in San Diego County[11] to require increasingly stringent best management practices, pursuant to the iterative process described in Receiving Water Limitation C.2.a.[12] of the MS4 Requirements, to reduce nutrients discharges in the Rainbow Creek watershed to the maximum extent practicable and restore compliance with the nutrient water quality objective.

### 2. Submit Nutrient Reduction and Management Plan (NRMP)

The County of San Diego shall, upon request by the Regional Board pursuant to Water Code section 13225, prepare and submit a NRMP for the Rainbow Creek watershed, consistent with the SWRCB NPS Implementation and Enforcement Policy and containing the elements described in section C, County of San Diego Nutrient Reduction and Management Plan or their equivalent. The County may submit alternative or additional elements equivalent to those described in section C that would result in equivalent protection from, or prevention of, nutrient discharges to Rainbow Creek.

### 3. Submit and Implement Groundwater Investigation and Characterization Workplan

The County of San Diego shall, upon request by the Regional Board pursuant to Water Code section 13225, undertake an investigation of groundwater quality within the Rainbow Creek watershed, and shall prepare and submit a workplan designed to guide the collection of information to produce the technical report described in Item 4, Groundwater Investigation and Characterization Report below. The workplan shall include the following:

a. A schedule for completion of all activities and submission of a final Groundwater Investigation and Characterization Report.

b. A description of proposed actions including drilling methods, analytical methods, sampling locations, and purging and sampling methods.

c. The location of existing monitoring wells and the proposed location of additional monitoring wells needed to characterize nutrient concentrations and their lateral and vertical extent in groundwater.

d. Contingencies for collection of additional samples.

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[9] "Onsite wastewater treatment system(s)" (OWTS) is any individual or community onsite wastewater treatment, pretreatment and dispersal system including, but not limited to, a conventional, alternative, or experimental sewage dispersal system such a septic tanks having a subsurface discharge.

[10] Water Code section 13291 directs the Regional Board to incorporate the regulations in the Basin Plan upon their adoption by the State Water Resources Control Board.

[11] The term "MS4 NPDES Storm Water Permit" refers to Order No.2001-001, NPDES No. CAS0108758, *Waste Discharge Requirements For Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego, the Incorporated Cities Of San Diego County, and the San Diego Unified Port District* or subsequent superceding NPDES renewal Orders.

[12] Groundwater beneath the Rainbow Creek watershed is interpreted to occur in both the alluvial deposits where present and in the fractured rock. The groundwater investigation report shall assess the relative contribution from each aquifer.

Sufficient scope to meet the objectives of assessing nutrient loading from surface sources to groundwater and the contribution of groundwater to the nutrient loading and nutrient concentrations in Rainbow Creek.

f. Consideration of the following elements or factors:

i. Nutrient mass loading to groundwater in the fractured rock aquifer and the alluvial deposits aquifer[13] from septic systems, deep percolation of applied irrigation water, and any other sources.

ii. Base flow contribution to Rainbow Creek from the fractured rock aquifer and the alluvial deposits aquifer.

iii. Mass balance of nutrients in the fractured rock aquifer and alluvial deposits aquifer (nutrient mass loading to groundwater, removals from the groundwater system including denitrification, plant uptake, and groundwater discharge, and change in the load and concentration of nutrients in groundwater.

The County of San Diego shall implement the workplan within sixty (60) days after submission of the workplan, unless otherwise directed in writing by the Regional Board. Before beginning these activities the County shall notify the Regional Board of the intent to initiate the proposed actions included in the workplan submitted; and comply with any conditions set by the Regional Board.

**4. Submit Groundwater Investigation and Characterization Report**

The County of San Diego shall, on a schedule agreed to in writing by the Regional Board, submit a Groundwater Investigation and Characterization Report containing a technical analysis and interpretation of the data to assess the contribution of groundwater to the nutrient loading and concentrations in Rainbow Creek. The report shall meet the objectives and address the considerations described in the Groundwater Investigation and Characterization Workplan. The report shall also present recommendations to refine assumptions, resolve uncertainties, and improve the scientific foundation of the TMDL with regard to quantifying groundwater nutrient loading to Rainbow Creek.

**5. Establish Management Agency Agreement (MAA)**

The County of San Diego is requested to enter into a MAA with the Regional Board setting forth the commitment of both parties to undertake various implementation oversight responsibilities for the nonpoint source nutrient load reduction component of this TMDL and the County's commitments to implement the NRMP.

## C. County Of San Diego Nutrient Reduction And Management Plan

**1. NPS Nutrient Reduction and Management Plan (NRMP)**

A NRMP for the Rainbow Creek watershed shall describe the activities the County of San Diego could undertake to oversee discharger efforts to reduce nutrients in the runoff or groundwater discharges from new and existing (1) commercial nurseries; (2) agricultural fields; (3) orchards; (4) parks; (5) residential area; (6) urban areas; and (7) septic tank disposal system land uses (hereinafter referred to as key nutrient sources). A NRMP should include the following elements as provided in items 2 through 17 below or alternative or additional elements equivalent to those described that would result in equivalent protection from, or prevention of, nutrient discharges to Rainbow Creek.

[13] Groundwater beneath the Rainbow Creek watershed is interpreted to occur in both the alluvial deposits where present and in the fractured rock. The groundwater investigation report shall assess the relative contribution from each aquifer.

**2. Legal Authority**

The County of San Diego should review its legal authority and evaluate its adequacy to mandate compliance with the nutrient load reductions specified in this TMDL through ordinance, statue, permit, contract or similar means. The County, at a minimum, should evaluate its authority to:

a. Control the discharge of nutrients from nonpoint sources; and

b. Prohibit discharges of nutrients which cause or contribute to exceedances of the nutrient load reductions specified in this TMDL or nutrient water quality objectives.

Alternatively the County of San Diego may certify that its existing legal authority is adequate to mandate compliance with the nutrient load reductions specified in this TMDL and prevent increases in nutrient loading to Rainbow Creek.

**3. General Plan Modification**

The County of San Diego should evaluate the adequacy of its General Plan to ensure that future land use and zoning decisions do not result in an increase in the nutrient loading to Rainbow Creek. The County should also describe the steps it will take to modify the General Plan as necessary. Alternatively the County of San Diego may certify that its existing General Plan is adequate to prevent an increase in nutrient loading to Rainbow Creek.

**4. Modify Development Project Approval Process**

The County of San Diego should evaluate the adequacy of its development project approval / permitting process as necessary to ensure that discharges from proposed developments in the Rainbow Creek watershed will comply with the nutrient load reductions specified in this TMDL and ensure that nutrient water quality objectives are not exceeded. The County's evaluation should consider the need to ensure that all development in Rainbow Creek watershed will be in compliance with County's storm water ordinances, permits, and all other applicable ordinances and requirements. The County should also describe the steps it will take to modify the development project approval / permitting process as necessary. Alternatively the County of San Diego may certify that its project approval / permitting process is adequate to ensure that discharges from proposed developments in the Rainbow Creek watershed will comply with the nutrients load reductions specified in this TMDL and ensure that nutrient water quality objectives are not exceeded.

**5. CEQA Reviews**

The County of San Diego should evaluate the adequacy of its environmental review process pursuant to CEQA to ensure that new development in the Rainbow Creek watershed does not contribute to exceedances of the nutrient load allocations specified in this TMDL or violations of the nutrient water quality objective. For example, diligent performance of environmental review under CEQA and requirements for mitigation of the adverse environmental consequences to water quality of new development and detrimental agricultural practices can significantly reduce nutrient loading to Rainbow Creek. The County's evaluation should consider the need to aggressively review proposed projects that have the potential to contribute nitrogen and phosphorus to the Rainbow Creek watershed and require appropriate mitigation. The County should also describe the steps it will take to revise the development project approval / permitting process as necessary. Alternatively the County of San Diego may certify that its environmental review process pursuant to CEQA is adequate to ensure that new development in the Rainbow Creek watershed does not contribute to exceedances of the nutrient load allocations specified in this TMDL or violations of the nutrient water quality objective.

**6. Pollution Prevention (Nutrients)**

The County of San Diego should describe the steps it will take to implement pollution prevention[14] methods for nutrients at sites owned by the County and require its use by owners or operators of nutrient sources, where appropriate.

**7. Source Identification (Nutrients)**

The County of San Diego should describe the steps it will take to develop and update annually an inventory of the individual nutrient sources within the residential, urban, commercial nursery, agricultural field, orchard, park, and septic tank disposal system category of land uses. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended.

**8. Threat to Water Quality Prioritization (Nutrients)**

The County of San Diego should describe the steps it will take to establish priorities for inspection and oversight activities. Each individual nutrient source in each nonpoint source category should be classified as high, medium, or low threat to water quality. The inventory should include the following minimum information for each site: name; address; SIC codes as appropriate which best reflects the type of site; a narrative description characterizing the nutrient waste generated; and the potential for nutrient discharges to Rainbow Creek.

**9. MP Implementation (Nutrients)**

The County of San Diego should describe the steps it will take to:

a. Designate a set of minimum MMs / MPs[15] for the high, medium, and low threat to water quality nutrient sources identified in item 7 above. The designated minimum MPs for the high threat to water quality nutrient sources should be site and source specific as appropriate.

b. Establish a time line for installation of the designated minimum MPs at each nutrient source within its jurisdiction. If particular minimum MPs are infeasible for any specific site/source the county of San Diego should describe the steps it will take to require the implementation of other equivalent MPs.

**10. Inspection of Sites and Sources (Nutrients)**

The County of San Diego should describe the steps it will take to inspect high priority sites and sources for compliance with its ordinances and permits as well as nutrient load reductions required under this TMDL. Inspections should include review of MP implementation plans and effectiveness. The County should also describe the steps it will take to implement all inspection follow-up actions, including enforcement actions, as necessary to obtain discharger compliance in implementing MPs.

**11. Enforcement of Sites and Sources (Nutrients)**

The County of San Diego should describe the steps it will take to enforce its ordinances, statues, permits, and contracts as necessary to attain compliance with the nutrient load reductions specified in this TMDL.

[14] Pollution Prevention is defined as practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control, treatment, or disposal.

[15] In determining appropriate MPs the County of San Diego is encouraged to consult the State Water Resources Control Board's California Nonpoint Source Encyclopedia (2004) (http://www.waterboards.ca.gov/nps/encyclopedia.html). This publication contains extensive information on nutrient reduction management measures (MMs) and management practices (MPs) applicable to the NPS land use activities in the Rainbow Creek watershed. The County is also encouraged to consult the Regional Board's Watershed Management Approach for the San Diego Region, Nonpoint Source (http://www.waterboards.ca.gov/sandiego/programs/wmc.html) for additional information on management measures.

### 12. Reporting of Non-compliant Sites (Nutrients)

The County of San Diego should describe the steps it will take to provide oral notification to the Regional Board of non-compliant sites that are determined to be recalcitrant in implementing MPs or attaining compliance with nutrient load reductions required under this TMDL within 24 hours of the discovery of noncompliance. The notification process should also include procedures for a follow-up written report to be submitted to the Regional Board within 5 days of the incidence of non-compliance.

### 13. Monitoring to Assess Compliance With Nutrient Load Reductions

The County of San Diego should describe the steps it will take to conduct, or require nutrient sites or sources to conduct, a monitoring program to assess compliance of runoff or groundwater discharges with the load reductions from each of the land use categories assigned a load reduction. This can be accomplished by placing sampling stations at strategic nodes that would monitor nutrient discharges from individual sources of a common land use category.

### 14. Community Education and Outreach

The County of San Diego should describe the steps it will take to develop a focused educational program to raise community awareness of the nutrient impairment problem, promote pollution prevention, and increase the use of applicable management measures and practices where needed to control and reduce nutrient discharges to Rainbow Creek. Public education, outreach, and training programs should involve applicable user groups and the community.[16]

### 15. Seek Financial Assistance

The County of San Diego is encouraged to seek grant funding[17] for projects to implement the Rainbow Creek nutrient TMDLs, particularly those that can achieve quantifiable nutrient load reductions consistent with the specific nutrient TMDL load allocations.

### 16. Nutrient Reduction and Management Plan (NRMP) Effectiveness

The County of San Diego should describe the steps it will take to develop a long-term strategy for assessing the effectiveness of the NRMP. The long-term assessment strategy should identify specific direct and indirect measurements that the County will use to track the long-term progress towards achieving the nutrient load reductions required under this TMDL. Methods used for assessing effectiveness should include the following or their equivalent: surveys, pollutant loading estimations, and receiving water quality monitoring. The long-term strategy shall also discuss the role of monitoring data in substantiating or refining the assessment.

### 17. Nutrient Reduction and Management Plan (NRMP) Annual Report

The County of San Diego should describe the steps it will take to submit an annual NRMP report to the Regional Board by January 31 of each year following USEPA approval of this TMDL. The reporting period for this annual report should be the previous fiscal year. For example, the report submitted January 31, 2006 would cover the reporting period July 1, 2004 to June 30, 2005. The report should be incorporated in the annual Jurisdictional URMP Annual Report and the Watershed Specific URMP Annual Reports under the County's MS4 NPDES Permit and include the following information:

[16] Consideration should be given to expanding the County of San Diego's ongoing community and education outreach program under the County's MS4 NPDES Storm Water Permit to address the Rainbow Creek nutrient impairment problem. Additional suggestions for the information to be included in pollution prevention and education programs is contained in the State Water Resources Control Board's *California Nonpoint Source Encyclopedia* (2004) (**http://www.waterboards.ca.gov/nps/encyclopedia.html**)

[17] Information on available grant funds is contained in the State Water Resources Control Board's California Nonpoint Source Encyclopedia (2004) (http://www.waterboards.ca.gov/nps/encyclopedia.html).

Comprehensive description of all activities conducted by the County of San Diego to oversee implementation of the NRMP.

b. An accounting of all: inspections conducted; enforcement actions taken; and education efforts conducted.

c. An assessment of whether actions to implement designated minimum MPs at each nutrient source were actually carried out by dischargers.

d. An assessment of the compliance of runoff or groundwater discharges with the load reductions from each of the land use categories assigned a load reduction.

e. Identification of water quality improvements or degradation in Rainbow Creek with regard to attainment of the nutrient water quality objectives.

f. An evaluation of the effectiveness of the NRMP in achieving the nutrient load reductions required under this TMDL.

## D. Discharger Actions

### 1. State of California, Department of Transportation (Caltrans) Actions

Caltrans shall take all actions necessary to meet the nutrient wasteload reductions assigned to Caltrans. These nutrient wasteload reductions will eventually be incorporated into Caltrans statewide NPDES storm water permit. It is assumed that compliance with the nutrient wasteload reductions will be accomplished through the development and implementation of best management practices (BMPs). Caltrans shall also prepare and submit progress reports in accordance with the Caltrans statewide NPDES storm water permit or as otherwise directed by the Regional Board in a Water Code section 13383 order.

### 2. State of California Department of Forestry and Fire Protection (CDFFP) Actions

CDFFP shall, upon direction by the Regional Board in a Water Code section 13267 order, undertake an investigation to 1) evaluate whether CDFFP's discharge is surfacing and/or contributing to the impairment of Rainbow Creek; and 2) estimate the actual nutrient load to Rainbow Creek from groundwater flow originating from the septic tank and percolation ponds.

### 3. Nonpoint Source Dischargers (NPS Dischargers) Actions

NPS discharges of nutrients in the Rainbow Creek watershed result from (1) commercial nurseries; (2) agricultural fields; (3) orchards; (4) parks; (5) residential areas; (6) urban areas; and (7) septic tank disposal system land use activities. Individual landowners and other persons (NPS Dischargers) engaged in these land use activities shall implement pollution prevention[18] methods and increase the use of applicable management measures and practices[19] where needed to control and reduce nutrient discharges to Rainbow Creek and attain nutrient load reductions. Individual landowners and other persons are encouraged to seek grant funding[20] for projects to implement the Rainbow Creek nutrient TMDLs, particularly those that can achieve quantifiable nutrient load reductions consistent with the specific nutrient TMDL load allocations.

[18] Pollution Prevention is defined as practices and processes that reduce or eliminate the generation of pollutants, in contrast to source control, treatment, or disposal.

[19] In determining appropriate management methods and practices to control nutrient discharges interested persons are encouraged to consult the State Water Resources Control Board's California Nonpoint Source Encyclopedia (2004) (http://www.waterboards.ca.gov/nps/encyclopedia.html. This publication contains extensive information on nutrient reduction management measures (MMs) and management practices (MPs) applicable to the NPS land use activities in the Rainbow Creek watershed. Interested persons are also encouraged to consult the Regional Board's Watershed Management Approach for the San Diego Region, Nonpoint Source (**http://www.waterboards.ca.gov/sandiego/programs/wmc**.html) for additional information on management measures.

[20] Information on available grant funds is contained in the in the State Water Resources Control Board's *California Nonpoint Source Encyclopedia* (2004) (http://www.waterboards.ca.gov/nps/encyclopedia.html).

NPS dischargers will be subject to Regional Board enforcement action for failing to: comply with applicable waiver conditions, waste discharge requirements (WDRs), discharge prohibitions; attain compliance with the nutrient load reductions specified in this TMDL; or attain compliance with the nutrient water quality objectives. The Regional Board may also terminate the applicability of waivers and issue waste discharge requirements to any NPS dischargers failing to comply with waiver conditions.

# *TMDL IMPLEMENTATION MONITORING PLAN*

The necessary actions to monitor TMDL implementation are described in section 10 of the *Technical Report for Total Nitrogen and Total Phosphorus Total Maximum Daily Loads (TMDLs) in Rainbow Creek*, dated February 9, 2005 and listed below.

## A. Regional Board Actions

### 1. Issue Order to Submit Monitoring Plan to Caltrans and County of San Diego

The Regional Board shall issue an Order to Caltrans under Water Code section 13383 and a Governmental Water Quality Investigation Request Order to the County of San Diego under Water Code section 13225, to prepare and submit an Implementation Monitoring Plan containing the elements described in **Section C. Implementation Monitoring Plan Elements** below. The Regional Board may amend this order at any time to include other nutrient dischargers in the Rainbow Creek watershed on a case-by-case basis.

### 2. Issue Order to Implement Monitoring Plan to Caltrans and County of San Diego

Upon concurrence with the County of San Diego's and Caltrans' Implementation Monitoring Plan the Regional Board shall issue an Order to Caltrans under Water Code section 13383 and a Governmental Water Quality Investigation Request Order to the County of San Diego under Water Code section 13225, to implement monitoring. The Regional Board may amend this order at any time to include other nutrient dischargers in the Rainbow Creek watershed on a case-by-case basis.

## B. County of San Diego and Caltrans Actions

### 1. Prepare and Submit Monitoring Plan

The County of San Diego and Caltrans shall collaborate to prepare and submit an Implementation Monitoring Plan for the Rainbow Creek watershed containing the elements described in **Section C. Implementation Monitoring Plan Elements** below, upon direction by the Regional Board in a Water Code section 13225 / Water Code section 13383 Order. The number of monitoring stations in Rainbow Creek assigned to Caltrans should be based on the number of stations needed by Caltrans to demonstrate compliance with the nutrient wasteload allocation and the success of the TMDL in attaining the nutrient water quality objective in the portion of Rainbow Creek affected by its discharge. The Implementation Monitoring Plan shall be modified as requested by the Regional Board.

### 2. Implement Monitoring Plan

The County of San Diego and Caltrans shall implement the Implementation Monitoring Plan upon direction by the Regional Board pursuant to a Water Code section 13225 / section 13383 Order. The Regional Board may amend this order at any time to include other nutrient dischargers in the Rainbow Creek watershed on a case-by case basis.

## C. Implementation Monitoring Plan Elements

The Implementation Monitoring Plan shall contain the following elements:

### 1. Surface Water Monitoring Stations

Monitoring stations shall be proposed that best serve the monitoring objectives described above in section 10.2 Monitoring Objectives. Previously monitored locations that shall be considered include Jubilee, Hines Nursery, Oak Crest, Rainbow Glen Tributary, Margarita Glen Tributary, Willow Glen-4, Willow Glen Tributary, Riverhouse, Via Milpas Tributary, and Stage Coach (See Figure A-3, in Appendix A). An additional sampling location between Oak Crest and Willow Glen-4 should also be considered. For instance, a monitoring location might be placed downstream of Oak Crest Mobile Estates to assess nutrient loading from this property. Monitoring stations shall also be considered at strategic nodes in Rainbow Creek and its tributaries that would monitor nutrient discharges from individual sources of a common land use category.

### 2. Groundwater Monitoring Stations

The location of existing wells and the proposed location of additional monitoring wells needed to define nutrient concentration trends in groundwater. Methods for purging and sampling monitoring wells to provide representative samples for the waste constituents of interest should be described.

### 3. Surface Water Monitoring Frequency

Monitoring frequencies of the various monitoring parameters shall be proposed that best serve the monitoring objectives described above in section 10.2 Monitoring Objectives. The frequencies should be adequate to evaluate ambient conditions and address any impact from low dissolved oxygen concentrations and algal growth.

### 4. Groundwater Monitoring Frequency

Monitoring frequencies of the various monitoring parameters shall be proposed that best serve the monitoring objectives described above section 10.2 Monitoring Objectives. The magnitude and timing of nutrient variability may vary significantly in monitoring wells that are located varying distances from nutrient sources. Sampling these wells will likely obtain water from varying depths in the aquifer. To define the nitrate variability at each well, the network will be sampled quarterly for two years. The observed variability will serve as a basis for determining the long-term sampling frequency for the network.

### 5. Surface Water Quality Parameters

Surface Water Quality Parameters shall include nitrogen (including nitrate, nitrite, ammonia and total Kjeldahl nitrogen (TKN), phosphorus (including orthophosphate and total), dissolved oxygen, pH, turbidity, and temperature.

### 6. Groundwater Quality Parameters

Groundwater Quality Parameters shall include total nitrogen, nitrate, ammonia, nitrites, TKN, orthophosphate, total phosphorus, pH, dissolved oxygen and TDS.

### 7. Hydrology

Flow rate measurements shall be taken to calculate nutrient loading, to provide additional information about the hydrology of the watershed, and to identify patterns in algal growth.

## 8. Algal Biomass

Characterization of algal species composition is needed to provide a more reliable indicator of trophic status and evidence of nutrient condition (USEPA, 2000). The growth of algae is stimulated principally by nutrients such as nitrogen and phosphorus, but also requires adequate water temperature, light, flow, and dissolved oxygen. It is assumed at this time that both factors are co-limiting. Characterization of algal species composition may give a better understanding of the relationships between all the factors that affect algal growth, including sunlight, nitrogen, phosphorus, temperature, and dissolved oxygen. Algal biomass should be quantified by mass and/or by % cover of bottom. Collection and measurement of algal biomass should be performed uniformly or by a standardized method.

## 9. Biological Assessment Monitoring

It is recommended that biological assessment monitoring of benthic microinvertebrates be performed at a minimum of three stations on Rainbow Creek and a reference stream. Biological assessment monitoring should be performed in accordance with the California Stream Bioassessment Methods Manual (Harrington and Born, 2000). Changes in the stream's biological integrity (e.g., an increase or decrease in diversity and abundance of sensitive species) could be used as an indicator of changes in the health of the creek. Sampling done in 1998-99 for the San Diego Ambient Bioassessment Program (CDFG, 2000) indicates that benthic macroinvertebrate communities vary seasonally. The seasonal trend could be due in part to rainfall and consequent streamflow conditions (e.g., scouring). Thus, sites should be sampled for benthic macroinvertebrates at least twice each year: once during the spring (i.e., May), and again in the fall (preferably in October).

## 10. Monitoring Reports

Monitoring reports shall be submitted in both electronic and paper formats and include the following information:

a. An executive summary addressing all sections of the monitoring report, comprehensive interpretations and conclusions, and recommendations for future actions.

b. A description of monitoring station locations by latitude and longitude coordinates, frequency of sampling, quality assurance / quality control procedures and sampling and analysis protocols.

c. The data/results, methods of evaluating the data, graphical summaries of the data, and an explanation / discussion of the data.

d. An assessment of the compliance of runoff characteristics with the required load reductions from each of the land use categories assigned a load reduction.

e. Identification and analysis of trends in surface and groundwater quality and assessment of compliance with nutrient water quality objectives.

f. An evaluation of the effectiveness of the TMDL implementation actions and the need for revisions to improve the implementation action plan.

**Table 7-17. Required Monitoring Parameters**

| Parameter | Type of Sample[1] |
|---|---|
| Surface Water Monitoring | |
| Total nitrogen, nitrate, ammonia[2], nitrates, TKN, orthophosphate, and total phosphorus concentrations. | Grab |
| Temperature | In situ |
| pH | In situ |
| Dissolved oxygen | In situ |
| Turbidity | In situ |
| TDS | Grab |
| Flow rate | Field measurement |
| Algal biomass (% cover of bottom and/or Chl a/ash free dry weight (AFDM)) | In situ and / or grab |
| Benthic macroinvertebrate community analysis (recommended) | Grab |
| Groundwater Monitoring | |
| Total nitrogen, nitrate, ammonia[2], nitrites, TKN, orthosphosphate, and total phosphorus concentrations | Grab |
| pH | Grab or In situ |
| Dissolved Oxygen | Grab or In situ |
| TDS | Grab or In situ |

1. A California certified laboratory should be used with an approved QA/QC plan.
2. All laboratory detection limits should be sufficient to determine compliance with the water quality objective. For example, un-ionized ammonia in surface waters (25 µg/L).

## 11. Quality Assurance/ Quality Control Plan

The monitoring program shall develop and implement a QA/QC plan for field and laboratory operations to ensure that data collected are of adequate quality given the monitoring objectives[21]. The QA/QC plan for field operations shall cover the following, at a minimum:

a. Quality assurance objectives;
b. Sample container preparation, labeling and storage;
c. Chain-of-custody tracking;
d. Field setup;
e. Sampler equipment check and setup;
f. Sample collection;
g. Use of field blanks to assess field contamination;
h. Use of field duplicate samples;
i. Transportation to the laboratory;
j. Training of field personnel; and
k. Evaluation, and enhancement if needed of the QA/QC plan.

The QA/QC plan for laboratory operations shall cover the following, at a minimum:
a. Quality assurance objectives;
b. Organization of laboratory personnel, their education, experience, and duties;
c. Sample procedures;
d. Sample custody;
e. Calibration procedures and frequency;
f. Analytical procedures;
g. Data reduction, validation, and reporting;
h. Internal quality control procedures;
i. Performance and system audits;

[21] For more information on QA/QC activities, including guidelines and example QA/QC documents, refer to http://www.waterboards.ca.gov/swamp/qapp.html

Preventive maintenance;

k. Assessment of accuracy and precision;
l. Correction actions; and
m. Quality assurance report.

**12. Reporting Period**

Annual reports should cover the period of October 1 through September 30. The reports should be submitted to the Regional Board by January 31 of the following year and should be incorporated within the annual receiving water monitoring reports required under the County of San Diego's MS4 NPDES Permit Receiving Waters Monitoring and Reporting Program.[22]

**13. Reporting Frequency**

The first report shall be due in the first January following initiation of the monitoring program. Reporting shall continue on an annual basis until the nutrient water quality objective has been attained and maintained in Rainbow Creek.

## Compliance Schedule

Total nitrogen and total phosphorus reductions are required over a 16-year phased compliance schedule period during which incremental load and wasteload reductions are required as shown in Table 7-18, below. Twenty percent (20%) reductions are required every fourth year for the first three phases (by the end of year 12). The last (fourth) phase requires the remaining 14% total nitrogen reduction and 25% total phosphorus reduction needed to meet the TMDLs.

**Table 7-18. Total Nitrogen and Total Phosphorus Phased Load Reduction Compliance Schedule**

| | | | | |
|---|---|---|---|---|
| | 3,055[1] | | 278[1] | |
| 12/31/2009 | 2,444 | 20 | 222 | 20 |
| 12/31/2013 | 1,833 | 40 | 167 | 40 |
| 12/31/2017 | 1,222 | 60 | 111 | 60 |
| 12/31/2021 | 796 | 74 | 41 | 85 |

[1] Current annual nutrient loads from identified point and nonpoint sources (See Table 7-12). This value does not include the contribution for background.

Regardless of what actions are taken to achieve load and wasteload reductions, there may not be an immediate response in the water quality or biological condition of Rainbow Creek. For example, there may be significant time lags between when actions are taken to reduce nutrient loads and resulting changes in nutrient concentrations in Rainbow Creek. This is especially likely if nutrients from past activities are tightly bound to sediments or if nutrient-contaminated groundwater has a long residence time before its release to Rainbow Creek waters. A three-year response time is projected for Rainbow Creek to attain compliance with nutrient water quality objectives after reaching the desired nutrient wasteload and load reductions in 2021. Accordingly the projected date when Rainbow Creek will attain and maintain compliance with nutrient water quality objectives is December 31, 2024.

[22] The term "MS4 NPDES Storm Water Permit" currently refers to Order No.2001-001, NPDES No. CAS0108758, Waste Discharge Requirements For Discharges Of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego, the Incorporated Cities Of San Diego County, and the San Diego Unified Port District or subsequent superceding NPDES renewal Orders. Attachment B to this Order contains the Receiving Waters Monitoring and Reporting Program for Order No. 2001-01. The annual receiving water monitoring report is described in Table 6, Item 28, page 51 of Order No. 2001-01.

Pursuant to Water Code section 13141 the Regional Board has estimated the TMDL Implementation Program cost for agricultural water quality control in Table 7-19.

**Table 7-19. Cost of Implementing Agricultural Water Quality Control**

| | Initial Capital Costs $ per Operation | | Annual Operational Costs $ per Operation | |
|---|---|---|---|---|
| | **Low** | **High** | **Low** | **High** |
| Commercial Nurseries | $26 | $41,075 | $3 | $4,108 |
| Orchards | $26 | $57,705 | $3 | $5,771 |
| Agricultural Fields | $26 | $57,705 | $3 | $5,771 |

Potential sources of financing include:

- Federal Clean Water Act Section 319(h) grants.
- Federal Clean Water Act Section 205(j) grants.
- State of California Proposition 13 funded grants.
- Small Communities Grants for Water Reclamation and Wastewater Treatment Facilities.
- Other state, federal and business loans, grants, and other assistance programs. These may include assistance from U.S. Small Business Administration and from conservation programs through various agencies such as the U.S. Department of Agriculture and Natural Resource Conservation Service.
- Various secured and unsecured loans, including home equity loans and business loans.

# *METHOD FOR RECALCULATION OF THE TOTAL MAXIMUM DAILY LOADS FOR NITROGEN AND PHOSPHORUS IN RAINBOW CREEK*

This section describes the method for recalculating Rainbow Creek TMDLs for nitrogen and phosphorus if the water quality objectives are modified in the future.

**Numeric Target**

The numeric targets are set equal to the new water quality objectives.

**Margin of Safety**

The explicit margin of safety (MOS) equals five percent of the loading capacity. The equation to calculate the loading capacity is given below.

**Loading Capacity**

The annual total nitrogen loading capacity is determined by multiplying the flow volume (in $ft^3$/yr) by the new water quality objective (in mg N/L) that will allow the creek to attain water quality standards. The equations below also use terms to convert milligrams to kilograms and cubic feet to liters. The loading capacity for nitrogen is as follows:

Low Flow (0-2.9 cfs)

17,764 * 1 e–3 $ft^3$/yr * **new water quality objective** in mg N/L * 28.32 L/$ft^3$ * 1 e –6 kg/mg

= **new low flow loading capacity** in kg N/yr

Moderate – High Flow (3 – 39 cfs)

40,775 * 1 e–3 $ft^3$/yr * **new water quality objective** in mg N/L * 28.32 L/$ft^3$ * 1 e –6 kg/mg

= **new moderate - high flow loading capacity** in kg N/yr

**Total Annual Nitrogen Loading Capacity = sum of low flow and moderate - high flow loading capacity**

Similarly, the annual total loading capacity for phosphorus is as follows:

Low Flow (0-2.9 cfs)

17,764 * 1 e–3 $ft^3$/yr * **new water quality objective** in mg P/L * 28.32 L/$ft^3$ * 1 e –6 kg/mg

= **new low flow loading capacity** in kg P/yr

Moderate – High Flow (3 – 39 cfs)

40,775 * 1e–3 $ft^3$/yr * **new water quality objective** in mg P/L * 28.32 L/$ft^3$ * 1 e –6 kg/mg

=**new moderate-high flow loading capacity** in kg P/yr

**Total Annual Phosphorus Loading Capacity** = **sum of low flow and moderate - high flow loading capacity**

## Total Maximum Daily Load

The TMDLs for nitrogen and phosphorous are set equal to the total annual loading capacity for each pollutant. The allocations in Table 7-20 below use the following equation to determine the total load allocations for nonpoint sources (LA) by subtracting background, the margin of safety (MOS), and the point source waste load allocations (WLA) from the TMDL.

$$TMDL = \sum(WLA) + \sum(LA) + Background + MOS$$

## Allocations

The allocations of the total annual nitrogen and phosphorous loading capacities to the margin of safety, background, and various point and non-point sources are presented in Table 7-20.

**Table 7-20. Total Nitrogen and Phosphorus Allocations for Rainbow Creek TMDL**

| Source | Nitrogen Allocation | Phosphorus Allocation |
|---|---|---|
| Margin of Safety (MOS) | 5%[1] | 5%[1] |
| Background | 779 kg | 116 kg |
| Caltrans (WLA) | New WQO * volume of Caltrans runoff | New WQO * volume of Caltrans runoff |
| Unidentified and Future Point Sources (WLA) | 2%[1] | 2%[1] |
| **Total Allocation for Nonpoint Sources (LA)** = Total Annual Loading Capacity – MOS – Background – Caltrans – Unidentified and Future Point Sources | | |
| Commercial nurseries | 16%[2] | 9%[2] |
| Agricultural fields | 21%[2] | 12%[2] |
| Orchards | 25%[2] | 18%[2] |
| Park | 0.4% | 0.3% |
| Residential areas | 21%[2] | 36%[2] |
| Urban areas | 4%[2] | 18%[2] |
| Septic tank disposal systems | 6%[2] | 0%[2] |
| Air deposition | 6%[2] | 6%[2] |

[1] percent of the total annual nitrogen and phosphorus loading capacity

[2] percent of the total allocation for nonpoint sources

# *COPPER, LEAD, AND ZINC IN CHOLLAS CREEK*

On June 13, 2007, the Regional Board adopted Resolution No. R9-2007-0043, *Amendment to the Water Quality Control Plan for the San Diego Region to Incorporate Total Maximum Daily Loads for Dissolved Copper, Lead and Zinc in Chollas Creek, Tributary to San Diego Bay*. The TMDL Basin Plan Amendment was subsequently approved by the State Water Resources Control Board on July 15, 2008, the Office of Administrative Law on October 22, 2008, and the USEPA on December 18, 2008.

## *PROBLEM STATEMENT*

Dissolved copper, lead and zinc concentrations in Chollas Creek violate numeric water quality criteria for copper, lead, and zinc promulgated in the California Toxics Rule, and the narrative objective for toxicity. Concentrations of these metals in Chollas Creek threaten and impair the designated beneficial uses of warm freshwater habitat (WARM), and wildlife habitat (WILD).

## *NUMERIC TARGETS*

The TMDL numeric targets for copper, lead, and zinc are set equal to the numeric water quality criteria as defined in the California Toxics Rule (CTR) and shown below. Because the concentration of a dissolved metal causing a toxic effect varies significantly with hardness, the water quality criteria are expressed in the CTR as hardness based equations. The numeric targets are equal to the loading capacity of these metals in Chollas Creek.

**Table 7-21. Water Quality Criteria /Numeric Targets for dissolved metals in Chollas Creek**

| Metal | Numeric Target for Acute Conditions: Criteria Maximum Concentration | Numeric Target for Chronic Conditions: Criteria Continuous Concentration |
|---|---|---|
| Copper | (1) * (0.96) * {e^ [0.9422 * ln (hardness) - 1.700]} | (1) * (0.96) * {e^[0.8545 * ln (hardness) - 1.702]} |
| Lead | (1) * {1.46203 – [0.145712 * ln (hardness)]} * {e^ [1.273 * ln (hardness) - 1.460]} | (1) * {1.46203 – [0.145712 * ln hardness)]} * {e^[1.273 * ln (hardness) - 4.705]} |
| Zinc | (1) * (0.978) * {e^ [0.8473 * ln (hardness) + 0.884]} | (1) * (0.986) * {e^[0.8473 * ln (hardness) + 0.884]} |

## *SOURCE ANALYSIS*

The vast majority of metals loading to Chollas Creek are believed to come through the storm water conveyance system. An analysis of source contributions reveals many land uses and activities associated with urbanization to be potential sources of copper, lead and zinc to Chollas Creek. Modeling efforts point toward freeways and commercial/industrial land uses as the major contributors.

## *TOTAL MAXIMUM DAILY LOADS*

The TMDLs for dissolved copper, lead and zinc in Chollas Creek are concentration-based and set equal to 90 percent of the numeric targets/loading capacity.

## *MARGIN OF SAFETY*

The TMDL includes an explicit margin of safety (MOS). Ten percent of the loading capacity was reserved as an explicit MOS.

## *ALLOCATIONS AND REDUCTIONS*

The source analysis showed that nonpoint sources and background concentrations of metals are insignificant, and thus, were set equal to zero in the TMDL calculations. The wasteload allocations are set equal to 90 percent of the numeric targets/loading capacity. Concentrations of dissolved copper, lead and zinc require significant reductions from current concentrations to meet the loading capacity.

## *TMDL IMPLEMENTATION PLAN*

Persons whose point source discharges contribute to exceedance of Water Quality Criteria (WQC) for copper, lead, and zinc in Chollas Creek will be required to meet the WLA hardness dependant concentrations in their urban runoff discharges before it is discharged to Chollas Creek. Actions to meet the WLAs in discharges to Chollas Creek will be required in WDRs that regulate MS4 discharges, industrial facility and construction activity stormwater discharges, and groundwater extraction discharges in the Chollas Creek watershed. The following orders may be reissued or revised by the Regional Board to include requirements to meet the WLAs. Alternatively, the Regional Board may issue new WDRs to meet the WLAs.

**Order No. 2007-0001**, NPDES No. CAS0108758, *Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems Draining the Watersheds of the County of San Diego, the Incorporated Cities of San Diego County, and the San Diego Unified Port District*, or subsequent superceding NPDES renewal orders.

**Order No. 2000-90**, NPDES No. CAG19001, *General Waste Discharge Requirements for Temporary Groundwater Extraction and Similar Waste Discharges to San Diego Bay and Storm Drains or other Conveyance Systems Tributary Thereto*, or subsequent superceding NPDES renewal orders.

**Order No. 2001-96**, NPDES No. CAG 919002, *General Waste Discharge Requirements for Groundwater Extraction Waste Discharges from Construction, Remediation and Permanent Groundwater Extraction Projects to Surface Waters within the San Diego Region Except for San Diego Bay* or subsequent superceding NPDES renewal orders.

**Order No. 97-11**, *General Waste Discharge Requirements for Post-Closure Maintenance of Inactive Nonhazardous Waste Landfills within the San Diego Region* or subsequent superceding NPDES renewal orders.

The Regional Board shall request the State Water Resources Control Board amend the following statewide orders:

**Order No. 99-06-DWQ**, NPDES No. CAS000003, *National Pollutant Discharge Elimination System (NPDES) Permit, Statewide Storm Water Permit, and Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation (Caltrans)*, or subsequent superceding NPDES renewal orders.

**Order No. 97-03-DWQ**, NPDES No. CAS 000001, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities*, or subsequent superceding NPDES renewal orders.

**Order No. 2003-0005-DWQ**, NPDES No. CAS000004, *Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems*, or subsequent superceding NPDES renewal orders.

**Order No. 99-08-DWQ**, NPDES No. CAS000002, *General Permit for Storm Water Discharges Associated with Construction Activity*, or subsequent superceding NPDES renewal orders.

The Regional Board shall require the U.S. Navy to submit a Notice of Intent to enroll the Naval Base San Diego facility under statewide Order No. 2003-005-DWQ or subsequent superseding NPDES renewal orders.

## *IMPLEMENTATION MONITORING PLAN*

The dischargers will be required to monitor Chollas Creek and provide monitoring reports to the Regional Board for the purpose of assessing the effectiveness of the management practices implemented to meet the TMDL allocations. The Regional Board shall amend the following order to include a requirement that the cities of San Diego, Lemon Grove, and La Mesa, the County of San Diego, the San Diego Unified Port District, and CalTrans investigate excessive levels of metals in Chollas Creek and feasible management strategies to reduce metal loadings in Chollas Creek, and conduct additional monitoring to collect the data necessary to refine the watershed wash-off model to provide a more accurate estimate of the mass loads of copper, lead and zinc leaving Chollas Creek each year.

**Order No. R9-2004-0277**, *California Department of Transportation and San Diego Municipal Separate Storm Sewer System Copermittees Responsible for the Discharge of Diazinon into the Chollas Creek Watershed, San Diego, California.*

## *SCHEDULE OF COMPLIANCE*

Concentrations of metals in urban runoff shall only be allowed to exceed the WLAs by a certain percentage for the first nineteen years after initiation of this TMDL. Allowable concentrations shall decrease as shown in Table 7-22. For example, if the measured hardness in year ten dictates the WLA for copper in urban runoff is 10 µg/l, the maximum allowable measured copper concentration would be 12.0 µg/L. By the end of the twentieth year of this TMDL, the WLAs of this TMDL shall be met. This will ensure that copper, lead and zinc water quality objectives are being met at all locations in the creek during all times of the year.

**Table 7-22. Interim goals for achieving Wasteload Allocations**

| | **Allowable Exceedance of the WLAs (allowable percentage above)** | | |
|---|---|---|---|
| **Compliance Year** | **Copper** | **Lead** | **Zinc** |
| 1 | 100% | 100% | 100% |
| 10 | 20% | 20% | 20% |
| 20 | 0% | 0% | 0% |

Compliance with the interim goals in this schedule can be assessed by showing that dissolved metals concentrations in the receiving water exceed the WQC for copper, lead, and zinc by no more than the allowable exceedances for WLAs shown in the table above. Regulated groundwater discharges to Chollas Creek must meet the WLAs at the initiation of the discharge. No schedule to meet interim goals will be allowed in the case of groundwater discharges.

**Table 7-23. Compliance Schedule**

| | | | |
|---|---|---|---|
| 1 | Effective date of Chollas Creek Metals TMDL Waste Load Allocations. | San Diego Water Board, Municipal Dischargers, Caltrans, Navy, Industrial Stormwater Dischargers, Construction Stormwater Dischargers, Landfill Stormwater Dischargers | October 22, 2008[23] |
| 2 | Recommend High Priority for grant funds. | San Diego Water Board | Immediately after effective date |
| 3 | Submit annual Progress Report to San Diego Water Board due January 1 of each year. | Municipal Dischargers | Annually after reissue of NPDES WDRs. |
| 4 | Submit annual Progress Report to San Diego Water Board due April 1 of each year. | Caltrans | Annually after reissue of NPDES WDRs. |
| 5 | Submit annual Progress Report to San Diego Water Board due July 1 of each year. | Industrial Stormwater Dischargers | Annually after reissue of NPDES WDRs. |
| 6 | Submit annual Progress Report to San Diego Water Board due July 1 of each year. | Construction Stormwater Dischargers | Annually after reissue of NPDES WDRs. |
| 7 | Municipal NPDES WDRs shall be issued, reissued, or revised to include WQBELs consistent with the assumptions and requirements of the Chollas Creek WLAs. | San Diego Water Board | Within 5 years of effective date |
| 8 | Caltrans NPDES WDRs shall be issued, reissued, or revised to include WQBELs consistent with the assumptions and requirements of the Chollas Creek WLAs. | State Water Board | Within 5 years of effective date |
| 9 | Construction NPDES WDRs shall be issued, reissued, or revised to include WQBELs consistent with the assumptions and requirements of the Chollas Creek WLAs. | State Water Board | Within 5 years of effective date |
| 10 | Industrial NPDES WDRs shall be issued, reissued, or revised to include WQBELs consistent with the assumptions and requirements of the Chollas Creek WLAs. | State Water Board | Within 5 years of effective date |
| 11 | Amend Orders No. 2000-90, and No. 2001-96 (or superseding renewal orders) which regulates temporary groundwater extraction discharges to San Diego Bay and its tributaries to include WQBELs consistent with the assumptions and requirements of the Chollas Creek WLAs. | San Diego Water Board | Within 5 years of effective date |
| 12 | Municipal and Navy WDR Order No. R9-2004-0277 shall amended to require additional monitoring for metals and hardness. | San Diego Water Board | Within 5 years of effective date |
| 13 | Landfill NPDES WDR Order No. 97-11 (or superseding renewal orders) shall be issued, reissued, or revised to monitor for metals and hardness. | San Diego Water Board | Within 5 years of effective date |
| 14 | Navy and all other Phase II small MS4 permittees in the Chollas Creek watershed shall be enrolled in Order No. 2003-0005-DWQ (or superseding renewal orders). | San Diego Water Board | Immediately after effective date. |
| 15 | Take enforcement actions | San Diego Water Board | As needed after effective date. |

[23] Upon approval of by Office of Administrative Law.

| | | | |
|---|---|---|---|
| 16 | Meet 80% Chollas Creek Metals TMDL WLA reductions. | Municipal Dischargers, Caltrans, Navy, Industrial Stormwater Dischargers, Construction Stormwater Dischargers, Landfill Stormwater Dischargers | 10 years after effective date. |
| 17 | Meet 100% Chollas Creek Metals TMDL WLA reductions. | Municipal Dischargers, Caltrans, Navy, Industrial Stormwater Dischargers, Construction Stormwater Dischargers, Landfill Stormwater Dischargers | 20 years after effective date. |

# *TOTAL MAXIMUM DAILY LOADS FOR INDICATOR BACTERIA, BABY BEACH AND SHELTER ISLAND SHORELINE PARK SHORELINES*

On June 11, 2008, the San Diego Water Board adopted Resolution No. R9-2008-0027, *A Resolution Amending the Water Quality Control Plan for the San Diego Region (9) to Incorporate Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay*. The TMDL Basin Plan Amendment was subsequently approved by the State Water Resources Control Board on June 16, 2009, the Office of Administrative Law on September 15, 2009, and the USEPA on October 26, 2009.

## *PROBLEM STATEMENT*

Bacteria densities along the shoreline segments of Baby Beach within Dana Point Harbor and Shelter Island Shoreline Park within San Diego Bay violate water quality objectives (WQOs) for indicator bacteria. Bacteria densities in waters at these shoreline segments unreasonably impair and threaten to impair the water quality needed to support designated beneficial uses of contact recreation (REC-1)[24].

The federal Clean Water Act requires the establishment of Total Maximum Daily Loads (TMDLs) for pollutants that exceed water quality objectives needed to support designated beneficial uses, i.e., that cause or contribute to violation of state "water quality standards."

## *NUMERIC TARGETS*

When calculating TMDLs, numeric targets are established to meet WQOs and subsequently ensure the protection of beneficial uses. The numeric targets for these TMDLs consist of the REC-1 WQOs for indicator bacteria contained in the Basin Plan. TMDLs were calculated for each impaired waterbody, for each indicator bacteria, for wet and dry weather. The numeric targets used in the TMDL calculations were equal to the WQOs for bacteria for REC-1.

Different dry weather and wet weather numeric targets were used for load calculations because the bacteria transport mechanisms to receiving waters are different under wet and dry weather conditions.

Single sample maximum WQOs were used as wet weather numeric targets. Dry weather numeric targets are typically best represented by geometric mean WQOs. However, due to extreme diurnal variations in bacteria densities that can result from tidal effects, in some cases the maximum hourly concentration could regularly exceed the single sample maximum WQOs. Therefore, both the REC-1 30-day geometric mean and single sample maximum WQOs were selected as numeric targets for dry weather. The numeric targets were equal to the total coliform, fecal coliform and *Enterococcus* WQOs for REC-1 in all cases.

The numeric targets for the scenarios described above are listed in the following tables:

[24] Water quality objectives for indicator bacteria in waters with non-water-contact recreation (REC-2) are less stringent than the water quality objectives for REC-1, therefore, attainment of REC-1 objectives through the implementation of TMDLs will, *a fortiori,* provide the requisite water quality for REC-2.

**Table 7-24. Wet Weather Numeric Targets**

| Basis for Numeric Target | Total Coliform (MPN/100mL) | Fecal Coliform (MPN/100mL) | Enterococcus (MPN/100mL) |
|---|---|---|---|
| **Beneficial Use** | **REC-1** | **REC-1** | **REC-1** |
| Single sample maximum | 10,000 | 400 | 104 |

**Table 7-25. Dry Weather Numeric Targets**

| Basis for Numeric Target | Total Coliform (MPN/100mL) | Fecal Coliform (MPN/100mL) | Enterococcus (MPN/100mL) |
|---|---|---|---|
| **Beneficial Use** | **REC-1** | **REC-1** | **REC-1** |
| 30-day geometric mean | 1,000 | 200 | 35 |
| Single sample maximum | 10,000 | 400 | 104 |

## *SOURCE ANALYSIS*

Sources of bacteria are the same under both wet weather and dry weather conditions. Bacteria can enter surface waters from both nonpoint and point sources. Nonpoint sources are typically diffuse sources that have multiple routes of entry into surface waters. Point sources typically discharge at a specific location from pipes, outfalls, and conveyance channels.

The only nonpoint sources identified to potentially affect the waterbodies addressed by these TMDLs were natural sources (e.g., direct inputs from birds, terrestrial and aquatic animals, wrack line and aquatic plants, sediments, or other unidentified or unquantified sources within the receiving waters), homeless encampments, or other background sources (e.g., “ambient” bacteria that may be influenced by illegal discharges from boats). Because the homeless encampments are illegal, these loads are not allowed and must be eliminated. Due to lack of data, bacteria loads from natural sources or other background sources could not be specifically identified or quantified for TMDL development. Until more information is obtained through further study to provide identification of the relative loading from each of these potential sources, they were combined into a single natural and background source for each shoreline segment.

The point sources identified to potentially affect the waterbodies addressed in this study were discharges from municipal separate storm sewer systems (MS4s) and illegal discharges from boats and/or wastewater collection systems and treatment plants. Because the Basin Plan includes waste discharge prohibitions specifically for the discharge of treated or untreated sewage from vessels to Dana Point Harbor and San Diego Bay and the unauthroized discharge of treated or untreated sewage to waters of the state, illegal discharges from boats and wastewater collection systems and treatment plants are not allowed must be eliminated. The watersheds that drain into the receiving waters at the impaired shoreline segments are wholly located within urbanized areas. Therefore, the only allowable point source identified was urban runoff discharged from MS4s, although other point sources may exist.

For both wet weather and dry weather conditions, there are natural and background sources of bacteria within the receiving waters at the impaired shoreline segments. However, for sources of bacteria that originate from the watersheds draining into the receiving waters, the method of transport for the two conditions is very different. Wet weather loading originating from the watersheds is dominated by episodic storm flows that wash off bacteria that build up on the surface of all land use types in the watershed during dry periods. Dry weather loading originating from the watersheds is dominated by nuisance flows from urban land use activities such as car washing, sidewalk washing, and lawn over-irrigation, which pick up bacteria and deposit it into receiving waters.

## *TOTAL MAXIMUM DAILY LOADS AND ALLOCATIONS*

The TMDLs are equal to the assimilative or loading capacity of each shoreline segment for each pollutant. TMDLs for each type of indicator bacteria were developed for each impaired waterbody. TMDLs are defined as the maximum amount of a pollutant the waterbody can receive and still attain water quality objectives and protection of designated beneficial uses. Once calculated, a TMDL is set equal to the sum of all individual Waste Load Allocations (WLAs) for point sources and Load Allocations (LAs) for nonpoint sources. The TMDL includes a margin of safety (MOS) that takes into account any uncertainties in the TMDL calculation, which may be explicit or implicit. For these TMDLs, an implicit margin of safety is included via conservative estimates and assumptions used throughout the TMDL calculations. Separate TMDLs were calculated for wet weather and dry weather conditions to account for seasonal variations, and because the transport mechanism, flow, and bacteria loads from the watersheds draining to the receiving waters are different between dry and wet weather conditions.

Calibrated models were used to simulate flow and bacteria densities from the watersheds draining into the receiving waters and within the receiving waters of the shoreline segments. The models were used to calculate the existing bacteria loads, as well as TMDLs for each impaired shoreline segment. The modeled existing loads were compared to the TMDLs to calculate the necessary load reductions needed to achieve the TMDLs in the waterbodies. The TMDLs were allocated among point sources (WLAs) and nonpoint sources (LAs). The only allowable point source identified was urban runoff discharged from MS4s, which was assigned a WLA for each watershed. The only allowable nonpoint sources identified were natural or background sources, such as direct inputs from birds, terrestrial and aquatic animals, wrack line and aquatic plants, sediments, or other unidentified and unquantified sources within the receiving waters, which were lumped together and assigned a LA. Because only the point sources are considered controllable, a load reduction was only calculated for the bacteria loads from the MS4s. Bacteria loads from sources of illegal discharges were assigned WLAs and LAs of zero. The TMDLs, LAs for natural and background sources, WLAs for municipal MS4s, and load reductions for municipal MS4s are shown below in Tables 7-26 through 7-31.

## *MARGIN OF SAFETY*

There are two ways to incorporate the MOS (USEPA, 1991): (1) implicitly incorporate the MOS using conservative model assumptions to develop allocations; and/or, (2) explicitly specify a portion of the total TMDL as the MOS and use the remainder for allocations. Throughout the TMDL development process, conservative assumptions were employed. Based on the incorporation of all these conservative assumptions, no explicit MOS was necessary.

## Table 7-26. REC-1 Wet Weather TMDLs for Total Coliform for Baby Beach and Shelter Island Shoreline Park Shoreline Segments

| Waterbody | Shoreline Segment/Area | Hydrologic Descriptor | Model Sub-watershed | TMDL (Billion MPN/ 30 days) | Load Allocations (LAs) Natural/Background (Billion MPN/ 30 days)[1] | Wasteload Allocations (WLAs) Municipal MS4 (Billion MPN/ 30 days) | Existing Wasteloads Municipal MS4 (Billion MPN/ 30 days) | Percent Reduction of Municipal MS4 Existing Wasteload[2] |
|---|---|---|---|---|---|---|---|---|
| Dana Point Harbor | Baby Beach | Dana Point HSA (901.14) | 2101,2102 2103,2104 | 166,111 | 162,857 | 3,254 | 3,254 | 0% |
| San Diego Bay | Shelter Island Shoreline Park | Point Loma HA (908.10) | 2201 | 482,598 | 482,400 | 198 | 198 | 0% |

Abbreviations/Acronyms:
TMDL: total maximum daily load
LA: load allocation for nonpoint source
WLA: wasteload allocation for point source
MS4: Municipal Separate Storm Sewer System
MPN: most probable number

Notes:
[1] Calculated by dry weather EFDC model analysis (Dry weather LA from Table 7-29 multiplied by 30 days). No reduction required for natural/background sources.
[2] Percent Reduction of Existing Municipal MS4 Wasteload = (Existing Municipal MS4 Wasteload – Municipal MS4 WLA) ÷ (Existing Municipal MS4 Wasteload) x 100%

## Table7-27. REC-1 Wet Weather TMDLs for Fecal Coliform for Baby Beach and Shelter Island Shoreline Park Shoreline Segments

| Waterbody | Shoreline Segment/Area | Hydrologic Descriptor | Model Sub-watershed | TMDL (Billion MPN/ 30 days) | Load Allocations (LAs) Natural/Background (Billion MPN/ 30 days)[1] | Wasteload Allocations (WLAs) Municipal MS4 (Billion MPN/ 30 days) | Existing Wasteloads Municipal MS4 (Billion MPN/ 30 days) | Percent Reduction of Municipal MS4 Existing Wasteload[2] |
|---|---|---|---|---|---|---|---|---|
| Dana Point Harbor | Baby Beach | Dana Point HSA (901.14) | 2101,2102 2103,2104 | 32,585 | 32,473 | 112 | 112 | 0% |
| San Diego Bay | Shelter Island Shoreline Park | Point Loma HA (908.10) | 2201 | 41,408 | 41,400 | 8 | 8 | 0% |

Abbreviations/Acronyms:
TMDL: total maximum daily load
LA: load allocation for nonpoint source
WLA: wasteload allocation for point source
MS4: Municipal Separate Storm Sewer System
MPN: most probable number

Notes:
[1] Calculated by dry weather EFDC model analysis (Dry weather LA from Table 7-30 multiplied by 30 days). No reduction required for natural/background sources.
[2] Percent Reduction of Existing Municipal MS4 Wasteload = (Existing Municipal MS4 Wasteload – Municipal MS4 WLA) ÷ (Existing Municipal MS4 Wasteload) x 100%

### *Enterococcus* for Baby Beach and Shelter Island Shoreline Park Shoreline Segments

| Waterbody | Shoreline Segment/Area | Hydrologic Descriptor | Model Sub-watershed | TMDL (Billion MPN/ 30 days) | Load Allocations (LAs) Natural/Background (Billion MPN/ 30 days)[1] | Wasteload Allocations (WLAs) Municipal MS4 (Billion MPN/ 30 days) | Existing Wasteloads Municipal MS4 (Billion MPN/ 30 days) | Percent Reduction of Municipal MS4 Existing Wasteload[2] |
|---|---|---|---|---|---|---|---|---|
| Dana Point Harbor | Baby Beach | Dana Point HSA (901.14) | 2101,2102 2103,2104 | 5,730 | 5,616 | 114 | 301 | 62.2% |
| San Diego Bay | Shelter Island Shoreline Park | Point Loma HA (908.10) | 2201 | 10,556 | 10,530 | 26 | 26 | 0% |

Abbreviations/Acronyms:
TMDL: total maximum daily load
LA: load allocation for nonpoint source
WLA: wasteload allocation for point source
MS4: Municipal Separate Storm Sewer System
MPN: most probable number

Notes:
[1] Calculated by dry weather EFDC model analysis (Dry weather LA from Table 7-31 multiplied by 30 days). No reduction required for natural/background sources.
[2] Percent Reduction of Existing Municipal MS4 Wasteload = (Existing Municipal MS4 Wasteload – Municipal MS4 WLA) ÷ (Existing Municipal MS4 Wasteload) x 100%

### Table7-29. REC-1 Dry Weather TMDLs for Total Coliform for Baby Beach and Shelter Island Shoreline Park Shoreline Segments

| Waterbody | Shoreline Segment/Area | Hydrologic Descriptor | Model Sub-watershed | TMDL (Billion MPN/ day) | Load Allocations (LAs) Natural/Background (Billion MPN/ day)[1] | Wasteload Allocations (WLAs) Municipal MS4 (Billion MPN/ day) | Existing Wasteloads Municipal MS4 (Billion MPN/ day) | Percent Reduction of Municipal MS4 Existing Wasteload[2] |
|---|---|---|---|---|---|---|---|---|
| Dana Point Harbor | Baby Beach | Dana Point HSA (901.14) | 2101,2102 2103,2104 | 5,430 | 5,429 | 0.86 | 9.0 | 90.4% |
| San Diego Bay | Shelter Island Shoreline Park | Point Loma HA (908.10) | 2201 | 16,080 | 16,080 | 0 | 0 | 0% |

Abbreviations/Acronyms:
TMDL: total maximum daily load
LA: load allocation for nonpoint source
WLA: wasteload allocation for point source
MS4: Municipal Separate Storm Sewer System
MPN: most probable number

Notes:
[1] Calculated by dry weather EFDC model analysis. No reduction required for natural/background sources.
[2] Percent Reduction of Existing Municipal MS4 Wasteload = (Existing Municipal MS4 Wasteload – Municipal MS4 WLA) ÷ (Existing Municipal MS4 Wasteload) x 100%

## Table7-30. REC-1 Dry Weather TMDLs for Fecal Coliform for Baby Beach and Shelter Island Shoreline Park Shoreline Segments

| Waterbody | Shoreline Segment/Area | Hydrologic Descriptor | Model Sub-watershed | TMDL (Billion MPN/ day) | Load Allocations (LAs) Natural/Background (Billion MPN/ day)[1] | Wasteload Allocations (WLAs) Municipal MS4 (Billion MPN/ day) | Existing Wasteloads Municipal MS4 (Billion MPN/ day) | Percent Reduction of Municipal MS4 Existing Wasteload[2] |
|---|---|---|---|---|---|---|---|---|
| Dana Point Harbor | Baby Beach | Dana Point HSA (901.14) | 2101,2102 2103,2104 | 1,083 | 1,082 | 0.17 | 1.0 | 82.7% |
| San Diego Bay | Shelter Island Shoreline Park | Point Loma HA (908.10) | 2201 | 1,380 | 1,380 | 0 | 0 | 0% |

Abbreviations/Acronyms:
TMDL: total maximum daily load
LA: load allocation for nonpoint source
WLA: wasteload allocation for point source
MS4: Municipal Separate Storm Sewer System
MPN: most probable number

Notes:
[1] Calculated by dry weather EFDC model analysis. No reduction required for natural/background sources.
[2] Percent Reduction of Existing Municipal MS4 Wasteload = (Existing Municipal MS4 Wasteload – Municipal MS4 WLA) ÷ (Existing Municipal MS4 Wasteload) x 100%

## Table7-31. REC-1 Dry Weather TMDLs for *Enterococcus* for Baby Beach and Shelter Island Shoreline Park Shoreline Segments

| Waterbody | Shoreline Segment/Area | Hydrologic Descriptor | Model Sub-watershed | TMDL (Billion MPN/ day) | Load Allocations (LAs) Natural/Background (Billion MPN/ day)[1] | Wasteload Allocations (WLAs) Municipal MS4 (Billion MPN/ day) | Existing Wasteloads Municipal MS4 (Billion MPN/ day) | Percent Reduction of Municipal MS4 Existing Wasteload[2] |
|---|---|---|---|---|---|---|---|---|
| Dana Point Harbor | Baby Beach | Dana Point HSA (901.14) | 2101,2102 2103,2104 | 187 | 187 | 0.03 | 0.8 | 96.2% |
| San Diego Bay | Shelter Island Shoreline Park | Point Loma HA (908.10) | 2201 | 351 | 351 | 0 | 0 | 0% |

Abbreviations/Acronyms:
TMDL: total maximum daily load
LA: load allocation for nonpoint source
WLA: wasteload allocation for point source
MS4: Municipal Separate Storm Sewer System
MPN: most probable number

Notes:
[1] Calculated by dry weather EFDC model analysis. No reduction required for natural/background sources.
[2] Percent Reduction of Existing Municipal MS4 Wasteload = (Existing Municipal MS4 Wasteload – Municipal MS4 WLA) ÷ (Existing Municipal MS4 Wasteload) x 100%

## *TMDL IMPLEMENTATION PLAN*

By design, waste load allocations and load allocations are established at levels that when met, will result in the full attainment of water quality standards. For this reason, the San Diego Water Board expects that at the end of the TMDL compliance period, applicable load and waste load allocations, as well as the water quality objectives will be met at all times in the receiving water. In the event that water quality objectives are not met at the end of the compliance period, the Board will require the dischargers to conduct an investigation to identify the specific source(s) responsible for the failure to meet water quality objectives. If the source is found to be anthropogenic, the San Diego Water Board will initiate enforcement or other regulatory action as appropriate to correct the problem. If the source is natural, and if all of the conditions for using the natural sources exclusion approach (NSEA) have been met, the Board will consider the application of the NSEA, including the recalculation of the TMDLs to account for the natural sources. The necessary actions to implement the TMDLs are described in section 10 of the Technical Report entitled *Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay*, dated June 11, 2008, and listed below.

### *(A) Specific Implementation Objectives*

Since 2002, the dischargers have implemented several non-structural best management practice (BMP) programs and structural BMPs that have resulted in noticeable improvements in water quality at the impaired shoreline segments. The County of Orange has already conducted numerous studies and implemented a variety of non-structural and structural BMPs in an effort to reduce bacteria levels at Baby Beach since before 2002. These efforts have included installing seasonal plugs in storm drains, increased street sweeping efforts, expedited trash collection to control birds, the installation of bird netting under the pier, public education efforts against bird-feeding at the beach, artificial circulation of water at Baby Beach, a dry weather flow diversion structure and media filter system on the west end of the beach, catch basin filters, and the collection and disposal of bird fecal droppings from the exposed intertidal areas of the beach. The San Diego Unified Port District has also implemented several non-structural BMP programs since 2002. Water quality data from 2002 to 2006 indicate that bacteria levels in the waters at Baby Beach and Shelter Island Shoreline Park have shown significant improvements in water quality since 2002.

As shown in Tables 7-26 through 7-31, the modeling results indicate that no load reductions are required for total coliform, fecal coliform, and *Entercoccus* indicator bacteria for Shelter Island Shoreline Park during wet weather or dry weather conditions. Additionally, the modeling results indicate only *Entercoccus* indicator bacteria wet weather load reductions are required for Baby Beach and no wet weather load reductions are required for total coliform and fecal coliform indicator bacteria. For dry weather, Baby Beach requires between approximately 83 percent and 96 percent wasteload reductions for total coliform, fecal coliform, and *Entercoccus* indicator bacteria. However, based only on the water quality data collected during 2006, the number of samples that exceed the REC-1 water quality objectives are less than the allowable number of exceedances for recommending removal from the 303(d) List. This trend implies that the past and current BMPs that have been implemented are effective in reducing bacteria loads to the receiving waters and that water quality in the impaired shoreline segments already meet REC-1 water quality objectives during dry weather. However, additional monitoring is required to confirm this trend, and additional BMPs may be needed to meet the REC-1 water quality objectives during wet weather.

While the Bacteria Load Reduction Plans (BLRPs), as described below, will still be required from the dischargers, if current trends continue, monitoring and permanent implementation of the current programs and BMPs may be adequate for meeting the wet weather and dry weather TMDLs. If the REC-1 water quality objectives cannot be met in the receiving waters by the end of the compliance schedules, and if natural and background sources appear to be the sole source of continued impairment, application of the natural sources exclusion approach (NSEA) to revise the TMDLs, as described below, may be appropriate.[25]

[25] After adoption of a Basin Plan amendment authorizing the use of the Natural Sources Exclusion Approach by the San Diego Water Board and approval by the Office of Administrative Law.

Therefore, if the water quality data support delisting before the NPDES requirement revisions are considered, specific objectives of this Implementation Plan are as follows:

1. Persons responsible for monitoring the impaired shoreline segments of Baby Beach and Shelter Island Shoreline Park for bacteria will continue with the monitoring program to ensure REC-1 water quality objectives are maintained.

2. If REC-1 water quality objectives are exceeded, actions outlined in Attachment B of Order Nos. R9-2007-0001 and R9-2002-0001 in section II.C, Coastal Storm Drain Outfall Monitoring, and any subsequent amendment or renewal, will be implemented.

3. If sources of bacteria persist at levels that exceed water quality standards, then the persons responsible will take appropriate actions to identify and eliminate the controllable source or sources of the chronic contamination. If natural and background sources appear to be the sole source of the impairment, application of the NSEA to revise the TMDLs may be appropriate.

If the impaired shoreline segments of BB and SISP remain on or are put back on the List during subsequent iterations of the 303(d) listing process due to impacts from controllable sources of bacteria, the San Diego Water Board will revise the current NPDES requirements and/or issue additional waste discharge requirements to be consistent with these TMDLs.

***(B) San Diego Water Board Actions***

The San Diego Water Board regulates discharges of waste by issuing waste discharge prohibitions, waste discharge requirements, or conditional waivers of waste discharge requirements. Violation of a waste discharge prohibition, waste discharge requirement, or waiver condition is subject to enforcement actions. This section describes the actions that the San Diego Water Board will take to implement the TMDLs.

***(1) Process and Schedule for Issuing NPDES Requirements***

The TMDLs will be implemented primarily by reissuing or revising the existing NPDES waste discharge requirements for MS4 discharges to include water quality based effluent limitations (WQBELs) that are consistent with the assumptions and requirements of the bacteria WLAs for MS4 discharges, though there may be other or new point sources.

NPDES requirements should be issued, reissued, or revised "as expeditiously as practicable" to incorporate WQBELs derived from the TMDL WLAs. "As expeditiously as practicable" means the following:

1. **New point sources.** "New" point sources previously unregulated by NPDES requirements must obtain their NPDES requirements before they can lawfully discharge pollutants. For point sources receiving NPDES requirements for the first time, "as expeditiously as practicable" means that the San Diego Water Board incorporates WQBELs that are consistent with the assumptions and requirements of the WLAs into the NPDES requirements and requires compliance with the WQBELs upon the commencement of the discharge.

2. **Point Sources Currently Regulated Under NPDES Requirements.** For point sources currently regulated under NPDES requirements, "as expeditiously as practicable" means that:

    a. WQBELs that are consistent with the assumptions and requirements of the WLAs should be incorporated into NPDES requirements during their 5-year term, prior to expiration, in accordance with the applicable NPDES requirement reopening provisions, taking into account factors such as available NPDES resources, staff and budget constraints, and other competing priorities.

    b. In the event the NPDES requirement revisions cannot be considered during the 5-year term, the San Diego Water Board will incorporate WQBELs that are consistent with the assumptions and requirements of the WLAs into the NPDES requirements at the end of the 5-year term.

### *(2) Actions with Respect to Phase I Municipal Dischargers*

The Phase I Municipal Dischargers in San Diego and Orange County are required under Receiving Water Limitations A.3.a.1 and C.2[26] of Orders No. R9-2007-0001 and R9-2002-0001, respectively (San Diego County and Orange County MS4 NPDES requirements), and any subsequent amendment or renewal, to implement additional BMPs to reduce bacteria discharges in impaired watersheds to the maximum extent practicable and to restore compliance with the bacteria water quality objectives. This obligation is triggered when either the discharger or the San Diego Water Board determines that MS4 discharges are causing or contributing to an exceedance of an applicable water quality objective, in this case the REC-1 indicator bacteria water quality objectives. Designation of the shoreline segments in San Diego Bay and Dana Point Harbor as water quality limited segments under Clean Water Act section 303(d) and the TMDL analysis provided sufficient evidence that that MS4 discharges may be causing or contributing to the violation of water quality standards. Thus, the Municipal Dischargers should be, and have been implementing the provisions of Receiving Water Limitation C.2 with respect to bacteria discharges into water quality limited segments.

In addition to enforcing the provisions of Receiving Water Limitation C.2, the San Diego Water Board shall reissue or revise Orders No. R9-2007-0001 and R9-2002-0001, to incorporate WQBELs consistent with the assumptions and requirements of the bacteria WLAs, and requirements for monitoring and reporting. In those orders, the Phase I Municipal Dischargers are referred to as "Copermittees."[27] WQBELs and other requirements implementing the TMDLs can be incorporated into these NPDES requirements upon the normal renewal cycle or sooner, if appropriate. The requirements implementing the TMDLs shall include the following:

a. WQBELs consistent with the requirements and assumptions of the bacteria WLAs described in Tables 7-26 through 7-31 and a schedule of compliance applicable to the MS4 discharges into the impaired shoreline segments described in Tables 7-32 through 7-34. At a minimum, WQBELs shall include a BMP program to attain the WLAs.

b. If the WQBELs consist of BMP programs, then the reporting requirements shall consist of annual progress reports on BMP planning, implementation, and effectiveness in attaining the WQOs in impaired shoreline segments, and annual water quality monitoring reports. The first progress report shall consist of a Bacteria Load Reduction Plan (BLRP), which may be included as part of the annual NPDES reporting requirements. BLRPs must be specific to each impaired waterbody.

   To provide guidance to the dischargers in preparing BLRPs, the following bullets describe components that should be considered for incorporation in the BLRPs.

   Comprehensive Watershed Approach

   - Dischargers should identify the Lead Watershed Contact for their BLRPs. The Lead Watershed Contact should serve as liaison between all other common watershed dischargers and the San Diego Water Board, where appropriate.

   - Dischargers should describe a program for encouraging collaborative, watershed-based, land-use planning in their jurisdictional plans.

[26] Receiving Water Limitations A.3.a.1 and C.2.a provide that "[u]pon a determination by either the Copermittee or the San Diego Water Board that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Copermittee shall promptly notify and thereafter submit a report to the San Diego Water Board that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report may be incorporated in the annual update to the Jurisdictional URMP unless the San Diego Water Board directs an earlier submittal. The report shall include an implementation schedule. The San Diego Water Board may require modification to the report." Additional requirements are included in sections C.2.b-d.

[27] Copermittees own or operate MS4s through which urban runoff discharges into waters of the U.S. within the San Diego Region. These MS4s fall into one or more of the following categories: (1) a medium or large MS4 that services a population of greater than 100,000 or 250,000 respectively; or (2) a small MS4 that is "interrelated" to a medium or large MS4; or (3) an MS4 which contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the United States.

- Dischargers should develop and periodically update a map of the BLRP watershed, to facilitate planning, assessment, and collaborative decision-making. As appropriate, the map should include features such as receiving waters; Clean Water Act section 303(d) impaired receiving waters; water quality projects; land uses; MS4s; major highways; jurisdictional boundaries; and inventoried commercial, industrial, and municipal sites.

- Dischargers should annually assess the water quality of the impaired water body in their BLRPs in order to identify all water quality problems within the impaired water body. This assessment should use applicable water quality data, reports, and analysis generated in accordance with the requirements of the applicable NPDES MS4 monitoring and reporting programs, as well as applicable information available from other public and private organizations.

- Dischargers should develop and implement a collective watershed BLRP strategy to meet the bacteria TMDL. The strategy should guide dischargers in developing a Bacteria Compliance Schedule (BCS) which includes BMP planning and scheduling as outlined below.

- Dischargers should collaborate to develop and implement the BLRPs. The BLRP should include a proposal for regularly scheduled meetings among the dischargers in the impaired watershed.

- Because water quality data will ultimately determine if a waterbody will be delisted from the 303(d) List, the BLRP should include a monitoring and reporting program that contains the following elements:

  - Locations of water quality sampling sites that are spatially representative of the waterbody and appropriate for identifying potential sources, including, at a minimum, the monitoring stations currently used to monitor water quality.

  - Schedule of water quality sampling that is temporally representative of both wet weather and dry weather conditions. Wet weather samples are collected during storms of 0.2 inches of rainfall and the 72 hour period after the storm. Dry weather samples are collected from during times when rain has not fallen for the preceding 72 hours.

  - Presentation of past and present water quality data that have been collected.

  - Analysis of water quality data compared to the applicable Basin Plan water quality objectives. Dry weather water quality data are compared to long-term (e.g., geometric mean, mean, or median) water quality objectives, as well as short-term (e.g., single sample maximum) water quality objectives. Wet weather water quality data are compared to short-term (e.g., single sample maximum) water quality objectives.

  - Analysis of water quality data to correlate noticeable improvements in water quality with past and current BMPs that have been implemented and are effective.

  - Analysis of water quality data to correlate elevated bacteria levels with known or suspected sewage spills from wastewater collection systems and treatment plants or boats.

  - Recommendations for increased or decreased water quality sampling based on water quality data analyses.

- Each BLRP and BCS should be reviewed annually to identify needed modifications and improvements. The dischargers should develop and implement a plan and schedule, included in the BCS, to address the identified modifications and improvements. All updates to the BLRP should be documented in the BLRP, and submitted to the San Diego Water Board. Individual dischargers should also review and modify their jurisdictional ordinances and activities as necessary so that they are consistent with the requirements of the BLRP.

Bacteria Compliance Schedule - BMP Planning and Scheduling

The BCS should identify the BMPs/water quality projects that have been implemented or are planned for implementation and provide an implementation schedule for each BMP/water quality project. The BCS should demonstrate how the BMPs/water quality projects will address all the bacteria TMDLs. The BCS, at a minimum, should include scheduling for the following:

Non-structural BMP phasing:

- Completed Non-Structural BMP Analysis – Information should be provided regarding the non-structural BMPs completed and/or currently in practice, a timeline of BMP implementation and maintenance, and an assessment of effectiveness.

If the Completed Non-Structural BMP Analysis indicates additional non-structural BMPs are necessary, the following should be included in the BCS:

- New Non-Structural BMP Analysis - Watershed data should be analyzed to identify new effective non-structural BMPs for implementation. This should be completed and included in the BCS.

- Scheduled Annual Non-structural BMP Implementation - The above analysis should be used to identify BMPs that have and will be implemented and to develop an aggressive non-structural BMP implementation schedule. The BCS should include a schedule of the current BMP staffing for each impaired area, and provide a discussion on adjustments to staff scheduling to meet possible new non-structural BMP demands. Schedules should be realistic and justifiable.

- Scheduled Annual BMP Assessment and Optimizing Adjustments - As the non-structural BMPs are implemented, a scheduled in-depth assessment of the non-structural BMPs' performance should follow. Non-structural BMPs that are found to be ineffective should be modified to incorporate optimizing adjustments to improve performance or be replaced by other effective non-structural BMPs. The results from this assessment should also be used to determine structural BMP selection and the schedule for structural BMP implementation. The BCS should include an annual schedule for in-depth non-structural BMP assessment and optimizing adjustments.

- Scheduled Continuous Budget and Funding Efforts- Securing budget and funding for non-structural BMP staffing and equipment should be scheduled early and continue until the bacteria TMDLs are met. The BCS should include a schedule for staff time, including position and job description, authorized for securing budget and funding for non-structural BMP implementation.

Structural BMP phasing:

- Completed Structural BMP Analysis – Information should be provided regarding the structural BMPs completed and/or currently in practice, a timeline of BMP implementation and maintenance, and an assessment of effectiveness.

If the Completed Structural BMP Analysis indicates additional structural BMPs are necessary, the following should be included in the BCS:

- Scheduled New Structural BMP Analysis– Structural BMP analysis should utilize all available information, including the non-structural BMP assessment and existing structural BMP assessment, to identify, locate, design and build possible new structural BMPs, or a train of BMPs, to meet the these bacteria TMDLs. The BCS should include a schedule for structural BMP analysis.

- Scheduled Annual BMP Construction - The BCS should include a projected general construction schedule with a realistic and justifiable timeline for possible new BMP construction.

- Scheduled Annual BMP Assessment, Optimization Adjustments, and Maintenance - Assessment for structural BMPs should begin immediately upon initial BMP completion, followed by continuously scheduled BMP assessment, optimization adjustments, and maintenance, to both the individual structural BMPs and the structural BMP program as a whole. The BCS should include an annual schedule for in-depth structural BMP assessment.

- Scheduled Continuous Budget and Funding Effort - Securing budget and funding for structural BMPs and additional maintenance staff should be scheduled early and continue until the bacteria TMDLs are met. The BCS should include a schedule for staff time, including position and job description, authorized for securing budget and funding for structural BMP implementation.

Subsequent reports should assess and describe the effectiveness of implementing the Bacteria Load Reduction Plan. Effectiveness assessments should be based on a program effectiveness assessment framework, such as the one developed by the California Stormwater Quality Association (CASQA, 2005). Using the CASQA framework as an example, the assessments should address the framework's outcome levels 1-5 on an annual basis, and outcome level 6 once every five years.[28] Methods used for assessing effectiveness should include the following or their equivalent: surveys, pollutant loading estimations, and receiving water quality monitoring. The long-term strategy should also discuss the role of monitoring data in substantiating or refining the assessment. Once water quality objectives have been attained, or the anthropogenic sources have been eliminated and pollutant loads can be attributed to only natural and background sources, a reduced level of monitoring may be appropriate.

In addition to these requirements, if load-based numerical WQBELs are included in the NPDES requirements, the monitoring requirements should include flow and bacteria density measurements to determine if bacteria loads in effluent are in compliance with WQBELs.

The BLRPs are the municipal dischargers' opportunity to propose methods for assessing compliance with WQBELs that implement TMDLs. The monitoring components included in the BLRPs should be formulated according to particular compliance assessment strategies. The monitoring components are expected to be consistent with, and support whichever compliance assessment methods are proposed. The San Diego Water Board will coordinate with the municipal dischargers during the development of their proposed monitoring components and associated compliance assessment methods.

If NPDES requirements are not likely to be issued, reissued or revised within 6 months of Office of Administrative Law approval of these TMDLs, the San Diego Water Board may issue an investigative/monitoring order to dischargers pursuant to sections 13267 or 13383 of the Water Code. This order would require assessment of current BMPs, possible planning for additional BMPs, and receiving water quality monitoring in adherence to performance measures described above.

The BLRPs may be re-evaluated at set intervals (such as 5-year renewal cycles for NPDES requirements, or upon request from named dischargers, as appropriate and in accordance with the San Diego Water Board priorities). Plans may be iterative and adaptive according to assessments and any special studies.

***(3) Actions with Respect to Wastewater Collection Systems and Treatment Plants***

The San Diego Water Board will conduct surveillance of and enforce the provisions of State Water Board Order No. 2006-0003-DWQ, and San Diego Water Board Order No. R9-2007-0005 as needed to ensure that collection systems for wastewater treatment plants do not overflow, leak, or otherwise discharge into MS4s or surface waters. If necessary, San Diego Water Board Order No. R9-2007-0005 can be revised to require more aggressive collection system monitoring, maintenance, and repair schedules.

[28] Outcome level 1 assesses compliance with activity-based permit requirements. Outcome level 2 assesses changes in attitudes, knowledge, and awareness. Outcome level 3 assesses behavioral change and BMP implementation. Outcome level 4 assesses pollutant load reductions. Outcome level 5 assesses changes in urban runoff and discharge water quality. Outcome level 6 assesses changes in receiving water quality. See CASQA "An Introduction to Stormwater Program Effectiveness Assessment."

### *(4) Actions with Respect to Marinas and Boats*

If discharges from boats are shown to be a significant source of bacteria contributing to exceedances of water quality objectives, the San Diego Water Board will enforce the waste discharge prohibitions in the Basin Plan to ensure that illegal discharges from boats to surface waters do not occur. This may require issuing enforcement actions, such as Cease and Desist Orders, or issuing NPDES requirements or waste discharge requirements to the marina and harbor operators and/or the muncipalities requiring implementation of BMPs (e.g., public education and outreach, enforcing ordinances, and/or requiring dye tabs in boat sewage holding tanks) to eliminate illegal discharges of sewage, in addition to water quality monitoring and reporting.

### *(5) Additional Actions*

Take Enforcement Actions

The San Diego Water Board shall consider enforcement actions,[29] as necessary and appropriate, against any discharger failing to comply with applicable waste discharge requirements or discharge prohibitions. Enforcement actions may be taken, as necessary and appropriate, to control the discharge of bacteria to impaired shorelines to attain compliance with the bacteria WLAs specified in Tables 7-26 through 7-31, or to attain compliance with the applicable water quality objectives.

Recommend High Priority for Grant Funds

The San Diego Water Board shall recommend that the State Water Board assign a high priority to awarding grant funding[30] for projects to implement the bacteria TMDLs. Special emphasis will be given to projects that can achieve quantifiable bacteria load reductions consistent with the specific bacteria TMDL WLAs and LAs.

Apply the Natural Sources Exclusion Approach[31]

Under the Natural Sources Exclusion Approach (NSEA), all anthropogenic sources of indicator bacteria to the water bodies subject to an indicator bacteria TMDL must be controlled. Dischargers must also demonstrate that all anthropogenic sources of indicator bacteria to the target water body are controlled and that residual indicator bacteria densities do not indicate a health risk.

Once control of all anthropogenic sources and demonstration of appropriate health risk levels have been achieved, the residual indicator bacteria loads in the waterbodies attributable to uncontrollable sources can be identified and measured. Likewise, the frequency that uncontrollable sources cause exceedances of indicator bacteria water quality objectives in the water body can be identified. The information can be used to establish an allowable indicator bacteria WQO exceedance frequency in the impaired water body based upon the residual exceedance frequency observed. This information can then be used to recalculate the TMDLs, WLAs, and LAs.

[29] An enforcement action is any formal or informal action taken to address an incidence of actual or threatened noncompliance with existing regulations or provisions designed to protect water quality. Potential enforcement actions including notices of violation (NOVs), notices to comply (NTCs), imposition of time schedules (TSO), issuance of cease and desist orders (CDOs) and cleanup and abatement orders (CAOs), administrative civil liability (ACL), and referral to the attorney general (AG) or district attorney (DA). The San Diego Water Board generally implements enforcement through an escalating series of actions to: (1) assist cooperative dischargers in achieving compliance; (2) compel compliance for repeat violations and recalcitrant violators; and (3) provide a disincentive for noncompliance.

[30] In most cases, the State Water Board administers the awarding of grants funded from Proposition 13, Proposition 50, Clean Water Act section 319(h) and other federal appropriations to projects that can result in measurable improvements in water quality, watershed condition, and/or capacity for effective watershed management. Many of these grant fund programs have specific set-asides for expenditures in the areas of watershed management and TMDL project implementation for non-point source pollution.

[31] After adoption of a Basin Plan amendment authorizing the use of the Natural Sources Exclusion Approach by the San Diego Water Board and approval by the Office of Administrative Law.

The use of the NSEA is contingent upon demonstration of control of all anthropogenic sources of indicator bacteria to the waterbodies subject to an indicator bacteria TMDL. Since this task is likely to be formidable, use of the NSEA is not expected to occur immediately. Rather, the NSEA would be used to recalculate TMDLs at some point after their initial adoption, following demonstration of control of all anthropogenic sources.

The dischargers are responsible for collecting and providing the data to support the application of the NSEA. If the data support the application of the NSEA, the San Diego Water Board will recalculate the TMDLs, WLAs, and LAs to allow for the exceedances of the REC-1 indicator bacteria WQOs due to uncontrollable sources.

### *(C) Coordination and Execution of Special Studies*

The San Diego Water Board recognizes that coordination and execution of special studies by dischargers and other interested persons could result in improved TMDL analyses that more accurately protect beneficial uses. Areas of study that could benefit TMDL analysis include collection of data that can be used to improve model output, improved understanding of bacteria levels and the relationship to health effects, and identification of an appropriate and affordable method(s) to measure pathogens directly. Additionally, studies designed to measure BMP effectiveness and bacteria source identification will be useful for dischargers in identifying appropriate strategies to meet the requirements of this TMDL.

#### *(1) Collect Data Useful for Model Improvement*

Calibration and validation of the computer models used for TMDL analysis was based on limited data (water quality and/or flow) and assumed values for input parameters such as rates for bacteria die-off and re-growth. Limited data are available related to fecal bacteria that can be attributed to natural and background sources (e.g., waterfowl, terrestrial and aquatic wildlife, wrack line and aquatic plants, sediments, and other unidentified and unquantified sources within the waters). Studies designed to collect additional data that can be used for model improvement will result in more detailed TMDL results and allocations. Also, actual flow and loading data from each watershed and expanded receiving water data can be used to construct models that can more accurately reflect site-specific conditions.

#### *(2) Improve Understanding Between Bacteria Levels and Health Effects*

The San Diego Water Board recognizes that there are potential problems associated with using indicator bacteria WQOs to indicate the presence of human pathogens in receiving waters free of sewage discharges. The indicator bacteria WQOs were developed, in part, based on epidemiological studies in waters with sewage inputs. The risk of contracting a water-born illness from contact with urban runoff devoid of sewage, or human-source bacteria is not known. Some pathogens, such as *giardia* and *cryptosporidium* can be contracted from animal hosts. Likewise, domestic animals can pass on human pathogens through their feces. These and other uncertainties need to be addressed through special studies and, as a result, revisions to the TMDLs may be appropriate.

As information is gathered, initiating special studies to understand the uncertainties between bacteria levels and bacteria sources within the watersheds may be useful. Specifically, continuing research may be helpful to answer the following questions:

- What is the risk of illness from swimming in water contaminated with urban/stormwater runoff devoid of sewage?

- Do exceedances of the bacteria water quality objectives from animal sources (wildlife and domestic) increase the risk of illness?

- Are there other, more appropriate surrogates for measuring the risk of illness than the indicator bacteria WQOs currently used?

Addressing these uncertainties is needed to maximize effectiveness of strategies to reduce the risk of illness, which is currently measured by indicator bacteria densities. Dischargers may work with the San Diego Water Board to determine if such special studies are appropriate.

### *(3) Identification of Method for Direct Pathogen Measurement*

Ultimately, the San Diego Water Board supports the idea of measuring pathogens (the agents causing impairment of beneficial uses) or an acceptable alternative indicator, rather than indicator bacteria (surrogates for pathogens). However, as stated previously, indicator bacteria have been used to measure water quality historically because measurement of pathogens is both difficult and costly. The San Diego Water Board is supportive of any efforts by the scientific community to perform epidemiological studies and/or investigate the feasibility of measuring pathogens directly. The San Diego Water Board further supports subsequent modification of WQOs as a result of such studies. Ultimately, TMDLs will be recalculated if WQOs are modified due to results from future studies.

### *(D) Compliance Schedule*

Baby Beach Compliance Schedule

According to Tables 7-26 and 7-27, no wet weather wasteload reductions are required for total and fecal coliform indicator bacteria. This means that according to the wet weather models for Baby Beach, REC-1 water quality objectives for total and fecal coliform indicator bacteria are not expected to be exceeded due to discharges from the MS4s. The only wet weather wasteload reductions required for MS4s discharging into the receiving waters along the shoreline at Baby Beach is for *Enterococcus* indicator bacteria. The compliance schedule for Baby Beach to achieve wet weather TMDLs is as shown in Table 7-32.

**Table7-32. Compliance Schedule for Baby Beach to Achieve Wet Weather TMDLs**

| | | |
|---|---|---|
| 1 | No reduction required | ▪ Water Quality Monitoring<br>▪ Implement BMPs |
| 2 | Same as above | ▪ Water Quality Monitoring<br>▪ Implement BMPs |
| 3 | Same as above | ▪ Water Quality Monitoring<br>▪ Implement BMPs |
| 4 | Same as above | ▪ Water Quality Monitoring<br>▪ Implement BMPs |
| 5 | Same as above | ▪ Water Quality Monitoring<br>▪ Implement BMPs |
| 6 | Same as above | ▪ Water Quality Monitoring<br>▪ Implement BMPs |
| 7 | 50 percent *Enterococcus* reduction | ▪ Water Quality Monitoring<br>▪ Implement BMPs |
| 8 | Same as above | ▪ Water Quality Monitoring<br>▪ Implement BMPs |
| 9 | Same as above | ▪ Water Quality Monitoring<br>▪ Implement BMPs |
| 10 | 100 percent *Enterococcus* reduction | ▪ Water Quality Monitoring<br>▪ Implement BMPs<br>▪ Submit request for removal from 303(d) List (if not requested and removed earlier) |
| 10+ | Same as above | ▪ Water Quality Monitoring<br>▪ Implement BMPs<br>▪ Submit request for TMDL revisions based on Natural Sources Exclusion Approach if supported by data (if not requested and recalculated earlier)<br>▪ Submit request for removal from 303(d) List (if not requested and removed earlier) |

At this time, control of bacteria loads for MS4s during wet weather is inherently difficult because the MS4 systems are traditionally designed to convey water quickly for flood control purposes. However, new approaches to storm water runoff management and BMP implementation can reduce the storm water runoff flow and associated pollutant loads. The phased compliance schedule to achieve wet weather TMDLs will provide the MS4 dischargers time to identify sources, develop plans and implement enhanced and expanded BMPs capable of achieving the mandated decreases in bacteria densities at the Baby Beach shoreline.

**Table 7-33. Compliance Schedule for Baby Beach to Achieve Dry Weather TMDLs**

| | | |
|---|---|---|
| 1 | No reduction required | ▪ Water Quality Monitoring<br>▪ Implement BMPs |
| 2 | Same as above | ▪ Water Quality Monitoring<br>▪ Implement BMPs |
| 3 | 50 percent reduction | ▪ Water Quality Monitoring<br>▪ Implement BMPs |
| 4 | Same as above | ▪ Water Quality Monitoring<br>▪ Implement BMPs |
| 5 | 100 percent reduction | ▪ Water Quality Monitoring<br>▪ Implement BMPs<br>▪ Submit request for removal from 303(d) List (if not requested and removed earlier) |
| 5+ | Same as above | ▪ Water Quality Monitoring<br>▪ Implement BMPs<br>▪ Submit request for TMDL revisions based on Natural Sources Exclusion Approach if supported by data (if not requested and recalculated earlier)<br>▪ Submit request for removal from 303(d) List (if not requested and removed earlier) |

For both of the Baby Beach compliance schedules, if the REC-1 water quality objectives cannot be met in the receiving waters, and if natural and background sources appear to be the sole source of continued impairment, the natural sources exclusion approach (NSEA) may be applied. However, the Municipal Dischargers are responsible for collecting the data to support the application of the NSEA to recalculate the TMDL.

Shelter Island Shoreline Park Compliance Schedule

According to Tables 7-26 through 7-31, there are no wasteload reductions required for MS4s discharging into the receiving waters along the shoreline at Shelter Island Shoreline Park under both wet weather and dry weather conditions. This means that according to the wet weather and dry weather models for Shelter Island Shoreline Park, REC-1 water quality objectives are not expected to be exceeded due to discharges from the MS4s.

Given that the modeled wasteload reductions for both wet weather and dry weather conditions for all indicator bacteria are zero percent, no compliance schedules were developed to meet wasteload reductions for Shelter Island Shoreline Park. However the existing wasteload cannot exceed the WLA and Shelter Island Shoreline Park will remain on the 303(d) List until enough data are collected to support removing it from the 303(d) List. Therefore, in order to comply with these TMDLs, the responsible municipalities must continue implementing BMPs and collecting data until there are enough data to support and maintain the removal of SISP from the 303(d) List. In addition, the reporting requirements for the Shelter Island Shoreline Park TMDL must also include a periodic demonstration, no less often than every 2 years, that wasteload allocations and water quality objectives are being met.

The trend in the water quality data from Shelter Island Shoreline Park indicate that the number of REC-1 WQO exceedances have declined significantly since 2003. If the current trend continues, the San Diego Water Board expects that Shelter Island Shoreline Park will have enough data to support removal of Shelter Island Shoreline Park from the 303(d) List by 2010, and no later than 2012. The compliance schedule for SISP to achieve wet weather and dry weather TMDLs is as shown in Table 7-34.

**Table 7-34. Compliance Schedule for Shelter Island Shoreline Park to Achieve Wet Weather and Dry Weather TMDLs**

| | |
|---|---|
| 2012 | ▪ Water Quality Monitoring<br>▪ Implement BMPs<br>▪ Submit request for TMDL revisions based on Natural Sources Exclusion Approach if supported by data (if not requested and recalculated earlier)<br>▪ Submit request for removal from 303(d) List (if not requested and removed earlier) |

If the REC-1 water quality objectives cannot be met in the receiving waters by 2012, and if natural and background sources appear to be the source of continued impairment, the NSEA may be applied. However, the Municipal Dischargers are responsible for collecting the data to support the application of the NSEA to recalculate the TMDLs.

### *(E) TMDL Implementation Milestones*

Accomplishing the goals of the implementation plan will be achieved by cooperative participation from all responsible parties, including the San Diego Water Board. Major milestones are described below in Table 7-35.

**Table 7-35. TMDL Implementation Milestones**

| | | | |
|---|---|---|---|
| 1 | Effective date of Baby Beach and Shelter Island Shoreline Park Bacteria TMDL Waste Load Allocations (WLAs). | San Diego Water Board<br>Phase I Municipal Dischargers | Effective date* |
| 2 | Issue, reissue, or revise Phase I Municipal NPDES WDRs to include WQBELs consistent with the WLAs. | San Diego Water Board | Within 5 years of effective date |
| 3 | Submit annual Progress Report to San Diego Water Board. | Phase I Municipal Dischargers | Annually after reissue of NPDES WDRs |
| 4 | Recommend TMDL-related projects as high priority for grant funds. | San Diego Water Board | As needed after effective date |
| 5 | Coordination and execution of special studies. | San Diego Water Board<br>Phase I Municipal Dischargers | As needed after effective date |
| 6 | Meet 50% wasteload reductions. | Baby Beach<br>Phase I Municipal Dischargers | 3 years after effective date for dry weather<br>7 years after effective date for wet weather |
| | | Shelter Island Shoreline Park<br>Phase I Municipal Dischargers | No load reductions required. Removal from 303(d) List by 2012. |
| 7 | Meet 100% wasteload reductions. | Baby Beach<br>Phase I Municipal Dischargers | 5 years after effective date for dry weather<br>10 years after effective date for wet weather |
| | | Shelter Island Shoreline Park<br>Phase I Municipal Dischargers | No load reductions required. Removal from 303(d) List by 2012. |
| 8 | Take enforcement actions to attain compliance with the WLAs. | San Diego Water Board | As needed after effective date |
| 9 | Issue NPDES requirements or waste discharge requirements to marina and harbor operators and/or the muncipalities to eliminate sewage discharges from boats | San Diego Water Board | As needed after effective date |
| 10 | Apply NSEA and recalculate TMDLs | Baby Beach<br>Phase I Municipal Dischargers | As appropriate after effective date, if data are available to support the action. |
| | | Shelter Island Shoreline Park<br>Phase I Municipal Dischargers | |

* Effective date is date of approval of these TMDLs by the Office of Administrative Law

# *REVISED TOTAL MAXIMUM DAILY LOADS FOR INDICATOR BACTERIA, PROJECT I – TWENTY BEACHES AND CREEKS IN THE SAN DIEGO REGION (INCLUDING TECOLOTE CREEK)*

On February 10, 2010, the San Diego Water Board adopted Resolution No. R9-2010-0001, *A Resolution Amending the Water Quality Control Plan for the San Diego Region (9) to Incorporate Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)* (referred to hereafter as Revised Bacteria TMDLs Project I). The TMDL Basin Plan Amendment was subsequently approved by the State Water Resources Control Board (SWRCB)on December 14, 2010, the Office of Administrative Law on April 4, 2011, and the USEPA on June 22, 2011.

Bacteria TMDLs have been established for the following 20 waterbodies listed on the 2002 Clean Water Act Section 303(d) List of Water Quality Limited Segments:

**Table 7-36. Beaches and Creeks Addressed by Revised Bacteria TMDLs Project I**

| Watershed | Type of Listing | Waterbody Name [a,c] | Number of Listings |
|---|---|---|---|
| San Joaquin Hills HSA (901.11)/ Laguna Beach HSA (901.12) | Shoreline | Pacific Ocean Shoreline, San Joaquin Hills HSA [b] | 2 |
| | Shoreline | Pacific Ocean Shoreline, Laguna Beach HSA [b] | |
| Aliso HSA (901.13) | Creek | Aliso Creek | 3 |
| | Estuary | Aliso Creek (mouth) | |
| | Shoreline | Pacific Ocean Shoreline, Aliso HSA [b] | |
| Dana Point HSA (901.14) | Shoreline | Pacific Ocean Shoreline, Dana Point HSA [b] | 1 |
| Lower San Juan HSA (901.27) | Creek | San Juan Creek | 3 |
| | Estuary | San Juan Creek (mouth) | |
| | Shoreline | Pacific Ocean Shoreline, Lower San Juan HSA [b] | |
| San Clemente HA (901.30) | Shoreline | Pacific Ocean Shoreline, San Clemente HA [b] | 1 |
| San Luis Rey HU (903.00) | Shoreline | Pacific Ocean Shoreline, San Luis Rey HU [b] | 1 |
| San Marcos HA (904.50) | Shoreline | Pacific Ocean Shoreline, San Marcos HA [b] | 1 |
| San Dieguito HU (905.00) | Shoreline | Pacific Ocean Shoreline, San Dieguito HU [b] | 1 |
| Miramar Reservoir HA (906.10) | Shoreline | Pacific Ocean Shoreline, Miramar Reservoir HA [b] | 1 |
| Scripps HA (906.30) | Shoreline | Pacific Ocean Shoreline, Scripps HA [b] | 1 |
| Tecolote HA (906.50) | Creek | Tecolote Creek | 1 |
| Mission San Diego HSA (907.11)/ Santee HSA (907.12) | Creek | Forester Creek | 3 |
| | Creek | San Diego River (Lower) | |
| | Shoreline | Pacific Ocean Shoreline, San Diego HU [b] | |
| Chollas HSA (908.22) | Creek | Chollas Creek. | 1 |
| **Total Number of Listings on 2002 303(d) List in Revised Bacteria TMDLs Project I** | | | **20** |

Note: HSA = hydrologic subarea; HA = hydrologic area; HU = hydrologic unit

[a] Listed as impaired due to exceedances of REC-1 WQOs for fecal coliform, and/or total coliform, and/or enterococci.

[b] On the 2002 303(d) List, the Pacific Ocean Shoreline for a HSA, HA, or HU is listed, and specific beaches are noted under the listing. Beginning with the 2008 303(d) List, specific beaches are listed.

[c] Listings on the 2006 and 2008 303(d) List compared to listing shown above are provided in Appendix T to the Technical Report.

The TMDLs that have been developed for the Pacific Ocean shorelines are applicable to all the beaches located on the shorelines of the hydrologic subareas (HSAs), hydrologic areas (HAs), and hydrologic units (HUs) listed above. Beginning with the 2008 303(d) List, specific beach segments of the Pacific Ocean shoreline are listed individually. Specific beach segments from some of the Pacific Ocean shorelines listed in the above table have been delisted from the 2008 303(d) list that was approved by the San Diego Board on December 16, 2009, and therefore are not subject to any further action as long as monitoring data continues to support compliance with water quality standards.

## *PROBLEM STATEMENT*

Bacteria densities in the Pacific Ocean at various beach and coastal creek mouth segments (referred to hereafter as "beaches") exceed water quality objectives (WQOs) for indicator bacteria. Bacteria densities in ocean water at these beaches unreasonably impair and threaten to impair the water quality needed to support the contact water recreation (REC-1)[32] designated beneficial use.

Bacteria densities in the waters of Aliso Creek, San Juan Creek, Tecolote Creek, Forrester Creek, the (lower) San Diego River, and Chollas Creek exceed WQOs for indicator bacteria. Bacteria densities in these creeks unreasonably impair and threaten to impair the water quality needed to support REC-1.

The federal Clean Water Act requires the establishment of Total Maximum Daily Loads (TMDLs) for pollutants that exceed the WQOs needed to support designated beneficial uses, i.e., that cause or contribute to exceedances of state "water quality standards."

**Aliso Beach, Orange County**

## *NUMERIC TARGET*

When calculating TMDLs, one or more numeric targets are required. Numeric targets are typically selected based on water quality standards, which include beneficial uses and the WQOs that are established at levels sufficient to protect those beneficial uses. The numeric targets for these TMDLs are based primarily on the REC-1 WQOs for indicator bacteria contained in the Ocean Plan and/or Basin Plan.

Different REC-1 WQOs were used as the basis for wet weather[33] and dry weather[34] allowable load (i.e., TMDL) calculations because the bacteria transport mechanisms to receiving waters are different under wet and dry weather conditions. Because wet weather conditions, or storm flow, are episodic and short in duration, and characterized by rapid wash-off and transport of high bacteria loads, with short residence times, from all land use types to receiving waters, the single sample maximum WQOs were appropriate for use as wet weather numeric targets. For dry weather conditions, because dry weather runoff is not generated from storm flows, is not uniformly linked to every land use, and is more uniform than stormflow, with lower flows, lower loads, and slower transport, making die-off and/or amplification processes more important, the geometric mean WQOs were appropriate for use as dry weather numeric targets. Wet weather TMDL calculations were based on the REC-1 single sample maximum WQOs while dry weather TMDL calculations were based on REC-1 geometric mean WQOs.

[32] Water quality objectives for indicator bacteria in waters with non-water-contact recreation (REC-2) are less stringent than the water quality objectives for REC-1, therefore, attainment of REC-1 objectives through the implementation of TMDLs will, *a fortiori,* provide the requisite water quality for REC-2.

[33] Wet weather days defined as days with rainfall events of 0.2 inches or greater and the following 72 hours.

[34] Dry weather days defined as days with less than 0.2 inch of rainfall observed on each of the previous 3 days.

For the application of the Basin Plan's enterococci REC-1 WQOs, unless otherwise specified in the Basin Plan, all waterbodies in the San Diego Region designated with REC-1 beneficial use are assumed to have a "designated beach" usage frequency. The "designated beach" usage frequency has the lowest and most stringent enterococci REC-1 WQOs in the Basin Plan. The enterococci REC-1 single sample maximum WQOs in the Basin Plan are more stringent for freshwater (61 MPN/100mL) than for saltwater (104 MPN/100mL) waterbodies. The enterococci REC-1 geometric mean WQOs in the Basin Plan are also more stringent for freshwater (33 MPN/100mL) than for saltwater (35 MPN/100mL) waterbodies. Since coastal saltwater beaches are downstream of inland freshwater creeks, TMDLs for coastal saltwater beaches are calculated using the more conservative enterococci REC-1 WQOs applicable to freshwater creeks (i.e., 61 MPN/100mL and 33 MPN/100mL). The numeric targets used in the calculation of the TMDLs for Tecolote Creek and Chollas Creek are also based on the enterococci REC-1 WQOs applicable to freshwater creeks.

In some cases, the "designated beach" category may be over-protective of water quality because of the infrequent recreational use in the impaired freshwater creeks. The recreational usage frequency in these freshwater creeks may correspond to the "moderately to lightly used areas" category, which has an enterococci freshwater REC-1 single sample maximum WQO of 108 MPN/100mL. In such cases, the "designated beach" enterococci saltwater REC-1 single sample maximum WQO (104 MPN/100mL) would also be protective of the "moderately to lightly used area" freshwater creek.

Before the less stringent enterococci single sample maximum saltwater REC-1 WQO may be applied to a freshwater creek, the Basin Plan must be amended to designate a lower usage frequency (i.e., "moderately to lightly used area") for each freshwater creek. If information and evidence are provided to justify the "moderately to lightly used area" usage frequency for a freshwater creek, and the designated usage frequency of the freshwater creek is amended to "moderately to lightly used area" in the Basin Plan, the wet weather TMDLs that were calculated in a watershed that was modeled with a freshwater creek using the enterococci saltwater REC-1 WQOs can be implemented instead.

**Table 7-37. Wet Weather Numeric Targets**

| Indicator Bacteria | Numeric Target (MPN/100mL) | Allowable Exceedance Frequency [a] |
|---|---|---|
| Fecal coliform | 400 [b] | 22% |
| Total coliform | 10,000 [c] | 22% |
| Enterococci | 104[d] / 61[e] | 22% |

a. Percent of wet days (i.e., rainfall events of 0.2 inches or greater and the following 72 hours) allowed to exceed the wet weather numeric targets. Exceedance frequency based on reference system in the Los Angeles Region.
b. Fecal coliform single sample maximum WQO for REC-1 use in creeks and at beaches.
c. Total coliform single sample maximum WQO for REC-1 use at beaches and the point in creeks that discharges to beaches.
d. Enterococci single sample maximum WQO for REC-1 use in creeks established and designated as "moderately or lightly used" in the Basin Plan and at beaches downstream of those creeks, as well as all other beaches.
e. Enterococci single sample maximum WQO for REC-1 use in creeks not established and designated as "moderately or lightly used" in the Basin Plan and at beaches downstream of those creeks ("designated beach" frequency of use; applicable to San Juan Creek and downstream beach, Aliso Creek and downstream beach, Tecolote Creek, Forrester Creek, San Diego River and downstream beach, and Chollas Creek).

**Table 7-38. Dry Weather Numeric Targets**

| Indicator Bacteria | Numeric Target (MPN/100mL) | Allowable Exceedance Frequency [a] |
|---|---|---|
| Fecal coliform | 200 [b] | 0% |
| Total coliform | 1,000 [c] | 0% |
| Enterococci | 35 [d] / 33[e] | 0% |

a. Percent of dry days (i.e., days with less than 0.2 inch of rainfall observed on each of the previous 3 days) allowed to exceed the dry weather numeric targets.
b. Fecal coliform 30-day geometric mean WQO for REC-1 use in creeks and at beaches.
c. Total coliform 30-day geometric mean WQO for REC-1 at beaches and the point in creeks that discharges to beaches.
d. Enterococci 30-day geometric mean WQO for REC-1 at beaches.
e. Enterococci 30-day geometric mean WQO for REC-1 use in impaired creeks and beaches downstream of those creeks (applicable to San Juan Creek and downstream beach, Aliso Creek and downstream beach, Tecolote Creek, Forrester Creek, San Diego River and downstream beach, and Chollas Creek).

## *SOURCE ANALYSIS*

Sources of bacteria are the same under both wet weather and dry weather conditions. Bacteria build up on the land surface as a result of various anthropogenic land uses (e.g., urban development and agriculture) and natural processes (e.g., birds and wildlife). Bacteria are washed off the land surface by surface runoff. In urban areas, bacteria are washed off the land surface by dry weather and wet weather flows and transported through pipes and conveyance channels of the municipal separate storm sewer systems (MS4s) to surface waters. Other significant point sources of bacteria include municipal wastewater treatment plants and industrial waste treatment facilities. In rural and undeveloped areas, bacteria are washed off the land surface primarily by wet weather flows directly to surface waters. Discharges from rural areas are typically considered nonpoint sources. These diffuse nonpoint sources (e.g., undeveloped land, agriculture, livestock, and horse ranch facilities) have multiple routes of entry into surface waters.

Nonpoint sources were separated into controllable and uncontrollable categories. Controllable nonpoint sources are identified by land use types and coverages. Controllable nonpoint sources include land uses associated with agriculture, dairy/intensive livestock, and horse ranches (collectively referred to as agriculture land uses). These were considered controllable because the land uses are anthropogenic in nature, and load reductions can be reasonably expected with the implementation of suitable management measures. Uncontrollable nonpoint sources include loads from open recreation, open space, and water land uses (collectively referred to as open space land uses). Loads from these areas are considered uncontrollable because they come from mostly natural sources (e.g. bird and wildlife feces).

In order to quantify bacteria loading from these various sources and transport mechanisms, 13 land-use types were identified in the TMDL analysis: Low Density Residential, High Density Residential, Commercial/Institutional, Industrial/Transportation, Military, Parks/Recreation, Open Recreation, Agriculture, Dairy/Intensive Livestock, Horse Ranches, Open Space, Water, and Transitional (Construction Activities). In the technical TMDL analysis, the 13 land use types were grouped into the following four land use categories: 1) owners/operators of municipal separate storm sewers (Municipal MS4s); 2) Caltrans (separated from other Municipal MS4s); 3) Agriculture; and 4) Open Space. Bacteria loads discharged from Low Density Residential, High Density Residential, Commercial/Institutional, Industrial/Transportation, Military, Parks/Recreation, and Transitional land use types are included in the Municipal MS4s category, which is considered a controllable point source. Bacteria loads discharged from the Industrial/Transportation land use type associated with Caltrans were separated into the Caltrans category, which is considered a controllable point source. Bacteria loads discharged from Agriculture, Dairy/Intensive Livestock, and Horse Ranch land use types are included in the Agriculture category, which is considered a controllable nonpoint source. Bacteria loads discharged from Open Recreation, Open Space, and Water land use types are included in the Open Space category, which is associated with natural and undeveloped areas and considered an uncontrollable nonpoint source.

## *CRITICAL CONDITIONS*

The critical conditions are a set of environmental conditions for which controls designed to protect water quality will ensure attainment of the numeric targets for all other conditions. The critical conditions include the location and the period of time in which the waterbody is expected to exhibit the highest vulnerability.

To ensure that numeric targets are met throughout the impaired waterbodies, a critical location consisting of a node at the base of the watershed as it discharges to the ocean or bay was used as the point where the allowable load (i.e., TMDL) is calculated. A critical period associated with extreme rainfall conditions (i.e., critical wet year), and thus the highest potential bacteria load at the critical location, was selected for watershed modeling analysis. The year 1993 was selected as the critical wet period for assessment of extreme wet weather loading conditions because this year was the wettest year of the 12 years of record (1990 through 2002).

## *LINKAGE ANALYSIS*

The purpose of the linkage analysis is to quantify the “existing” bacteria loads that are currently generated by the pollutant sources in the watershed under the critical conditions, and quantify the maximum allowable bacteria loading to each impaired waterbody that will result in attainment of numeric targets under the same critical conditions. This maximum allowable bacteria loading is, in other words, the TMDL.

The linkage analysis used mathematical modeling approaches to quantify the “existing” and allowable bacteria loadings for each impaired waterbody. Separate modeling approaches were used for the calculation of the wet weather TMDLs and dry weather TMDLs.

## *TOTAL MAXIMUM DAILY LOADS AND ALLOCATIONS*

TMDLs can be expressed as mass per time (i.e., mass-loading basis), or other appropriate measure (e.g., as a concentration).[37] For these TMDLs, the wet weather and dry weather TMDLs are expressed both in terms of concentration and on a mass loading basis. The concentration based TMDLs will be used to determine compliance with the TMDLs in the receiving waters. Mass-load based TMDLs were calculated for the impaired waterbodies in each watershed. The mass-load based TMDLs were allocated to the identified point and nonpoint sources and used to identify the controllable sources that need to reduce their bacteria loads in order for the concentration based TMDLs to be met in the receiving waters. The concentration based TMDLs, mass-load based TMDLs, and allocations are discussed below.

### *(1) Concentration Based TMDLs*

The wet weather and dry weather concentration based TMDLs are based on meeting the numeric targets (i.e., numeric WQOs and allowable exceedance frequencies) in the receiving waters. The numeric WQOs for REC-1 beneficial uses are the basis of the numeric targets used to calculate the TMDLs, expressed as number of bacteria colonies per volume. An allowable exceedance frequency is included as part of the numeric target to allow for exceedances that may be caused by natural sources, based on a reference system. Tables 7-39 and 7-40 summarize the concentration based TMDLs, which are expressed as numeric objectives and allowable exceedance frequencies in the receiving waters for each watershed, for wet weather and dry weather, respectively. Meeting the concentration based TMDLs in the receiving waters will be used to determine compliance with the TMDLs.

[37] Code of Federal Regulations Title 40 section 130.2(1) [40CFR130.2(i)]

### *(2) Mass-Load Based TMDLs*

The numeric targets were used to calculate the TMDLs on a mass loading basis under a set of critical conditions. The TMDLs that were calculated in terms of mass loading were used to identify the bacteria loads from controllable sources that need to be reduced in order for the numeric targets to be met in the receiving waters.

On a mass loading basis, TMDLs are defined as the maximum mass of a pollutant the waterbody can receive and still protect the designated beneficial uses. Separate mass-load based TMDLs were calculated for wet weather and dry weather conditions to account for seasonal variations, and because the transport mechanism, flow, and bacteria loads are different between dry and wet weather conditions.

On a mass-loading basis, the TMDLs are expressed as number of bacteria colonies per unit time. The wet weather mass-load based TMDLs are expressed as "annual loads" in terms of number of bacteria colonies per year (billion MPN/yr). The dry weather mass-load based TMDLs are expressed as "monthly loads" in terms of number of bacteria colonies per month (billion MPN/mth). In order for bacteria loading to be calculated, both flow rates and bacteria densities must be measured at a point in time and location. When multiplied together, these two parameters result in bacteria mass loading, or the number of bacteria colonies measured per unit time.

$$Bacteria\ Loading = flow\ rate\ (volume / time) \times bacteria\ density (number\ of\ colonies / volume)$$

Calibrated models were used to simulate flow and bacteria densities. This information was used to calculate the "existing" mass of bacteria loads to, and allowable mass of bacteria loads (i.e., mass-load based TMDLs) for, each impaired segment under critical conditions (i.e., worst case loading conditions). The existing mass loads that were calculated represent the worst case flows and bacteria densities that are expected from the watershed during the critical wet year. The mass-load based TMDLs were calculated with the numeric targets and modeled flows expected during the critical wet year. Existing mass loads were compared to the mass-load based TMDLs. The difference between the existing mass loads and the mass-load based TMDLs is the load reduction required to meet the REC-1 WQOs and allowable exceedance frequencies in the receiving water.

Existing mass loads and mass-load based TMDLs were calculated for wet weather and dry weather. The calculation of the mass-load based TMDLs included the use of an allowable exceedance frequency of the REC-1 WQOs. The purpose of the exceedance frequency is to account for the natural, and largely uncontrollable sources of bacteria (e.g., bird and wildlife feces) generated in the watersheds and at the beaches, which can, by themselves, cause exceedances of WQOs.

All of the wet weather mass-load based TMDLs were calculated using a 22 percent allowable exceedance frequency.[38] All of the dry weather mass-load based TMDLs were calculated using a 0 percent allowable exceedance frequency. These allowable exceedance frequencies were used to calculate the number of wet and dry weather allowable exceedance days during the critical wet year.

[38] In the calculation of the wet weather TMDLs, the San Diego Regional Board chose to apply the 22 percent allowable exceedance frequency as determined for Leo Carillo Beach in Los Angeles County. At the time the wet weather watershed model was developed, the 22 percent exceedance frequency from Los Angeles County was the only reference beach exceedance frequency available. The 22 percent allowable exceedance frequency used to calculate the wet weather TMDLs is justified because the San Diego Region watersheds' exceedance frequencies will likely be close to the value calculated for Leo Carillo Beach, and is consistent with the exceedance frequency that was applied by the Los Angeles Regional Board.

The mass-load based TMDLs are calculated as the sum of the allowable load associated with the numeric REC-1 WQO and the allowable load associated with the allowable exceedance frequency during the critical wet year. Tables 7-39 and 7-40 summarize the calculated existing bacteria mass loads, allowable mass loads based on the numeric REC-1 WQOs, allowable exceedance frequencies and days, allowable mass loads based on the allowable exceedance frequencies, and mass-load based TMDLs for each watershed, for wet weather and dry weather, respectively.

### *(3) Allocation of Mass-Load Based TMDLs*

The mass-load based TMDLs were allocated among point sources (WLAs) and nonpoint sources (LAs) in each watershed. WLAs were assigned to discharges originating from urban land use areas (i.e., MS4s and Caltrans), all of which are considered controllable. LAs were assigned to discharges from rural and undeveloped land use areas (i.e., Agriculture and Open Space). Discharges from rural and undeveloped land use areas are separated into controllable and uncontrollable nonpoint sources. Agricultural land uses (e.g., agriculture, horse ranches, and intensive livestock) are considered controllable nonpoint source land use areas. Open space land uses (e.g., open space and open recreation) are considered uncontrollable nonpoint source land use areas.

Sources that are not identified are assumed to be assigned a zero allowable load as part of the mass-load based TMDL (i.e., WLA = 0 or LA = 0). In other words, discharges of pollutant loads from these sources are not allowed as part of the TMDLs. Sources that are assigned an allowable mass load equal to the existing mass load (i.e., WLA or LA = existing mass load) are not allowed to increase their pollutant loads over time.

Allocations of the mass-load based TMDLs were different for wet weather TMDLs and dry weather TMDLs, as discussed below.

#### *(A) Wet Weather TMDL Allocations*

The wet weather mass-load based TMDLs were divided and assigned to point sources as WLAs and nonpoint sources as LAs based on land uses. The portions of the wet weather mass-load based TMDLs assigned to WLAs and LAs were calculated based on the percent of the TMDL mass load generated by the urban, rural, and undeveloped land uses in each watershed as determined by the wet weather models under critical conditions.

The allocation of the wet weather mass-load based TMDLs assumes surface runoff discharge occurs from all land use categories, and allocated according to the following steps:

1) Sources are separated in to controllable and uncontrollable sources. Discharges from Municipal MS4, Caltrans, and Agriculture land use categories are assumed to be controllable (i.e., subject to regulation), and discharges from Open Space land use categories are assumed to be uncontrollable (i.e., not subject to regulation).
2) Because discharges from Open Space land use categories are uncontrollable (i.e., not subject to regulation), the LAs for Open Space land use categories are set equal to the existing mass loads calculated under the critical conditions.
3) For discharges from controllable land use categories that do not contribute more than 5 percent of the total existing mass load for all three indicator bacteria, the WLA or LA is set equal to the existing mass loads from those land uses calculated under the critical conditions.
4) After the WLAs and LAs are assigned based on steps 2 and 3, the remaining portion of the mass-load based TMDL is assigned to discharges from controllable land use categories that contribute more than 5 percent of the total existing mass load for all three indicator bacteria. The allowable mass load for each source (WLA or LA) is calculated based on the ratio of the existing mass loads from those sources relative to each other.

- Designated Beach Area: those recreation waters that, during the recreation season, are heavily used (based upon a comparison of use within the state) and may have a lifeguard, bathhouse facilities, or public parking for beach access. States may include any other waters in this category even if the waters do not meet these criteria.

- Moderate Full Body Contact Recreation: those recreation waters that are not designated bathing beach waters but typically, during the recreation season, are used by at least half of the number of people as at typical designated bathing beach waters within the state. States may also include light use or infrequent use coastal recreation waters in this category.

- Lightly Used Full Body Contact Recreation: those recreation waters that are not designated bathing beach waters but typically, during the recreation season, are used by less than half of the number of people as at typical designated bathing beach waters within the state, but are more than infrequently used. States may also include infrequent use coastal recreation waters in this category.

[39] The enterococci WQOs in the Basin Plan are structured to reflect the frequency of recreational use. The enterococci freshwater REC-1 single sample maximum WQO for a "designated beach" area is 61 MPN/100 mL. For a "moderately or lightly used area," the REC-1 single sample maximum WQO is 108 MPN/100 mL. The saltwater REC-1 single sample maximum WQO for "designated beach" area is 104 MPN/100 mL. Where the "moderately or lightly used area" designation is appropriate for creeks, the saltwater REC-1 single sample maximum WQO of 104 MPN/100 mL could be used as the numeric target because it is also protective of both the freshwater creek and the downstream marine beach.

[40] Code of Federal Regulations Title 40 section 131.41 [40CFR131.41]

- Infrequently Used Full Body Contact: those recreation waters that are rarely or occasionally used.

If sufficient evidence can be provided to the San Diego Water Board that can demonstrate the usage frequency for one or more of the six impaired creeks falls under the "Lightly Used Full Body Contact Recreation" or "Infrequently Used Full Body Contact" usage frequency, the Basin Plan may be amended to designate one or more of the creeks with the "moderately to lightly used area" usage frequency.

If one or more of the six creeks (San Juan Creek, Aliso Creek, Tecolote Creek, Forrester Creek, San Diego River, and/or Chollas Creek) are designated in the Basin Plan with the "moderately to lightly used area" usage frequency, the enterococci wet weather TMDLs, WLAs, and LAs based on the 104 MPN/100mL (Table 7-44) can be implemented. Otherwise, the more stringent and conservative enterococci wet weather TMDLs, WLAs, and LAs based on the freshwater "designated beach" usage frequency WQO of 61 MPN/100mL (Table 7-43) must be implemented.

***(B) Dry Weather TMDL Allocations***

The dry weather mass-load based TMDLs were assigned entirely to discharges from MS4 land uses because the runoff that transports bacteria loads to surface waters during dry weather are expected to occur only in urban areas. The allocation of the dry weather mass-load based TMDLs assumes that no surface runoff discharge to receiving waters occurs from Caltrans, Agriculture, or Open Space land use categories (i.e., $WLA_{Caltrans} = 0$, $LA_{Agriculture} = 0$, and $LA_{OpenSpace} = 0$), meaning the entire dry weather mass-load based TMDL (i.e., allowable mass load) is allocated to Municipal MS4 land use categories (i.e., $WLA_{MS4} = TMDL$).

The total watershed dry weather existing mass loads and mass-load based TMDLs, point source existing mass loads and mass-load based WLAs, nonpoint source existing mass loads and mass-load based LAs, and load reductions required to achieve the mass-load based TMDLs, WLAs, and LAs are shown below in Tables 7-45, 7-46, and 7-47.

Because the wet weather and dry weather modeling approaches used to calculate the mass-load based TMDLs, WLAs, LAs, and existing mass wasteloads and loads were based on critical conditions (i.e., worst case loading scenario), the mass-loading numbers (i.e., existing mass loads, and mass-load based TMDLs, WLAs, and LAs expressed in terms of billion MPN/year for wet weather and billion MPN/month for dry weather) presented in Tables 7-39 through 7-47 represent conservative mass-load estimates expected to be protective of the beneficial uses under extreme conditions. The mass-loading numbers also provide a tool for identifying bacteria sources that need to be controlled and existing bacteria loads that need to be reduced to meet the TMDLs in the receiving waters.

Ultimately, controllable point and nonpoint sources must reduce their anthropogenic loads so the concentration based wet weather and dry weather TMDLs, which are based on the numeric REC-1 WQOs in the Basin Plan and allowable exceedance frequencies, can be met during wet weather and dry weather conditions during each year. Meeting the wet weather and dry weather numeric targets in the discharge and/or receiving water will indicate the TMDLs, WLAs, and/or LAs have been met.

## *MARGIN OF SAFETY*

The numeric targets used for the mass-load based and concentration based TMDLs are assumed to be conservative by utilizing the most stringent REC-1 WQOs contained in the Ocean Plan and/or Basin Plan. Additionally, the mass-load based TMDLs were calculated under a set of critical conditions that assumed the highest potential mass loading would occur at a critical point during a critical wet year, which is expected to be protective of beneficial uses during extreme conditions. The conservative assumptions that were used result in conservative mass-load based and concentration based TMDLs that are expected to restore and protect the beneficial uses of the receiving waters.

Because bacteria in wet weather runoff and streamflows have a quick travel time, and therefore, a short residence time in the waterbodies, the REC-1 single-sample maximum WQOs were determined to be most appropriate for calculating the wet weather TMDLs. The numeric targets used for the wet weather mass-load based and concentration based TMDLs are assumed to be conservative by utilizing the most stringent REC-1 single sample maximum WQOs contained in the Ocean Plan and/or Basin Plan.

Because dry weather conditions have flows and bacteria loads much smaller in magnitude than wet weather conditions, do not occur from all land use types, and are more uniform than stormflow, the REC-1 30-day geometric mean WQOs were determined to be most appropriate for the dry weather TMDLs. The numeric targets used for the dry weather mass-load based and concentration based TMDLs are assumed to be conservative by utilizing the most stringent REC-1 30 day geometric mean WQOs contained in the Ocean Plan and/or Basin Plan.

Because of the numeric targets and critical conditions that were included in the calculation of the TMDLs, there was no explicit margin of safety included. Instead, the TMDLs include an implicit margin of safety (MOS). The implicit MOS is included via conservative estimates and assumptions (meaning worst-case scenarios were assumed in terms of existing bacteria loading) throughout the calculations and not as a separate, additional factor.

| - Impaired Waterbody | Indicator Bacteria | Existing Bacteria Load (Billion MPN/year) | Single Sample Maximum Objective (MPN/100mL) | Allowable Numeric Objective Load (Billion MPN/year) | Total Wet Days in Critical Year | Allowable Exceedance Frequency | Allowable Wet Exceedance Days in Critical Year | Allowable Exceedance Load (Billion MPN/year) | Total Allowable Load [=TMDL] (Billion MPN/year) |
|---|---|---|---|---|---|---|---|---|---|
| **San Joaquin Hills HSA** (901.11) **and Laguna Hills HSA** (901.12) - Pacific Ocean Shoreline | Fecal Coliform | 705,015 | **400** | 16,043 | 69 | **22%** | 15 | 648,591 | 664,634 |
| | Total Coliform | 8,221,901 | **10,000** | 401,049 | | | | 7,044,601 | 7,445,649 |
| | Enterococcus | 852,649 | **104** | 4,175 | | | | 778,624 | 782,799 |
| **Aliso HSA** (901.13) - Pacific Ocean Shoreline - Aliso Creek - Aliso Creek mouth | Fecal Coliform | 1,752,096 | **400** | 84,562 | 69 | **22%** | 15 | 1,494,512 | 1,579,073 |
| | Total Coliform | 23,210,774 | **10,000** | 2,109,600 | | | | 18,081,198 | 20,190,798 |
| | Enterococcus | 2,230,206 | **104*** | 22,682 | | | | 1,929,834 | 1,952,517 |
| | | 2,230,206 | **61** | 13,644 | | | | 1,937,321 | 1,950,964 |
| **Dana Point HSA** (901.14) - Pacific Ocean Shoreline | Fecal Coliform | 403,911 | **400** | 14,894 | 69 | **22%** | 15 | 362,419 | 377,313 |
| | Total Coliform | 6,546,962 | **10,000** | 372,328 | | | | 5,659,144 | 6,031,472 |
| | Enterococcus | 501,526 | **104** | 3,875 | | | | 458,431 | 462,306 |
| **Lower San Juan HSA** (901.27) - Pacific Ocean Shoreline - San Juan Creek - San Juan Creek mouth | Fecal Coliform | 15,304,790 | **400** | 358,410 | 76 | **22%** | 17 | 14,356,423 | 14,714,833 |
| | Total Coliform | 130,258,863 | **10,000** | 8,947,114 | | | | 113,932,076 | 122,879,189 |
| | Enterococcus | 12,980,098 | **104*** | 95,357 | | | | 12,063,781 | 12,159,138 |
| | | 12,980,098 | **61** | 56,119 | | | | 12,096,327 | 12,152,446 |
| **San Clemente HA** (901.30) - Pacific Ocean Shoreline | Fecal Coliform | 1,441,723 | **400** | 36,481 | 73 | **22%** | 16 | 1,342,450 | 1,378,931 |
| | Total Coliform | 16,236,606 | **10,000** | 911,994 | | | | 14,235,609 | 15,147,603 |
| | Enterococcus | 1,663,100 | **104** | 9,491 | | | | 1,553,696 | 1,563,187 |
| **San Luis Rey HU** (903.00) - Pacific Ocean Shoreline | Fecal Coliform | 33,120,012 | **400** | 640,595 | 90 | **22%** | 20 | 31,803,647 | 32,444,242 |
| | Total Coliform | 231,598,677 | **10,000** | 15,993,384 | | | | 208,157,151 | 224,150,535 |
| | Enterococcus | 18,439,920 | **104** | 167,152 | | | | 17,296,466 | 17,463,618 |
| **San Marcos HA** (904.50) - Pacific Ocean Shoreline | Fecal Coliform | 20,886 | **400** | 1,559 | 49 | **22%** | 11 | 15,665 | 17,224 |
| | Total Coliform | 515,278 | **10,000** | 38,984 | | | | 386,099 | 425,083 |
| | Enterococcus | 40,558 | **104** | 406 | | | | 32,559 | 32,966 |
| **San Dieguito HU** (905.00) - Pacific Ocean Shoreline | Fecal Coliform | 21,286,910 | **400** | 425,968 | 98 | **22%** | 22 | 20,675,680 | 21,101,649 |
| | Total Coliform | 163,541,133 | **10,000** | 10,637,225 | | | | 149,176,959 | 159,814,184 |
| | Enterococcus | 14,796,210 | **104** | 113,253 | | | | 14,193,834 | 14,307,087 |
| **Miramar Reservoir HA** (906.10) - Pacific Ocean Shoreline | Fecal Coliform | 10,392 | **400** | 312 | 94 | **22%** | 21 | 9,943 | 10,256 |
| | Total Coliform | 212,986 | **10,000** | 7,809 | | | | 202,371 | 210,180 |
| | Enterococcus | 11,564 | **104** | 81 | | | | 11,323 | 11,405 |

| - Impaired Waterbody | Indicator Bacteria | Existing Bacteria Load (Billion MPN/year) | Single Sample Maximum Objective (MPN/100mL) | Allowable Numeric Objective Load (Billion MPN/year) | Total Wet Days in Critical Year | Allowable Exceedance Frequency | Allowable Wet Exceedance Days in Critical Year | Allowable Exceedance Load (Billion MPN/year) | Total Allowable Load [=TMDL] (Billion MPN/year) |
|---|---|---|---|---|---|---|---|---|---|
| **Scripps HA** (906.30) | Fecal Coliform | 204,057 | **400** | 10,329 | | | | 166,578 | 176,907 |
| - Pacific Ocean Shoreline | Total Coliform | 5,029,519 | **10,000** | 258,228 | 57 | **22%** | 13 | 4,098,745 | 4,356,973 |
| | Enterococcus | 377,839 | **104** | 2,686 | | | | 321,347 | 324,032 |
| **Tecolote HA** (906.50) | Fecal Coliform | 261,966 | **400** | 25,080 | | | | 204,241 | 229,322 |
| - Tecolote Creek | Total Coliform | 7,395,789 | **10,000** | 626,414 | 57 | **22%** | 13 | 5,753,355 | 6,379,770 |
| | Enterococcus | 708,256 | **104*** | 6,522 | | | | 597,659 | 604,180 |
| | | 708,256 | **61** | 3,825 | | | | 599,936 | 603,761 |
| **Mission San Diego HSA** (907.11) | Fecal Coliform | 4,932,380 | **400** | 310,820 | | | | 4,370,018 | 4,680,838 |
| **and Santee HSA** (907.12) | Total Coliform | 72,757,569 | **10,000** | 7,752,284 | 86 | **22%** | 19 | 58,352,938 | 66,105,222 |
| - Forrester Creek<br>- San Diego River (lower)<br>- Pacific Ocean Shoreline | Enterococcus | 7,255,759 | **104*** | 80,899 | | | | 6,514,309 | 6,595,208 |
| | | 7,255,759 | **61** | 47,479 | | | | 6,543,487 | 6,590,966 |
| **Chollas HSA** (908.22) | Fecal Coliform | 603,863 | **400** | 55,516 | | | | 464,924 | 520,440 |
| - Chollas Creek | Total Coliform | 15,390,608 | **10,000** | 1,386,037 | 65 | **22%** | 14 | 11,861,589 | 13,247,626 |
| | Enterococcus | 1,371,972 | **104*** | 15,008 | | | | 1,138,590 | 1,153,599 |
| | | 1,371,972 | **61** | 9,073 | | | | 1,143,572 | 1,152,645 |

* Total Maximum Daily Load calculated using a Enterococcus numeric target of 61 MPN/mL that is conservatively protective of the REC-1 "designated beach" usage frequency for freshwater creeks and downstream beaches. If the usage frequency of the freshwater creeks can be established as "moderately to lightly used" in the Basin Plan, alternative Total Maximum Daily Loads calculated using an Enterococcus numeric target of 104 MPN/ml may be used.

*Existing Bacteria Load* = Predicted existing bacteria load discharged from the watershed calculated by the Loading Simulation Program in C++ (LSPC) model using modeled flows and bacteria densities for all wet days during the critical year 1993

*Single Sample Maximum Objective* = Target bacteria densities based on numeric single sample maximum water quality objectives that are protective of REC-1 beneficial uses
*Allowable Numeric Objective Load* = Allowable load from the watershed calculated by the LSPC model using modeled flows and the numeric single sample maximum water quality objective bacteria densities for all wet days during the critical year 1993

*Total Wet Days in Critical Year* = Number of wet days (i.e., rainfall events of 0.2 inches or greater and the following 72 hours) in the critical year 1993 (i.e., wettest year between 1990 and 2002)
*Allowable Exceedance Frequency* = Assumed to be 22 percent exceedance frequency. In the calculation of the wet weather TMDLs, the San Diego Regional Board chose to apply the 22 percent allowable exceedance frequency as determined for Leo Carillo Beach in Los Angeles County. At the time the wet weather watershed model was developed, the 22 percent exceedance frequency from Los Angeles County was the only reference beach exceedance frequency available. The 22 percent allowable exceedance frequency used to calculate the wet weather TMDLs is justified because the San Diego Region watersheds' exceedance frequencies will likely be close to the value calculated for Leo Carillo Beach, and is consistent with the exceedance frequency that was applied by the Los Angeles Regional Board.
*Allowable Wet Exceedance Days* = (Total Wet days in Critical Year) X (Allowable Exceedance Frequency)
*Allowable Exceedance Load* = Sum of exceedance loads from the allowable exceedance days with the highest exceedance loads calculated by the LSPC model using modeled flows and bacteria densities for all wet days during the critical year 1993

*Total Allowable Load [i.e. TMDL]* = (Allowable Numeric Objective Load) + (Allowable Exceedance Load)

| - Impaired Waterbody | Indicator Bacteria | Existing Bacteria Load (Billion MPN/mth) | 30-Day Geometric Mean Objective (MPN/100mL) | Allowable Numeric Objective Load (Billion MPN/mth) | Total Dry Days in Critical Year | Allowable Exceedance Frequency | Allowable Dry Exceedance Days in Critical Year | Allowable Exceedance Load (Billion MPN/mth) | Total Allowable Load [=TMDL] (Billion MPN/mth) |
|---|---|---|---|---|---|---|---|---|---|
| **San Joaquin Hills HSA** (901.11) **and Laguna Hills HSA** (901.12) - Pacific Ocean Shoreline | Fecal Coliform | 2,741 | **200** | 227 | 296 | **0%** | 0 | 0 | 227 |
| | Total Coliform | 13,791 | **1,000** | 1,134 | | | | 0 | 1,134 |
| | Enterococcus | 2,321 | **35** | 40 | | | | 0 | 40 |
| **Aliso HSA** (901.13) - Pacific Ocean Shoreline - Aliso Creek - Aliso Creek mouth | Fecal Coliform | 5,470 | **200** | 242 | 296 | **0%** | 0 | 0 | 242 |
| | Total Coliform | 26,639 | **1,000** | 1,208 | | | | 0 | 1,208 |
| | Enterococcus | 4,614 | **33*** | 40 | | | | 0 | 40 |
| **Dana Point HSA** (901.14) - Pacific Ocean Shoreline | Fecal Coliform | 1,851 | **200** | 92 | 296 | **0%** | 0 | 0 | 92 |
| | Total Coliform | 9,315 | **1,000** | 462 | | | | 0 | 462 |
| | Enterococcus | 1,567 | **35** | 16 | | | | 0 | 16 |
| **Lower San Juan HSA** (901.27) - Pacific Ocean Shoreline - San Juan Creek - San Juan Creek mouth | Fecal Coliform | 6,455 | **200** | 1,665 | 289 | **0%** | 0 | 0 | 1,665 |
| | Total Coliform | 30,846 | **1,000** | 8,342 | | | | 0 | 8,342 |
| | Enterococcus | 5,433 | **33*** | 275 | | | | 0 | 275 |
| **San Clemente HA** (901.30) - Pacific Ocean Shoreline | Fecal Coliform | 3,327 | **200** | 192 | 292 | **0%** | 0 | 0 | 192 |
| | Total Coliform | 16,743 | **1,000** | 958 | | | | 0 | 958 |
| | Enterococcus | 2,817 | **35** | 33 | | | | 0 | 33 |
| **San Luis Rey HU** (903.00) - Pacific Ocean Shoreline | Fecal Coliform | 1,737 | **200** | 1,058 | 275 | **0%** | 0 | 0 | 1,058 |
| | Total Coliform | 8,549 | **1,000** | 5,289 | | | | 0 | 5,289 |
| | Enterococcus | 1,466 | **35** | 185 | | | | 0 | 185 |
| **San Marcos HA** (904.50) - Pacific Ocean Shoreline | Fecal Coliform | 149 | **200** | 26 | 316 | **0%** | 0 | 0 | 26 |
| | Total Coliform | 751 | **1,000** | 129 | | | | 0 | 129 |
| | Enterococcus | 126 | **35** | 5 | | | | 0 | 5 |
| **San Dieguito HU** (905.00) - Pacific Ocean Shoreline | Fecal Coliform | 1,631 | **200** | 1,293 | 267 | **0%** | 0 | 0 | 1,293 |
| | Total Coliform | 7,555 | **1,000** | 6,468 | | | | 0 | 6,468 |
| | Enterococcus | 1,368 | **35** | 226 | | | | 0 | 226 |
| **Miramar Reservoir HA** (906.10) - Pacific Ocean Shoreline | Fecal Coliform | 205 | **200** | 7 | 271 | **0%** | 0 | 0 | 7 |
| | Total Coliform | 1,030 | **1,000** | 36 | | | | 0 | 36 |
| | Enterococcus | 173 | **35** | 1 | | | | 0 | 1 |

## Table 7-40. Summary of Dry Weather Existing and Allowable Indicator Bacteria Loads (Cont'd)

| Watershed<br>- Impaired Waterbody | Indicator Bacteria | Existing Bacteria Load (Billion MPN/mth) | 30-Day Geometric Mean Objective (MPN/100mL) | Allowable Numeric Objective Load (Billion MPN/mth) | Total Dry Days in Critical Year | Allowable Exceedance Frequency | Allowable Dry Exceedance Days in Critical Year | Allowable Exceedance Load (Billion MPN/mth) | Total Allowable Load [=TMDL] (Billion MPN/mth) |
|---|---|---|---|---|---|---|---|---|---|
| **Scripps HA** (906.30) | Fecal Coliform | 3,320 | **200** | 119 | 308 | **0%** | 0 | 0 | 119 |
| - Pacific Ocean Shoreline | Total Coliform | 16,707 | **1,000** | 594 | | | | 0 | 594 |
| | Enterococcus | 2,811 | **35** | 21 | | | | 0 | 21 |
| **Tecolote HA** (906.50) | Fecal Coliform | 4,329 | **200** | 234 | 308 | **0%** | 0 | 0 | 234 |
| - Tecolote Creek | Total Coliform | 21,349 | **1,000** | 1,171 | | | | 0 | 1,171 |
| | Enterococcus | 3,657 | **33*** | 39 | | | | 0 | 39 |
| **Mission San Diego HSA** (907.11) **and Santee HSA** (907.12) | Fecal Coliform | 4,928 | **200** | 1,506 | 279 | **0%** | 0 | 0 | 1,506 |
| | Total Coliform | 28,988 | **1,000** | 7,529 | | | | 0 | 7,529 |
| - Forrester Creek (lower 1 mile)<br>- San Diego River (lower 6 miles)<br>- Pacific Ocean Shoreline | Enterococcus | 4,106 | **33*** | 248 | | | | 0 | 248 |
| **Chollas HSA** (908.22) | Fecal Coliform | 5,068 | **200** | 398 | 300 | **0%** | 0 | 0 | 398 |
| - Chollas Creek | Total Coliform | 25,080 | **1,000** | 1,991 | | | | 0 | 1,991 |
| | Enterococcus | 4,283 | **33*** | 66 | | | | 0 | 66 |

* Total Allowable Load [=TMDL] calculated using a Enterococcus numeric target of 33 MPN/mL that is conservatively protective of the REC-1 "designated beach" usage frequency for watersheds with impaired freshwater creeks.

*Existing Bacteria Load* = Predicted existing bacteria load discharged from the watershed calculated by the plug-flow reactor model using estimated flows and bacteria densities for 30 dry days during the critical year 1993

*30-Day Geometric Mean Objective* = Target bacteria densities based on numeric 30-day geometric mean water quality objectives that are protective of REC-1 beneficial uses
*Allowable Numeric Objective Load* = Allowable load from the watershed calculated by the plug-flow reactor model using estimated flows and the numeric 30-day geometric mean water quality objective bacteria densities for 30 dry days during the critical year 1993

*Total Dry Days in Critical Year* = Number of dry days (i.e., day not including rainfall events of 0.2 inches or greater and the following 72 hours) in the critical year 1993 (i.e., wettest year between 1990 and 2002)
*Allowable Exceedance Frequency* = Assumed to be zero; data collected from reference systems generally do not show exceedances of REC-1 water quality objectives
*Allowable Wet Exceedance Days* = (Total Dry Days in Critical Year) X (Allowable Exceedance Frequency)
*Allowable Exceedance Load* = Sum of exceedance loads from the allowable exceedance days for all dry days during the critical year 1993

*Total Allowable Load [i.e. TMDL]* = (Allowable Numeric Objective Load) + (Allowable Exceedance Load) for a 30-day period

## Table 7-41. Wet Weather Fecal Coliform Bacteria Existing Loads, TMDLs, WLA, LAs Expressed as Annual Loads (Billion MPN/year)

| Watershed | Total Watershed | | Point Sources | | | | | | Nonpoint Sources | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Municipal MS4 | | | Caltrans | | | Agriculture | | | Open | | |
| | Existing Load | TMDL* | Existing Load | WLA* | Reduction Required | Existing Load | WLA* | Reduction Required | Existing Load | LA* | Reduction Required | Existing Load | LA* | Reduction Required |
| San Joaquin Hills/ Laguna Hills HSAs (901.11 and 901.12) | 705,015 | 664,634 | 77,548 | 37,167 | 52.07% | 179 | 179 | 0.00% | 7,346 | 7,346 | 0.00% | 619,942 | 619,942 | 0.00% |
| Aliso HSA (901.13) | 1,752,096 | 1,579,073 | 650,092 | 477,069 | 26.62% | 260 | 260 | 0.00% | 26,508 | 26,508 | 0.00% | 1,075,237 | 1,075,237 | 0.00% |
| Dana Point HSA (901.14) | 403,911 | 377,313 | 179,043 | 152,446 | 14.86% | 13 | 13 | 0.00% | 0 | 0 | 0.00% | 224,854 | 224,854 | 0.00% |
| Lower San Juan HSA (901.27) | 15,304,790 | 14,714,833 | 1,326,469 | 1,156,419 | 12.82% | 1,713 | 1,713 | 0.00% | 3,275,477 | 2,855,570 | 12.82% | 10,701,131 | 10,701,131 | 0.00% |
| San Clemente HA (901.30) | 1,441,723 | 1,378,931 | 255,445 | 192,653 | 24.58% | 335 | 335 | 0.00% | 366 | 366 | 0.00% | 1,185,577 | 1,185,577 | 0.00% |
| San Luis Rey HU (903.00) | 33,120,012 | 32,444,242 | 943,501 | 914,026 | 3.12% | 1,537 | 1,537 | 0.00% | 20,687,954 | 20,041,659 | 3.12% | 11,487,019 | 11,487,019 | 0.00% |
| San Marcos HA (904.50_ | 20,886 | 17,224 | 8,095 | 6,558 | 18.98% | 8 | 8 | 0.00% | 11,199 | 9,073 | 18.98% | 1,585 | 1,585 | 0.00% |
| San Dieguito HU (905.00) | 21,286,910 | 21,101,649 | 810,008 | 798,175 | 1.46% | 1,310 | 1,310 | 0.00% | 11,872,240 | 11,698,811 | 1.46% | 8,603,352 | 8,603,352 | 0.00% |
| Miramar Reservoir HA (906.10) | 10,392 | 10,256 | 6,839 | 6,703 | 1.99% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 3,552 | 3,552 | 0.00% |
| Scripps HA (906.30) | 204,057 | 176,907 | 128,403 | 101,253 | 21.14% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 75,654 | 75,654 | 0.00% |
| Tecolote HA (906.5) | 261,966 | 229,322 | 159,449 | 126,806 | 20.47% | 553 | 553 | 0.00% | 0 | 0 | 0.00% | 101,963 | 101,963 | 0.00% |
| Mission San Diego/ Santee HSAs (907.11 and 907.12) | 4,932,380 +1,302** | 4,680,838 +1,302* | 472,660 | 221,117 | 53.22% | 1,009 | 1,009 | 0.00% | 414,721 | 414,721 | 0.00% | 4,043,991 | 4,043,991 | 0.00% |
| Chollas HSA (908.22) | 603,863 | 520,440 | 335,901 | 252,479 | 24.84% | 892 | 892 | 0.00% | 0 | 0 | 0.00% | 267,070 | 267,070 | 0.00% |

* TMDLs, WLAs, and LAs calculated based on numeric targets consisting of the single sample maximum WQO for fecal coliform (400 MPN/100mL) and a 22 percent allowable exceedance frequency. Meeting the numeric targets in the discharge and/or receiving water indicate the TMDLs, WLAs, and/or LAs have been met.

** Permitted existing fecal coliform bacteria load from Padre Dam Municipal Water District Water Reclamation Plant (Padre Dam), assigned as a separate point source wasteload allocation for discharges from Padre Dam equal to the permitted existing load

*Watershed Existing Load* = Predicted existing fecal coliform bacteria loads discharged from all land use categories in the watershed calculated by the Loading Simulation Program in C++ (LSPC) model using modeled flows and bacteria densities for all wet days during the critical year 1993

*Watershed TMDL* = Total Maximum Daily Load (TMDL) or total allowable load (Allowable Numeric Objective Load + Allowable Exceedance Load) that can be discharged from all land uses in the watershed on an annual basis

*MS4 Existing Load* = Predicted exiting fecal coliform bacteria loads discharged from Municipal Separate Storm Sewer System (MS4) land use categories in the watershed (i.e., commercial/institutional, high density residential, low density residential, parks/recreation, military, transitional, and industrial/transportation, not including Caltrans transportation) calculated by the LSPC model

*MS4 WLA* = Point source wasteload allocation (WLA) for discharges from Municipal MS4 land uses

*MS4 Reduction Required* = Percent of the MS4 Existing Load that must be reduced to meet the MS4 WLA = (MS4 Existing Load – MS4 WLA)/(MS4 Existing Load)

*Caltrans Existing Load* = Predicted exiting fecal coliform bacteria loads discharged from Caltrans land use areas in the watershed calculated as a fraction of the discharge from industrial/transportation land use category area

*Caltrans WLA* = Point source wasteload allocation (WLA) for discharges from Caltrans land uses, assumed to be equal to Caltrans Existing Load

*Caltrans Reduction Required* = Percent of the Caltrans Existing Load that must be reduced to meet the Caltrans WLA = (Caltrans Existing Load – Caltrans WLA)/(Caltrans Existing Load)

*Agriculture Existing Load* = Predicted exiting fecal coliform bacteria loads discharged from Agriculture land use categories in the watershed (i.e., agriculture, dairy/livestock, horse ranch) calculated by the LSPC model

*Agriculture LA* = Non-point source load allocation (LA) for discharges from Agriculture land uses, assumed to be equal to Agriculture Existing Load in watersheds with existing bacteria load contributions for all three indicator bacteria of less than 5 percent; calculated as a relative load percent of the TMDL minus Caltrans WLA and Open Space LA, based on existing load contributions from MS4 and Agriculture land use categories in watersheds with existing bacteria load contributions for all three indicator bacteria of greater than 5 percent

*Agriculture Reduction Required* = Percent of the Agriculture Existing Load that must be reduced to meet the Agriculture LA = (Agriculture Existing Load – Agriculture LA)/( Agriculture Existing Load)

*Open Existing Load* = Predicted exiting fecal coliform bacteria loads discharged from Open Space land use categories in the watershed (i.e., open space, open recreation, water) calculated by the LSPC model

*Open LA* = Non-point source load allocation (LA) for discharges from Open Space land uses, assumed to be equal to the Open Space Existing Load

*Open Reduction Required* = Percent of the Open Space Existing Load that must be reduced to meet the Open Space LA = (Open Space Existing Load – Open Space LA)/( Open Space Existing Load)

## Table 7-42. Wet Weather Total Coliform Bacteria Existing Loads, TMDLs, WLA, LAs Expressed as Annual Loads (Billion MPN/year)

| Watershed | Total Watershed | | Point Sources | | | | | | Nonpoint Sources | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Municipal MS4 | | | Caltrans | | | Agriculture | | | Open | | |
| | Existing Load | TMDL* | Existing Load | WLA* | Reduction Required | Existing Load | WLA* | Reduction Required | Existing Load | LA* | Reduction Required | Existing Load | LA* | Reduction Required |
| San Joaquin Hills/ Laguna Hills HSAs (901.11 and 901.12) | 8,221,901 | 7,445,649 | 1,656,904 | 880,652 | 46.85% | 7,722 | 7,722 | 0.00% | 50,774 | 50,774 | 0.00% | 6,506,501 | 6,506,501 | 0.00% |
| Aliso HSA (901.13) | 23,210,774 | 20,190,798 | 11,943,241 | 8,923,264 | 25.29% | 11,003 | 11,003 | 0.00% | 179,828 | 179,828 | 0.00% | 11,076,702 | 11,076,702 | 0.00% |
| Dana Point HSA (901.14) | 6,546,962 | 6,031,472 | 3,919,497 | 3,404,008 | 13.15% | 634 | 634 | 0.00% | 0 | 0 | 0.00% | 2,626,830 | 2,626,830 | 0.00% |
| Lower San Juan HSA (901.27) | 130,258,863 | 122,879,189 | 19,919,322 | 16,093,160 | 19.21% | 60,480 | 60,480 | 0.00% | 18,499,884 | 14,946,372 | 19.21% | 91,779,178 | 91,779,178 | 0.00% |
| San Clemente HA (901.30) | 16,236,606 | 15,147,603 | 4,566,742 | 3,477,739 | 23.85% | 13,534 | 13,534 | 0.00% | 2,370 | 2,370 | 0.00% | 11,653,960 | 11,653,960 | 0.00% |
| San Luis Rey HU (903.00) | 231,598,677 | 224,150,535 | 15,229,456 | 14,373,954 | 5.62% | 54,508 | 54,508 | 0.00% | 117,360,800 | 110,768,160 | 5.62% | 98,953,913 | 98,953,913 | 0.00% |
| San Marcos HA (904.50_ | 515,278 | 425,083 | 366,021 | 298,430 | 18.47% | 533 | 533 | 0.00% | 122,414 | 99,809 | 18.47% | 26,311 | 26,311 | 0.00% |
| San Dieguito HU (905.00) | 163,541,133 | 159,814,184 | 17,406,569 | 16,660,538 | 4.29% | 47,969 | 47,969 | 0.00% | 69,551,416 | 66,570,499 | 4.29% | 76,535,178 | 76,535,178 | 0.00% |
| Miramar Reservoir HA (906.10) | 212,986 | 210,180 | 174,243 | 171,436 | 1.61% | 9 | 9 | 0.00% | 0 | 0 | 0.00% | 38,734 | 38,734 | 0.00% |
| Scripps HA (906.30) | 5,029,519 | 4,356,973 | 4,120,310 | 3,447,764 | 16.32% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 909,209 | 909,209 | 0.00% |
| Tecolote HA (906.5) | 7,395,789 | 6,379,770 | 6,152,484 | 5,136,598 | 16.51% | 27,095 | 27,095 | 0.00% | 0 | 0 | 0.00% | 1,216,077 | 1,216,077 | 0.00% |
| Mission San Diego/ Santee HSAs (907.11 and 907.12) | 72,757,569 | 66,105,222 | 17,442,867 | 10,790,520 | 38.14% | 53,141 | 53,141 | 0.00% | 3,495,960 | 3,495,960 | 0.00% | 51,765,601 | 51,765,601 | 0.00% |
| Chollas HSA (908.22) | 15,390,608 | 13,247,626 | 12,023,766 | 9,880,784 | 17.82% | 45,652 | 45,652 | 0.00% | 0 | 0 | 0.00% | 3,321,191 | 3,321,191 | 0.00% |

* TMDLs, WLAs, and LAs calculated based on numeric targets consisting of the single sample maximum WQO for total coliform (10,000 MPN/100mL) and a 22 percent allowable exceedance frequency. Meeting the numeric targets in the discharge and/or receiving water indicate the TMDLs, WLAs, and/or LAs have been met.

*Watershed Existing Load* = Predicted existing total coliform bacteria loads discharged from all land use categories in the watershed calculated by the Loading Simulation Program in C++ (LSPC) model using modeled flows and bacteria densities for all wet days during the critical year 1993

*Watershed TMDL* = Total Maximum Daily Load (TMDL) or total allowable load (Allowable Numeric Objective Load + Allowable Exceedance Load) that can be discharged from all land uses in the watershed on an annual basis

*MS4 Existing Load* = Predicted exiting total coliform bacteria loads discharged from Municipal Separate Storm Sewer System (MS4) land use categories in the watershed (i.e., commercial/institutional, high density residential, low density residential, parks/recreation, military, transitional, and industrial/transportation, not including Caltrans transportation) calculated by the LSPC model

*MS4 WLA* = Point source wasteload allocation (WLA) for discharges from Municipal MS4 land uses

*MS4 Reduction Required* = Percent of the MS4 Existing Load that must be reduced to meet the MS4 WLA = (MS4 Existing Load – MS4 WLA)/(MS4 Existing Load)

*Caltrans Existing Load* = Predicted exiting total coliform bacteria loads discharged from Caltrans land use areas in the watershed calculated as a fraction of the discharge from industrial/transportation land use category area

*Caltrans WLA* = Point source wasteload allocation (WLA) for discharges from Caltrans land uses, assumed to be equal to Caltrans Existing Load

*Caltrans Reduction Required* = Percent of the Caltrans Existing Load that must be reduced to meet the Caltrans WLA = (Caltrans Existing Load – Caltrans WLA)/(Caltrans Existing Load)

*Agriculture Existing Load* = Predicted exiting total coliform bacteria loads discharged from Agriculture land use categories in the watershed (i.e., agriculture, dairy/livestock, horse ranch) calculated by the LSPC model

*Agriculture LA* = Non-point source load allocation (LA) for discharges from Agriculture land uses, assumed to be equal to Agriculture Existing Load in watersheds with existing bacteria load contributions for all three indicator bacteria of less than 5 percent; calculated as a relative load percent of the TMDL minus Caltrans WLA and Open Space LA, based on existing load contributions from MS4 and Agriculture land use categories in watersheds with existing bacteria load contributions for all three indicator bacteria of greater than 5 percent

*Agriculture Reduction Required* = Percent of the Agriculture Existing Load that must be reduced to meet the Agriculture LA = (Agriculture Existing Load – Agriculture LA)/( Agriculture Existing Load)

*Open Existing Load* = Predicted exiting total coliform bacteria loads discharged from Open Space land use categories in the watershed (i.e., open space, open recreation, water) calculated by the LSPC model

*Open LA* = Non-point source load allocation (LA) for discharges from Open Space land uses, assumed to be equal to the Open Space Existing Load

*Open Reduction Required* = Percent of the Open Space Existing Load that must be reduced to meet the Open Space LA = (Open Space Existing Load – Open Space LA)/( Open Space Existing Load)

## Table 7-43. Wet Weather Enterococcus Bacteria Existing Loads, TMDLs, WLA, LAs Expressed as Annual Loads (Billion MPN/year)

| Watershed | Total Watershed | | Point Sources | | | | | | Nonpoint Sources | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Municipal MS4 | | | Caltrans | | | Agriculture | | | Open | | |
| | Existing Load | TMDL* | Existing Load | WLA* | Reduction Required | Existing Load | WLA* | Reduction Required | Existing Load | LA* | Reduction Required | Existing Load | LA* | Reduction Required |
| San Joaquin Hills/ Laguna Hills HSAs (901.11 and 901.12) | 852,649 | 782,799 | 136,267 | 66,417 | 51.26% | 365 | 365 | 0.00% | 3,201 | 3,201 | 0.00% | 712,816 | 712,816 | 0.00% |
| Aliso HSA (901.13) | 2,230,206 | 1,950,964** | 1,014,732 | 735,490 | 27.52% | 516 | 516 | 0.00% | 11,245 | 11,245 | 0.00% | 1,203,713 | 1,203,713 | 0.00% |
| Dana Point HSA (901.14) | 501,526 | 462,306 | 258,747 | 219,528 | 15.16% | 25 | 25 | 0.00% | 0 | 0 | 0.00% | 242,753 | 242,753 | 0.00% |
| Lower San Juan HSA (901.27) | 12,980,098 | 12,152,446** | 1,900,520 | 1,385,094 | 27.12% | 2,823 | 2,823 | 0.00% | 1,151,266 | 839,040 | 27.12% | 9,925,490 | 9,925,490 | 0.00% |
| San Clemente HA (901.30) | 1,663,100 | 1,563,187 | 395,581 | 295,668 | 25.26% | 635 | 635 | 0.00% | 148 | 148 | 0.00% | 1,266,736 | 1,266,736 | 0.00% |
| San Luis Rey HU (903.00) | 18,439,920 | 17,463,618 | 1,472,296 | 1,300,235 | 11.69% | 2,397 | 2,397 | 0.00% | 6,881,755 | 6,077,514 | 11.69% | 10,083,473 | 10,083,473 | 0.00% |
| San Marcos HA (904.50_ | 40,558 | 32,966 | 29,784 | 23,771 | 20.19% | 26 | 26 | 0.00% | 7,825 | 6,246 | 20.19% | 2,923 | 2,923 | 0.00% |
| San Dieguito HU (905.00) | 14,796,210 | 14,307,087 | 1,911,170 | 1,763,603 | 7.72% | 2,288 | 2,288 | 0.00% | 4,423,566 | 4,082,010 | 7.72% | 8,459,187 | 8,459,187 | 0.00% |
| Miramar Reservoir HA (906.10) | 11,564 | 11,405 | 8,269 | 8,109 | 1.93% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 3,295 | 3,295 | 0.00% |
| Scripps HA (906.30) | 377,839 | 324,032 | 285,842 | 232,035 | 18.82% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 91,997 | 91,997 | 0.00% |
| Tecolote HA (906.5) | 708,256 | 603,761** | 575,708 | 471,211 | 18.15% | 1,266 | 1,266 | 0.00% | 0 | 0 | 0.00% | 131,284 | 131,284 | 0.00% |
| Mission San Diego/ Santee HSAs (907.11 and 907.12) | 7,255,759 | 6,590,966* | 1,555,411 | 890,617 | 42.74% | 2,430 | 2,430 | 0.00% | 213,149 | 213,149 | 0.00% | 5,484,770 | 5,484,770 | 0.00% |
| Chollas HSA (908.22) | 1,371,972 | 1,152,645** | 1,022,245 | 802,918 | 21.46% | 2,062 | 2,062 | 0.00% | 0 | 0 | 0.00% | 347,665 | 347,665 | 0.00% |

* TMDLs, WLAs, and LAs calculated based on numeric targets consisting of the single sample maximum WQO for enterococcus (104 MPN/100mL or 61 MPN/100mL) and a 22 percent allowable exceedance frequency. Meeting the numeric targets in the discharge and/or receiving water indicate the TMDLs, WLAs, and/or LAs have been met.

** Total Maximum Daily Load calculated using a Enterococcus numeric target of 61 MPN/mL that is conservatively protective of the REC-1 "designated beach" usage frequency for freshwater creeks and downstream beaches. If the usage frequency of the freshwater creeks can be established as "moderately to lightly used," alternative Total Maximum Daily Loads calculated using an Enterococcus numeric target of 104 MPN/ml presented in Table 7-44 may be used.

*Watershed Existing Load* = Predicted existing Enterococcus bacteria loads discharged from all land use categories in the watershed calculated by the Loading Simulation Program in C++ (LSPC) model using modeled flows and bacteria densities for all wet days during the critical year 1993

*Watershed TMDL* = Total Maximum Daily Load (TMDL) or total allowable load (Allowable Numeric Objective Load + Allowable Exceedance Load) that can be discharged from all land uses in the watershed on an annual basis

*MS4 Existing Load* = Predicted exiting Enterococcus bacteria loads discharged from Municipal Separate Storm Sewer System (MS4) land use categories in the watershed (i.e., commercial/institutional, high density residential, low density residential, parks/recreation, military, transitional, and industrial/transportation, not including Caltrans transportation) calculated by the LSPC model

*MS4 WLA* = Point source wasteload allocation (WLA) for discharges from Municipal MS4 land uses

*MS4 Reduction Required* = Percent of the MS4 Existing Load that must be reduced to meet the MS4 WLA = (MS4 Existing Load – MS4 WLA)/(MS4 Existing Load)

*Caltrans Existing Load* = Predicted exiting Enterococcus bacteria loads discharged from Caltrans land use areas in the watershed calculated as a fraction of the discharge from industrial/transportation land use category area

*Caltrans WLA* = Point source wasteload allocation (WLA) for discharges from Caltrans land uses, assumed to be equal to Caltrans Existing Load

*Caltrans Reduction Required* = Percent of the Caltrans Existing Load that must be reduced to meet the Caltrans WLA = (Caltrans Existing Load – Caltrans WLA)/(Caltrans Existing Load)

*Agriculture Existing Load* = Predicted exiting Enterococcus bacteria loads discharged from Agriculture land use categories in the watershed (i.e., agriculture, dairy/livestock, horse ranch) calculated by the LSPC model

*Agriculture LA* = Non-point source load allocation (LA) for discharges from Agriculture land uses, assumed to be equal to Agriculture Existing Load in watersheds with existing bacteria load contributions for all three indicator bacteria of less than 5 percent; calculated as a relative load percent of the TMDL minus Caltrans WLA and Open Space LA, based on existing load contributions from MS4 and Agriculture land use categories in watersheds with existing bacteria load contributions for all three indicator bacteria of greater than 5 percent

*Agriculture Reduction Required* = Percent of the Agriculture Existing Load that must be reduced to meet the Agriculture LA = (Agriculture Existing Load – Agriculture LA)/( Agriculture Existing Load)

*Open Existing Load* = Predicted exiting Enterococcus bacteria loads discharged from Open Space land use categories in the watershed (i.e., open space, open recreation, water) calculated by the LSPC model

*Open LA* = Non-point source load allocation (LA) for discharges from Open Space land uses, assumed to be equal to the Open Space Existing Load

*Open Reduction Required* = Percent of the Open Space Existing Load that must be reduced to meet the Open Space LA = (Open Space Existing Load – Open Space LA)/( Open Space Existing Load))

**Table 7-44. Alternative Wet Weather Enterococcus Bacteria Existing Loads, TMDLs, WLA, LAs Expressed as Annual Loads (Billion MPN/year)**

| Watershed | Total Watershed | | Point Sources | | | | | | Nonpoint Sources | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Municipal MS4 | | | Caltrans | | | Agriculture | | | Open | | |
| | Existing Load | TMDL* | Existing Load | WLA* | Reduction Required | Existing Load | WLA* | Reduction Required | Existing Load | LA* | Reduction Required | Existing Load | LA* | Reduction Required |
| Aliso HSA (901.13) | 2,230,206 | 1,952,517** | 1,014,732 | 737,042 | 27.37% | 516 | 516 | 0.00% | 11,245 | 11,245 | 0.00% | 1,203,713 | 1,203,713 | 0.00% |
| Lower San Juan HSA (901.27) | 12,980,098 | 12,159,138** | 1,900,520 | 1,389,261 | 26.90% | 2,823 | 2,823 | 0.00% | 1,151,266 | 841,564 | 26.90% | 9,925,490 | 9,925,490 | 0.00% |
| Tecolote HA (906.50) | 708,256 | 604,180** | 575,708 | 471,630 | 18.08% | 1,266 | 1,266 | 0.00% | 0 | 0 | 0.00% | 131,284 | 131,284 | 0.00% |
| Mission San Diego/ Santee HSAs (907.11 and 907.12) | 7,255,759 | 6,595,208** | 1,555,411 | 894,859 | 42.47% | 2,430 | 2,430 | 0.00% | 213,149 | 213,149 | 0.00% | 5,484,770 | 5,484,770 | 0.00% |
| Chollas HSA (908.22) | 1,371,972 | 1,153,599** | 1,022,245 | 803,871 | 21.36% | 2,062 | 2,062 | 0.00% | 0 | 0 | 0.00% | 347,665 | 347,665 | 0.00% |

* TMDLs, WLAs, and LAs calculated based on numeric targets consisting of the single sample maximum WQO for enterococcus (104 MPN/100mL) and a 22 percent allowable exceedance frequency. Meeting the numeric targets in the discharge and/or receiving water indicate the TMDLs, WLAs, and/or LAs have been met.

** Total Maximum Daily Load calculated using a Enterococcus numeric target of 104 MPN/ml protective of the REC-1 "moderately to lightly used area" usage frequency that is protective freshwater creeks and downstream beaches. Acceptable evidence that impaired freshwater creeks can be considered "moderately to lightly used areas" must be provided before these alternative wet weather TMDLs, WLAs, and LAs can be implemented in these watersheds.

*Watershed Existing Load* Predicted existing Enterococcus bacteria loads discharged from all land use categories in the watershed calculated by the Loading Simulation Program in C++ (LSPC) model using modeled flows and bacteria densities for all wet days during the critical year 1993

*Watershed TMDL* = Total Maximum Daily Load (TMDL) or total allowable load (Allowable Numeric Objective Load + Allowable Exceedance Load) that can be discharged from all land uses in the watershed on an annual basis

*MS4 Existing Load* = Predicted exiting Enterococcus bacteria loads discharged from Municipal Separate Storm Sewer System (MS4) land use categories in the watershed (i.e., commercial/institutional, high density residential, low density residential, parks/recreation, military, transitional, and industrial/transportation, not including Caltrans transportation) calculated by the LSPC model

*MS4 WLA* = Point source wasteload allocation (WLA) for discharges from Municipal MS4 land uses

*MS4 Reduction Required* = Percent of the MS4 Existing Load that must be reduced to meet the MS4 WLA = (MS4 Existing Load – MS4 WLA)/(MS4 Existing Load)

*Caltrans Existing Load* = = Predicted exiting Enterococcus bacteria loads discharged from Caltrans land use areas in the watershed calculated as a fraction of the discharge from industrial/transportation land use category area

*Caltrans WLA* = Point source wasteload allocation (WLA) for discharges from Caltrans land uses, assumed to be equal to Caltrans Existing Load

*Caltrans Reduction Required* = Percent of the Caltrans Existing Load that must be reduced to meet the Caltrans WLA = (Caltrans Existing Load – Caltrans WLA)/(Caltrans Existing Load)

*Agriculture Existing Load* = Predicted exiting Enterococcus bacteria loads discharged from Agriculture land use categories in the watershed (i.e., agriculture, dairy/livestock, horse ranch) calculated by the LSPC model

*Agriculture LA* = Non-point source load allocation (LA) for discharges from Agriculture land uses, assumed to be equal to Agriculture Existing Load in watersheds with existing bacteria load contributions for all three indicator bacteria of less than 5 percent; calculated as a relative load percent of the TMDL minus Caltrans WLA and Open Space LA, based on existing load contributions from MS4 and Agriculture land use categories in watersheds with existing bacteria load contributions for all three indicator bacteria of greater than 5 percent

*Agriculture Reduction Required* = Percent of the Agriculture Existing Load that must be reduced to meet the Agriculture LA = (Agriculture Existing Load – Agriculture LA)/( Agriculture Existing Load)

*Open Existing Load* = Predicted exiting Enterococcus bacteria loads discharged from Open Space land use categories in the watershed (i.e., open space, open recreation, water) calculated by the LSPC model

*Open LA* = Non-point source load allocation (LA) for discharges from Open Space land uses, assumed to be equal to the Open Space Existing Load

*Open Reduction Required* = Percent of the Open Space Existing Load that must be reduced to meet the Open Space LA = (Open Space Existing Load – Open Space LA)/( Open Space Existing Load)

## Table 7-45. Dry Weather Fecal Coliform Bacteria Existing Loads, TMDLs, WLA, LAs Expressed as Monthly Loads (Billion MPN/month)

| Watershed | Total Watershed | | Point Sources | | | | | | Nonpoint Sources | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Municipal MS4 | | | Caltrans | | | Agriculture | | | Open | | |
| | Existing Load | TMDL* | Existing Load | WLA* | Reduction Required | Existing Load | WLA* | Reduction Required | Existing Load | LA* | Reduction Required | Existing Load | LA* | Reduction Required |
| San Joaquin Hills/ Laguna Hills HSAs (901.11 and 901.12) | 2,741 | 227 | 2,741 | 227 | 91.72% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Aliso HSA (901.13) | 5,470 | 242 | 5,470 | 242 | 95.58% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Dana Point HSA (901.14) | 1,851 | 92 | 1,851 | 92 | 95.03% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Lower San Juan HSA (901.27) | 6,455 | 1,665 | 6,455 | 1,665 | 74.21% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| San Clemente HA (901.30) | 3,327 | 192 | 3,327 | 192 | 94.23% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| San Luis Rey HU (903.00) | 1,737 | 1,058 | 1,737 | 1,058 | 39.09% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| San Marcos HA (904.50_ | 149 | 26 | 149 | 26 | 82.55% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| San Dieguito HU (905.00) | 1,631 | 1,293 | 1,631 | 1,293 | 20.72% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Miramar Reservoir HA (906.10) | 205 | 7 | 205 | 7 | 96.59% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Scripps HA (906.30) | 3,320 | 119 | 3,320 | 119 | 96.42% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tecolote HA (906.5) | 4,329 | 234 | 4,329 | 234 | 94.59% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Mission San Diego/ Santee HSAs (907.11 and 907.12) | 4,928 +461** | 1,506 +461* | 4,928 | 1,506 | 69.44% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Chollas HSA (908.22) | 5,068 | 398 | 5,068 | 398 | 92.15% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |

* TMDLs, WLAs, and LAs calculated based on numeric targets consisting of the 30-day geometric mean WQO for fecal coliform (200 MPN/100mL) and a 0 percent allowable exceedance frequency. Meeting the numeric targets in the discharge and/or receiving water indicate the TMDLs, WLAs, and/or LAs have been met.

** Permitted existing fecal coliform bacteria load from Padre Dam Municipal Water District Water Reclamation Plant (Padre Dam), assigned as a separate point source wasteload allocation for discharges from Padre Dam equal to the permitted existing load

*Watershed Existing Load* = Predicted existing fecal coliform bacteria loads discharged from all land use categories in the watershed calculated by a plug-flow reactor model using estimated flows and bacteria densities for 30 dry days during the critical year 1993

*Watershed TMDL* = Total Maximum Daily Load (TMDL) or total allowable load (Allowable Numeric Objective Load + Allowable Exceedance Load) that can be discharged from all land uses in the watershed for a 30-day period

*MS4 Existing Load* = Predicted exiting fecal coliform bacteria loads discharged from Municipal Separate Storm Sewer System (MS4) land use categories in the watershed (i.e., commercial/institutional, high density residential, low density residential, parks/recreation, military, transitional, and industrial/transportation, not including Caltrans transportation) calculated by the plug-flow reactor model

*MS4 WLA* = Point source wasteload allocation (WLA) for discharges from Municipal MS4 land uses

*MS4 Reduction Required* = Percent of the MS4 Existing Load that must be reduced to meet the MS4 WLA = (MS4 Existing Load – MS4 WLA)/(MS4 Existing Load)

*Caltrans Existing Load* = Fecal coliform bacteria loads discharged from Caltrans land use areas in the watershed assumed to be unlikely during dry weather conditions, or zero bacteria load during dry weather

*Caltrans WLA* = Point source wasteload allocation (WLA) for discharges from Caltrans land uses, assumed to be equal to the Caltrans Existing Load

*Caltrans Reduction Required* = Percent of the Caltrans Existing Load that must be reduced to meet the Caltrans WLA = (Caltrans Existing Load – Caltrans WLA)/(Caltrans Existing Load)

*Agriculture Existing Load* = Fecal coliform bacteria loads discharged from Agriculture land use categories in the watershed (i.e., agriculture, dairy/livestock, horse ranch) assumed to be unlikely during dry weather conditions, or zero bacteria load during dry weather

*Agriculture LA* = Non-point source load allocation (LA) for discharges from Agriculture land uses, assumed to be equal to the Open Space Existing Load

*Agriculture Reduction Required* = Percent of the Agriculture Existing Load that must be reduced to meet the Agriculture LA = (Agriculture Existing Load – Agriculture LA)/( Agriculture Existing Load)

*Open Existing Load* = Fecal coliform bacteria loads discharged from Open Space land use categories in the watershed (i.e., open space, open recreation, water) assumed to be unlikely during dry weather conditions, or zero bacteria load during dry weather

*Open LA* = Non-point source load allocation (LA) for discharges from Open Space land uses, assumed to be equal to the Open Space Existing Load

*Open Reduction Required* = Percent of the Open Space Existing Load that must be reduced to meet the Open Space LA = (Open Space Existing Load – Open Space LA)/( Open Space Existing Load)

## Table 7-46. Dry Weather Total Coliform Bacteria Existing Loads, TMDLs, WLA, LAs Expressed as Monthly Loads (Billion MPN/month)

| Watershed | Total Watershed | | Point Sources | | | | | | Nonpoint Sources | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Municipal MS4 | | | Caltrans | | | Agriculture | | | Open | | |
| | Existing Load | TMDL* | Existing Load | WLA* | Reduction Required | Existing Load | WLA* | Reduction Required | Existing Load | LA* | Reduction Required | Existing Load | LA* | Reduction Required |
| San Joaquin Hills/ Laguna Hills HSAs (901.11 and 901.12) | 13,791 | 1,134 | 13,791 | 1,134 | 91.78% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Aliso HSA (901.13) | 26,639 | 1,208 | 26,639 | 1,208 | 95.47% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Dana Point HSA (901.14) | 9,315 | 462 | 9,315 | 462 | 95.04% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Lower San Juan HSA (901.27) | 30,846 | 8,342 | 30,846 | 8,342 | 72.96% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| San Clemente HA (901.30) | 16,743 | 958 | 16,743 | 958 | 94.28% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| San Luis Rey HU (903.00) | 8,549 | 5,289 | 8,549 | 5,289 | 38.13% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| San Marcos HA (904.50_ | 751 | 129 | 751 | 129 | 82.82% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| San Dieguito HU (905.00) | 7,555 | 6,468 | 7,555 | 6,468 | 14.39% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Miramar Reservoir HA (906.10) | 1,030 | 36 | 1,030 | 36 | 96.50% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Scripps HA (906.30) | 16,707 | 594 | 16,707 | 594 | 96.44% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tecolote HA (906.5) | 21,349 | 1,171 | 21,349 | 1,171 | 94.51% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Mission San Diego/ Santee HSAs (907.11 and 907.12) | 28,988 | 7,529 | 28,988 | 7,529 | 74.03% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Chollas HSA (908.22) | 25,080 | 1,991 | 25,080 | 1,991 | 92.06% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |

* TMDLs, WLAs, and LAs calculated based on numeric targets consisting of the 30-day geometric mean WQO for total coliform (1,000 MPN/100mL) and a 0 percent allowable exceedance frequency. Meeting the numeric targets in the discharge and/or receiving water indicate the TMDLs, WLAs, and/or LAs have been met.

*Watershed Existing Load* = Predicted existing total coliform bacteria loads discharged from all land use categories in the watershed calculated by a plug-flow reactor model using estimated flows and bacteria densities for 30 dry days during the critical year 1993

*Watershed TMDL* = Total Maximum Daily Load (TMDL) or total allowable load (Allowable Numeric Objective Load + Allowable Exceedance Load) that can be discharged from all land uses in the watershed for a 30-day period

*MS4 Existing Load* = Predicted exiting total coliform bacteria loads discharged from Municipal Separate Storm Sewer System (MS4) land use categories in the watershed (i.e., commercial/institutional, high density residential, low density residential, parks/recreation, military, transitional, and industrial/transportation, not including Caltrans transportation) calculated by the plug-flow reactor model

*MS4 WLA* = Point source wasteload allocation (WLA) for discharges from Municipal MS4 land uses

*MS4 Reduction Required* = Percent of the MS4 Existing Load that must be reduced to meet the MS4 WLA = (MS4 Existing Load – MS4 WLA)/(MS4 Existing Load)

*Caltrans Existing Load* = Total coliform bacteria loads discharged from Caltrans land use areas in the watershed assumed to be unlikely during dry weather conditions, or zero bacteria load during dry weather

*Caltrans WLA* = Point source wasteload allocation (WLA) for discharges from Caltrans land uses, assumed to be equal to the Caltrans Existing Load

*Caltrans Reduction Required* = Percent of the Caltrans Existing Load that must be reduced to meet the Caltrans WLA = (Caltrans Existing Load – Caltrans WLA)/(Caltrans Existing Load)

*Agriculture Existing Load* = Total coliform bacteria loads discharged from Agriculture land use categories in the watershed (i.e., agriculture, dairy/livestock, horse ranch) assumed to be unlikely during dry weather conditions, or zero bacteria load during dry weather

*Agriculture LA* = Non-point source load allocation (LA) for discharges from Agriculture land uses, assumed to be equal to the Open Space Existing Load

*Agriculture Reduction Required* = Percent of the Agriculture Existing Load that must be reduced to meet the Agriculture LA = (Agriculture Existing Load – Agriculture LA)/( Agriculture Existing Load)

*Open Existing Load* = Total coliform bacteria loads discharged from Open Space land use categories in the watershed (i.e., open space, open recreation, water) assumed to be unlikely during dry weather conditions, or zero bacteria load during dry weather

*Open LA* = Non-point source load allocation (LA) for discharges from Open Space land uses, assumed to be equal to the Open Space Existing Load

*Open Reduction Required* = Percent of the Open Space Existing Load that must be reduced to meet the Open Space LA = (Open Space Existing Load – Open Space LA)/( Open Space Existing Load)

## Table 7-47. Dry Weather Enterococcus Bacteria Existing Loads, TMDLs, WLA, LAs Expressed as Monthly Loads (Billion MPN/month)

| Watershed | Total Watershed | | Point Sources | | | | | | Nonpoint Sources | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Municipal MS4 | | | Caltrans | | | Agriculture | | | Open | | |
| | Existing Load | TMDL* | Existing Load | WLA* | Reduction Required | Existing Load | WLA* | Reduction Required | Existing Load | LA* | Reduction Required | Existing Load | LA* | Reduction Required |
| San Joaquin Hills/ Laguna Hills HSAs (901.11 and 901.12) | 2,321 | 40 | 2,321 | 40 | 98.28% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Aliso HSA (901.13) | 4,614 | 40** | 4,614 | 40 | 99.13% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Dana Point HSA (901.14) | 1,567 | 16 | 1,567 | 16 | 98.98% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Lower San Juan HSA (901.27) | 5,433 | 275** | 5,433 | 275 | 94.94% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| San Clemente HA (901.30) | 2,817 | 33 | 2,817 | 33 | 98.83% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| San Luis Rey HU (903.00) | 1,466 | 185 | 1,466 | 185 | 87.38% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| San Marcos HA (904.50_ | 126 | 5 | 126 | 5 | 96.03% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| San Dieguito HU (905.00) | 1,368 | 226 | 1,368 | 226 | 83.48% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Miramar Reservoir HA (906.10) | 173 | 1 | 173 | 1 | 99.42% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Scripps HA (906.30) | 2,811 | 21 | 2,811 | 21 | 99.25% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tecolote HA (906.5) | 3,657 | 39** | 3,657 | 39 | 98.94% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Mission San Diego/ Santee HSAs (907.11 and 907.12) | 4,106 | 248** | 4,106 | 248 | 93.96% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Chollas HSA (908.22) | 4,283 | 66** | 4,283 | 66 | 98.46% | 0 | 0 | 0.00% | 0 | 0 | 0.00% | 0 | 0 | 0.00% |

* TMDLs, WLAs, and LAs calculated based on numeric targets consisting of the 30-day geometric mean WQO for enterococcus (35 MPN/100mL or 33 MPN/100mL) and a 0 percent allowable exceedance frequency. Meeting the numeric targets in the discharge and/or receiving water indicate the TMDLs, WLAs, and/or LAs have been met.

** Total Maximum Daily Load calculated using a Enterococcus numeric target of 33 MPN/mL that is conservatively protective of the REC-1 "designated beach" usage frequency for freshwater creeks and downstream beaches.

*Watershed Existing Load* = Predicted existing Enterococcus bacteria loads discharged from all land use categories in the watershed calculated by a plug-flow reactor model using estimated flows and bacteria densities for 30 dry days during the critical year 1993

*Watershed TMDL* = Total Maximum Daily Load (TMDL) or total allowable load (Allowable Numeric Objective Load + Allowable Exceedance Load) that can be discharged from all land uses in the watershed for a 30-day period

*MS4 Existing Load* = Predicted exiting Enterococcus bacteria loads discharged from Municipal Separate Storm Sewer System (MS4) land use categories in the watershed (i.e., commercial/institutional, high density residential, low density residential, parks/recreation, military, transitional, and industrial/transportation, not including Caltrans transportation) calculated by the plug-flow reactor model

*MS4 WLA* = Point source wasteload allocation (WLA) for discharges from MS4 land uses

*MS4 Reduction Required* = Percent of the MS4 Existing Load that must be reduced to meet the MS4 WLA = (MS4 Existing Load – MS4 WLA)/(MS4 Existing Load)

*Caltrans Existing Load* = Enterococcus bacteria loads discharged from Caltrans land use areas in the watershed assumed to be unlikely during dry weather conditions, or zero bacteria load during dry weather

*Caltrans WLA* = Point source wasteload allocation (WLA) for discharges from Caltrans land uses, assumed to be equal to the Caltrans Existing Load

*Caltrans Reduction Required* = Percent of the Caltrans Existing Load that must be reduced to meet the Caltrans WLA = (Caltrans Existing Load – Caltrans WLA)/(Caltrans Existing Load)

*Agriculture Existing Load* = Enterococcus bacteria loads discharged from Agriculture land use categories in the watershed (i.e., agriculture, dairy/livestock, horse ranch) assumed to be unlikely during dry weather conditions, or zero bacteria load during dry weather

*Agriculture LA* = Non-point source load allocation (LA) for discharges from Agriculture land uses, assumed to be equal to the Open Space Existing Load

*Agriculture Reduction Required* = Percent of the Agriculture Existing Load that must be reduced to meet the Agriculture LA = (Agriculture Existing Load – Agriculture LA)/( Agriculture Existing Load)

*Open Existing Load* = Enterococcus bacteria loads discharged from Open Space land use categories in the watershed (i.e., open space, open recreation, water) assumed to be unlikely during dry weather conditions, or zero bacteria load during dry weather

*Open LA* = Non-point source load allocation (LA) for discharges from Open Space land uses, assumed to be equal to the Open Space Existing Load

*Open Reduction Required* = Percent of the Open Space Existing Load that must be reduced to meet the Open Space LA = (Open Space Existing Load – Open Space LA)/( Open Space Existing Load)

## *TMDL IMPLEMENTATION PLAN*

The ultimate goal of the Implementation Plan is to restore the impaired beneficial uses of the waterbodies addressed by these TMDLs. Restoring the impaired beneficial uses will be accomplished by achieving the TMDLs in the receiving waters, and the wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources. The actions taken by the San Diego Water Board depends on the regulatory authority and the source. The regulatory authorities and actions that the San Diego Water Board will use to compel the controllable sources to implement these TMDLs are as follows.

### *(1) Basin Plan Waste Discharge Prohibitions*

The San Diego Water Board may specify certain conditions or areas where the discharge of waste or certain types of waste is not permitted, known as "waste discharge prohibitions," in the Basin Plan.[41] Basin Plan waste discharge prohibitions that are applicable to the implementation of these TMDLs include the following:

- The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in Water Code section 13050, is prohibited.

- The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the Regional Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.

- The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the Regional Board.

- Any discharge to a storm water conveyance system that is not composed entirely of "storm water" is prohibited unless authorized by the Regional Board. [The federal regulations, 40 CFR 122.26(b)(13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities.] [Section 122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].

- The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited.

Existing discharges are violating one or more of these of these Basin Plan prohibitions. The existing Basin Plan prohibitions are consistent with the TMDLs, WLAs, and LAs. If necessary, the San Diego Water Board may amend the Basin Plan to revise current waste discharge prohibitions or include new waste discharge prohibitions. The controllable sources must comply with the Basin Plan waste discharge prohibitions.

### *(2) Waste Discharge Requirements*

The primary regulatory authority used by the San Diego Water Board to protect water resources and water quality in the San Diego Region is the issuance of waste discharge requirements (WDRs).[42] The San Diego Water Board will issue, or revise and re-issue WDRs to point sources and/or nonpoint sources in the San Diego Region to be consistent with the TMDLs, WLAs, and LAs. The controllable sources regulated under WDRs

[41] Authorized pursuant to Water Code section 13243

[42] Authorized pursuant to Water Code sections 13263 and 13264

### *(A) Point Sources*

The San Diego Water Board regulates discharges from point sources to surface waters with WDRs that implement federal NPDES regulations (NPDES requirements). NPDES requirements must contain water quality-based effluent limitations (WQBELs) consistent with the assumptions and requirements of the WLAs of any applicable TMDL.[43]

When developing WQBELs to be incorporated in to NPDES requirements, the following summarizes the requirements and assumptions included in the calculation of the TMDLs, WLAs, and LAs that should be considered:

Numeric Targets

- The numeric targets consist of the numeric WQOs from the Basin Plan and/or Ocean Plan and an allowable exceedance frequency.
- The numeric targets for the wet weather TMDLs consist of the REC-1 single sample maximum WQOs and a 22 percent allowable exceedance frequency.
- The numeric targets for dry weather TMDLs consist of the REC-1 30-day geometric metric mean WQOs and a 0 percent allowable exceedance frequency.
- The TMDL calculations are based on either the single sample maximum WQO (for wet weather) or 30-day geometric mean WQOs (for dry weather), but both the single sample maximum and 30-day geometric mean numeric WQOs and allowable exceedance frequencies must be met in the receiving waters.
- The TMDLs, and in turn the WLAs for point sources and LAs for nonpoint sources, are assumed to be met when the numeric targets for all three indicator bacteria (fecal coliform, total coliform, and *Enterococcus*) are met in the receiving waters.

Critical Conditions

- The mass-load based TMDLs were calculated under critical conditions consisting of flows generated during a critical wet year and estimation of existing and allowable loads at a critical location.
- The flow from the critical wet year is a “worst case” annual wet weather flow and loading scenario. Actual annual wet weather flow and loading will vary from year to year.
- The mass-load based TMDLs calculated at the critical location are dependent on the flow, which can vary from year to year, but the numeric targets will not vary. When the numeric targets are met in the receiving water, the TMDLs are assumed to be met.
- The mass-load based TMDLs, WLAs, and LAs are calculated for the critical location, but the appropriate numeric targets (based on freshwater and/or saltwater REC-1 WQOs and allowable exceedance frequencies) must be met throughout the waterbodies addressed by these TMDLs.

[43] Code of Federal Regulations Title 40 section 122.44(d)(1)(vii)(B)

- The linkage analysis was performed by utilizing calibrated and validated models to predict flow from surface runoff and predict bacteria densities under the critical conditions (i.e., during the critical wet year at the critical location). Existing mass loads and allowable mass loads (i.e., TMDLs) were calculated for each watershed. The existing mass loads were calculated based on model-predicted flow and model-predicted bacteria densities. The allowable mass loads (i.e., TMDLs) were calculated based on model-predicted flow and the numeric targets (i.e., numeric WQOs and allowable exceedance frequencies).

- The wet weather existing mass loads and allowable mass loads (i.e., wet weather mass-load based TMDLs) are calculated assuming surface runoff is generated by rainfall from storm events and discharged from all land use categories to receiving waters.

- The dry weather existing mass loads and allowable mass loads (i.e., dry weather mass-load based TMDLs) are calculated assuming surface runoff is generated only by anthropogenic activities and discharged from specific land use categories to receiving waters. The possible contribution of subsurface or groundwater flows to bacteria loads in receiving waters during dry weather was not accounted for in any land use category.

Allocations

- Each mass-load based TMDL is allocated to known point sources and nonpoint sources. Wasteload allocations (WLAs) are assigned to point sources, and load allocations (LAs) are assigned to nonpoint sources. WLAs and LAs are the maximum load a source can discharge and still achieve the TMDL in the receiving water.

- The TMDLs, and in turn the WLAs for point sources and LAs for nonpoint sources, are assumed to be met when the numeric targets are met in the receiving waters.

- The sources were identified based on land use and grouped in to Municipal MS4, Caltrans MS4 (Caltrans), Agriculture, and Open Space categories. The Municipal MS4 and Caltrans land use categories are point sources, and the Agriculture and Open Space land use categories are nonpoint sources.

- Sources that are not identified are assumed to be assigned a zero allowable load as part of the mass-load based TMDL (i.e., WLA = 0 or LA = 0). In other words, discharges of pollutant loads from these sources are not expected or allowed as part of the TMDLs.

- Sources that are assigned an allowable load equal to the existing mass load as part of the mass-load based TMDL (i.e., WLA or LA = existing mass load) are not expected or allowed to increase their mass load in the future. In other words, discharges of pollutant loads (i.e., flows and bacteria densities) from these sources are not allowed to increase.

- The allocation of the dry weather mass-load based TMDLs assumes that no surface runoff discharge to receiving waters occurs from Caltrans, Agriculture, or Open Space land use categories (i.e., $WLA_{Caltrans}$ = 0, $LA_{Agriculture}$ = 0, and $LA_{OpenSpace}$ = 0), meaning the entire dry weather mass-load based TMDL (i.e., allowable mass load) is allocated to Municipal MS4 land use categories (i.e., $WLA_{MS4}$ = TMDL) (see Tables 7-45 through 7-47).

- The allocation of the wet weather mass-load based TMDLs assumes surface runoff discharge occurs from all land use categories, and allocated according to the following steps (see Tables 7-41 through 7-44):

  1) Sources are separated in to controllable and uncontrollable sources. Discharges from Municipal MS4, Caltrans, and Agriculture land use categories are assumed to be controllable (i.e., subject to regulation), and discharges from Open Space land use categories are assumed to be uncontrollable (i.e., not subject to regulation).

2) Because discharges from Open Space land use categories are uncontrollable (i.e., not subject to regulation), the LAs for Open Space land use categories are set equal to the existing mass loads calculated under the critical conditions.

3) For discharges from controllable land use categories that do not contribute more than 5 percent of the total existing mass load for all three indicator bacteria, the WLA or LA is set equal to the existing mass loads from those land uses calculated under the critical conditions.

4) After the WLAs and LAs are assigned based on steps 2 and 3, the remaining portion of the mass-load based TMDL is assigned to discharges from controllable land use categories that contribute more than 5 percent of the total existing mass load for all three indicator bacteria. The allowable mass load for each source (WLA or LA) is calculated based on the ratio of the existing mass loads from those sources relative to each other.

Load Reductions

- The load reductions required to meet the mass-load based TMDLs, WLAs, and LAs are based on reducing the loads compared to pollutant loads from 2001 to 2002.

- Load reductions for each source are calculated based on the difference between the existing mass load and the mass-load based WLA or LA for each source (see Tables 7-41 through 7-47).

- WLAs and LAs that are set equal to the existing mass loads do not require load reductions to be calculated, but this also means that existing mass loads from those sources cannot increase over time (i.e., pollutant loads should be less than or equal to pollutant loads relative to 2001 to 2002).

- The load reductions needed to meet the WLAs for point sources and LAs for nonpoint sources are assumed to be achieved when the numeric targets are met in the receiving waters.

The persons identified as responsible for point source discharges causing or contributing to bacteria impairments at the beaches and creeks addressed in these TMDLs include:

- Phase I MS4s,

- Phase II MS4s,

- Caltrans,

- POTWs and wastewater collection systems, and

- CAFOs.

According to Tables 7-41 through 7-47, Municipal (Phase I and Phase II) MS4s and Caltrans are the only point sources that have been assigned WLAs. POTWs,[44] CAFOs, and any other unidentified point sources were not assigned WLAs, which is equivalent to being assigned a WLA of zero. All these identified point sources are subject to NPDES regulations.

In order for the WDRs, NPDES requirements, and discharges from these point sources to be consistent with the TMDLs and WLAs, the San Diego Water Board will issue or revise and re-issue the WDRs for these point sources as follows:

[44] Not including Padre Dam, which has been allocated a fecal coliform TMDL based on the effluent limitations in the WDRs for Padre Dam

### *(i) Phase I MS4s*

The TMDLs and Municipal MS4 WLAs, with respect to discharges from Phase I MS4s, will be implemented primarily by revising and re-issuing the existing NPDES requirements that have been issued for Phase I MS4 discharges.

The Phase I MS4s subject to these TMDLs are regulated under San Diego Water Board WDRs that implement NPDES requirements.[45] The NPDES requirements regulating the Phase I MS4s include discharge prohibitions and receiving water limitations that are applicable to the implementation of these TMDLs, as summarized below:

- Discharges from MS4s are subject to all Basin Plan prohibitions.

- Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses) are prohibited.

- Discharges into and from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance, in waters of the state are prohibited.

- Effectively prohibit all types of non-storm water discharges into the MS4 unless such discharges are either authorized by separate NPDES requirements, or not prohibited (i.e., exempted) by the NPDES requirements regulating the MS4. Exempted non-storm water discharges into the MS4 are not prohibited unless the discharge category is identified as a significant source of pollutants to waters of the United States.

The available data reported by the Phase I MS4s and the results of the technical TMDL analysis indicate that discharges into and from MS4s are in violation of the discharge prohibitions and receiving water limitations above. Enforcement of the current discharge prohibitions and receiving water limitations is an action that the San Diego Water Board can immediately implement to compel the MS4s to reduce discharge of bacteria to the receiving waters.

In addition to the discharge prohibitions and receiving water limitations, WQBELs consistent with the assumptions and requirements of the WLAs of any applicable TMDL must also be incorporated into the NPDES requirements. The San Diego Water Board will revise and re-issue the WDRs and NPDES requirements for Phase I MS4s to incorporate the following:

- WQBELs consistent with the requirements and assumptions of the Municipal MS4 WLAs. WQBELs may be expressed as numeric effluent limitations, when feasible, and/or as a BMP program of expanded or better-tailored BMPs.[46]

- If the WQBELs include a BMP program, periodic reporting requirements on BMP planning, implementation, and effectiveness in improving water quality at impaired beaches and creeks (i.e., progress reports). Progress reports will also be required to include water quality monitoring results. Progress reports will be required as long as necessary to ensure that the beneficial uses of the impaired waterbodies have been restored and maintained.

- Compliance schedule for Phase I MS4s to attain the MS4 WLAs and TMDLs in the receiving waters.

[45] Phase I MS4s in Orange County are regulated under San Diego Water Board Order No. R9-2002-0001 or subsequent orders; Phase I MS4s in San Diego County are regulated under San Diego Water Board Order No. R9-2007-0001 or subsequent orders.

[46] Code of Federal Regulations Title 40 section 122.44(k)(2)&(3)

***(ii) Phase II MS4s***

The TMDLs and MS4 WLAs, with respect to discharges from Phase II MS4s, will be implemented primarily by requiring compliance with the existing general WDRs and NPDES requirements that have been issued for Phase II MS4 discharges. Phase II MS4s are subject to regulation under State Water Board general WDRs implementing NPDES requirements.[48]

Owners and operators of Phase II MS4s in the watersheds subject to these TMDLs, identified by the San Diego Water Board as significant sources of bacteria discharging to the receiving waters and/or Phase I MS4s, will be required to submit a Notice of Intent[49] to comply with the NPDES requirements in the State Water Board general WDRs as soon as possible after the effective date of these TMDLs.[50] Once enrolled under the general WDRs, Phase II MS4 owners and operators are required to comply with the provisions of the State Water Board general WDRs and NPDES requirements to reduce the discharge of bacteria as specified in their Stormwater Management Plans/Programs (SWMPs).

For any individual Phase II MS4s that are identified as a significant source of pollutants, the San Diego Water Board may also issue individual WDRs requiring the implementation of WQBELs that are consistent with the requirements and assumptions of the Municipal MS4 WLAs. Upon issuance of such individual WDRs by the San Diego Water Board, the State Water Board general WDRs for Phase II MS4s shall no longer regulate the affected individual Phase II MS4s.[51]

Similarly, for any category of Phase II MS4s that are identified as a significant source of pollutants, the San Diego Water Board may issue general WDRs requiring the implementation of WQBELs that are consistent with the requirements and assumptions of the Municipal MS4 WLAs above. Upon issuance of such general WDRs by the San Diego Water Board, the State Water Board general WDRs for Phase II MS4s shall no longer regulate the affected category of Phase II MS4s.[52]

In the event that the San Diego Water Board issues individual or general WDRs for Phase II MS4s in the San Diego Region, the WQBELs will likely consist of receiving water limitations (based on the numeric targets) and require the implementation of a BMP program to achieve the TMDLs in the receiving waters. The Phase II MS4s will likely be required to submit Bacteria Load Reduction Plans (BLRPs) or Comprehensive Load

[47] The effective date is the date the Office of Administrative Law approves this Basin Plan amendment.
[48] Phase II MS4s in the San Diego Region are subject to regulation under State Water Board Order No. 2003-0005-DWQ, or subsequent orders.
[49] The Notice of Intent, or NOI, is attachment 7 to Order No. 2003-0005-DWQ.
[50] The effective date is the date the Office of Administrative Law approves this Basin Plan amendment.
[51] As authorized under State Water Board Order No. 2003-0005-DWQ, section G.
[52] Ibid.

### *(iii) Caltrans*

The TMDLs and Caltrans WLAs will be implemented primarily by revising and re-issuing the existing NPDES requirements that have been issued for Caltrans discharges.

Caltrans is regulated under State Water Board general WDRs that implement NPDES requirements.[53] The San Diego Water Board will request the State Water Board to revise and re-issue the WDRs and NPDES requirements to incorporate the following for Caltrans discharges in the San Diego Region:

- WQBELs consistent with the requirements and assumptions of the Caltrans WLAs. WQBELs may be expressed as numeric effluent limitations, when feasible, and/or as a BMP program of expanded or better-tailored BMPs.[54]

- If the WQBELs include a BMP program, periodic reporting requirements on BMP planning, implementation, and effectiveness in improving water quality at impaired beaches and creeks (i.e., progress reports). Progress reports will also be required to include water quality monitoring results. Progress reports will be required as long as necessary to ensure that the beneficial uses of the impaired waterbodies have been restored and maintained.

- Compliance schedule for Caltrans to attain the Caltrans WLAs and TMDLs in the receiving waters.

The WQBELs will likely consist of receiving water limitations (based on the numeric targets) and require the implementation of a BMP program to achieve TMDLs in the receiving waters. Caltrans will be required to submit Bacteria Load Reduction Plans (BLRPs) or Comprehensive Load Reduction Plans (CLRPs) outlining a proposed BMP program that will be capable of attaining the TMDLs in the receiving waters, acceptable to the San Diego Water Board, within 18 months after the effective date of these TMDLs.[55] The San Diego Water Board will require the BLRPs or CLRPs to be developed on a watershed or region wide scale. Ideally, Caltrans and the Phase I MS4s will develop and coordinate the elements of their BLRPs or CLRPs together.

If the receiving water limitations (based on the numeric targets) are met in the receiving waters, the assumption will be that Caltrans has met its WLAs. If, however, the receiving water limitations are not being met in the receiving waters, and Caltrans MS4s are identified as a source of bacteria causing exceedances, Caltrans will be responsible for reducing its bacteria loads and/or demonstrating that controllable anthropogenic discharges from the Caltrans MS4s are not causing the exceedances, as outlined below in the Monitoring for TMDL Compliance section below.

[53] Caltrans is subject to regulation under State Water Board Order No. 99-06-DWQ, and subsequent orders.
[54] Code of Federal Regulations Title 40 section 122.44(k)(2)&(3)
[55] The effective date is the date the Office of Administrative Law approves this Basin Plan amendment.

### *(iv) Publicly Owned Treatment Works and Wastewater Collection Systems*

The TMDLs, with respect to discharges from POTWs and wastewater collection systems, will be implemented primarily by requiring compliance with any existing individual and/or general WDRs and NPDES requirements that have been issued. POTWs are subject to regulation under individual WDRs that implement NPDES requirements. Wastewater collection systems are subject to regulation under general WDRs issued by the State Water Board and San Diego Water Board.[56]

Because POTWs and wastewater collection systems have been assigned WLAs of zero,[57] no discharges of bacteria are expected or allowed under the wet weather TMDLs or dry weather TMDLs. If discharges of bacteria from POTWs and/or wastewater collection systems do occur as a result of sanitary sewer overflows and result in WQO exceedances, these exceedances will not apply to the compliance status of other dischargers.

If necessary, individual WDRs for POTWs and/or the San Diego Water Board WDRs for wastewater collection systems can be revised to require more aggressive monitoring, maintenance, and repair schedules to ensure discharges of bacteria wasteloads to surface waters are eliminated.

### *(v) Concentrated Animal Feeding Operations*

The TMDLs, with respect to discharges from CAFOs, will be implemented primarily by requiring compliance with any existing individual and/or general WDRs and NPDES requirements that have been issued. CAFOs that discharge to surface waters are subject to regulation under general WDRs that implement NPDES requirements.

Because CAFOs have been assigned WLAs of zero, no discharges of bacteria are expected or allowed under the wet weather TMDLs or dry weather TMDLs.

If necessary, the general WDRs and NPDES requirements for CAFOs can be revised to require more aggressive monitoring, maintenance, and repair schedules to ensure discharges of bacteria wasteloads to surface waters are minimized and/or eliminated.

### *(vi) Other Unidentified Point Sources*

Unidentified point sources have not been assigned WLAs, which is equivalent to being assigned a WLA of zero. No discharges of bacteria are expected or allowed from unidentified point sources under the wet weather TMDLs or dry weather TMDLs.

Therefore, the TMDLs, with respect to discharges from unidentified point sources to surface waters, will be implemented primarily by issuing WDRs implementing NPDES requirements, or requiring the point sources to cease their discharges.

## *(B) Nonpoint Sources*

The persons identified as responsible for controllable nonpoint source bacteria discharges causing or contributing to bacteria impairments at the beaches and creeks in these watersheds include the owners and operators of the following:

- agricultural facilities,
- nurseries,
- dairy/intensive livestock facilities,

[56] State Water Board Order No. 2006-0003-DWQ and San Diego Water Board Order No. R9-2007-0005

[57] With the exception of Padre Dam, which has a fecal coliform mass-load based WLA that is calculated based on numeric effluent limitations derived from the REC-1 WQOs in the Basin Plan.

- horse ranches,
- manure composting and soil amendment operations not regulated by NPDES requirements, and
- individual septic systems.

Agriculture (including nurseries), dairy/livestock, and horse ranch land uses (collectively called "agriculture" land uses) are controllable nonpoint sources that have been assigned LAs, as shown in Tables 7-41 through 7-47. Manure composting operations, soil amendment operations, and individual septic systems that are not part of agriculture land uses, and any other unidentified controllable nonpoint sources were not assigned LAs, which is equivalent to being assigned a LA of zero. Any controllable nonpoint source that has not been assigned a LA or has a LA of zero is not expected or allowed to discharge a pollutant load as part of the TMDL.

Controllable nonpoint source discharges are present in most watersheds, however, in only four watersheds do these discharges require load reductions to meet the Agriculture LAs. These watersheds are the Lower San Juan HSA, San Luis Rey HU, San Marcos HA, and San Dieguito HU watersheds (see Tables 7-41 through 7-44).

If individual or general WDRs are developed and issued to controllable nonpoint sources, the WDRs should incorporate one or more the following:

- Effluent limitations that are consistent with the requirements and assumptions of the nonpoint source LAs. Effluent limitations should be expressed as numeric effluent limitations, if feasible, and/or as a BMP program.
- Periodic reporting requirements on BMP planning, implementation, and effectiveness in improving the water quality of discharges from the nonpoint source (i.e., progress reports). Progress reports will also be required to include water quality monitoring results. Progress reports will be required as long as necessary to ensure that the beneficial uses of the impaired waterbodies have been restored and maintained.
- Compliance schedule and/or implementation milestones.

The San Diego Water Board will work with the nonpoint source dischargers and/or stakeholders when developing the WDRs. When and where possible, the San Diego Water Board will have the nonpoint source BMP programs coordinate with the BMPs programs for Phase I MS4s and Caltrans.

If the receiving water limitations (based on the numeric targets) are met in the receiving waters, the assumption will be that controllable nonpoint sources have met their LAs. If, however, the receiving water limitations are not being met in the receiving waters, and one or more controllable nonpoint source dischargers are identified as sources of bacteria causing exceedances, the San Diego Water Board may regulate those identified nonpoint sources, as needed, with WDRs or other enforcement actions, and those nonpoint sources will be responsible for reducing their bacteria loads and/or demonstrating that discharges from those nonpoint sources are not causing the exceedances, as outlined below in the Monitoring for TMDL Compliance section below.

### *(3) Conditional Waivers of Waste Discharge Requirements*

There are several types of point source discharges to land, as well as nonpoint source discharges to land and surface waters that may not have an adverse affect on the quality of the waters of the state, and/or are not readily amenable to regulation under WDRs. For these types of discharge, the San Diego Water Board has the authority to issue conditional waivers of WDRs.[58]

[58] Authorized pursuant to Water Code section 13269

### *(4) Enforcement Actions*

The San Diego Water Board shall consider enforcement actions, as necessary, for any discharger failing to comply with applicable waiver conditions, WDRs, or Basin Plan waste discharge prohibitions.[61] Enforcement actions can also be taken, as necessary, to control the discharge of bacteria to impaired beaches and creeks, to attain compliance with the assumptions and requirements of the TMDLs, WLAs, and LAs.

In order for implementation of the TMDLs to begin as soon as possible, the San Diego Water Board may issue enforcement actions, in lieu of or before revising and re-issuing general WDRs and NPDES requirements, for Phase I MS4s and Caltrans, directing them to begin implementing additional measures to restore compliance with the bacteria WQOs. Enforcement actions may also be issued to require the submission of Bacteria Load Reduction Plans (BLRPs) or Comprehensive Load Reduction Plans (CLRPs) to the San Diego Water Board within 18 months after the effective date of these TMDLs,[62] or sooner. The San Diego Water Board will require the BLRPs or CLRPs to be developed on a watershed or region wide scale.

[59] The current general conditional waivers in the Basin Plan were adopted under San Diego Water Board Resolution No. R9-2007-0104. These waivers will expire December 31, 2012. Conditional Waiver No. 3 (Animal Operations) and Conditional Waiver No. 4 (Agriculture and Nursery Operations) may be utilized to implement the Agriculture LAs. Future iterations of these conditional waivers may be issued in a separate implementing order and removed from the Basin Plan.
[60] Pursuant to Water Code section 13269(a)(2)
[61] Authorized pursuant to Water Code sections 13300-13304, 13308, 13350, 13385, and/or 13399
[62] The effective date is the date the Office of Administrative Law approves this Basin Plan amendment.

### *(5) Investigative Orders*

The San Diego Water Board has the authority to require any state or local agency to investigate and report on any technical factors involved in water quality control or to obtain and submit analyses of water.[63] The San Diego Water Board has the authority to require technical or monitoring program reports from persons who have discharged or are discharging waste that could affect the quality of the waters in the San Diego Region.[64] The San Diego Water Board also has the authority to establish monitoring and recordkeeping requirements for discharges regulated under NPDES requirements.[65]

Investigative orders may be issued requiring the submission of Bacteria Load Reduction Plans (BLRPs) or Comprehensive Load Reduction Plans (CLRPs), acceptable to the San Diego Water Board, within 18 months after the effective date of these TMDLs,[66] or sooner. The San Diego Water Board will require the BLRPs or CLRPs to be developed on a watershed or region wide scale. The San Diego Water Board may require the Phase I MS4s and Caltrans to develop and coordinate the elements of their BLRPs or CLRPs together. The BLRPs or CLRPs will be incorporated into the WDRs and NPDES requirements.

The San Diego Water Board may issue subsequent investigative orders to confirm items in the BLRPs or CLRPs. The BLRPs or CLRPs must be capable of achieving the WLAs for the bacteria TMDLs. The CLRPs must also be capable of restoring the beneficial uses in receiving waters for other impairing pollutants in the watershed, and achieving the goals and objectives of any other water quality improvement projects included in the CLRPs within the time frame of the compliance schedule.

The San Diego Water Board will also issue investigative orders requiring BLRPs or CLRPs, or other technical or monitoring program reports, as necessary, to any other discharger that is identified by the San Diego Water Board or other parties as a significant source causing or contributing to the bacteria impairments in the waterbodies addressed in these TMDLs.

### *(6) Basin Plan Amendments*

As the implementation of these TMDLs progress, the San Diego Water Board recognizes that revisions to the Basin Plan may be necessary in the future. The San Diego Water Board will initiate a Basin Plan amendment project to revise the requirements and/or provisions for implementing these TMDLs within 5 years from the effective date of this Basin Plan amendment or earlier if all the following conditions are met:

- Sufficient data are collected to provide the basis for the Basin Plan amendment.
- A report is submitted to the San Diego Water Board documenting the findings from the collected data.
- A request is submitted to the San Diego Water Board with specific revisions proposed to the Basin Plan, and the documentation supporting such revisions.

The San Diego Water Board will work with the project proponents to ensure that the data and documentation will be adequate for the initiation of the Basin Plan amendment. The San Diego Water Board staff will be responsible for taking the Basin Plan amendment project through the administrative and regulatory processes for adoption by the San Diego Water Board, and approval by the State Water Board, OAL, and USEPA.

[63] Authorized pursuant to Water Code section 13225
[64] Authorized pursuant to Water Code section 13267
[65] Authorized pursuant to Water Code section 13383
[66] The effective date is the date the Office of Administrative Law approves this Basin Plan amendment.

### *(7) Other Actions*

For these TMDLs, the San Diego Water Board shall recommend that the State Water Board assign a high priority to awarding grant funding[67] for projects to implement the bacteria TMDLs. Special emphasis will be given to projects that can achieve quantifiable bacteria load reductions consistent with the specific bacteria TMDLs, WLAs, and LAs.

Implementation of these TMDLs by the San Diego Water Board should not require any special studies to be conducted by the dischargers or other entities. The San Diego Water Board, however, will encourage and support any special studies proposed and undertaken by the dischargers or other entities that will provide information to refine and improve the implementation of these TMDLs. The San Diego Water Board may develop agreements (e.g., a Memorandum of Understanding) with one or more entities to support and use the findings from any special studies that may be conducted. Proposing a special study project and initiating an agreement with the San Diego Water Board to use the results of the study to modify this TMDL Implementation Plan is the responsibility of the project proponent(s).

#### **(i) Monitoring for TMDL Compliance and Compliance Assessment**

An essential component of implementation is water quality monitoring. Monitoring is needed to evaluate the progress toward attainment of the TMDLs and restoring the beneficial uses in the receiving waters. When all discharges from controllable sources meet their assigned WLAs and LAs, and the numeric targets (i.e., numeric WQOs and allowable exceedance frequencies) are also met in the receiving waters, , compliance with the TMDLs will be achieved. Additionally, sufficient water quality data are necessary to support the removal of a waterbody from the 303(d) List. Water quality data can also be used identify additional regulatory actions that may need to be implemented by the San Diego Water Board to restore and protect beneficial uses.

Monitoring for compliance will initially be conducted by the Phase I MS4s and Caltrans. The minimum components for any monitoring program that will be used to evaluate progress toward attainment of the TMDLs should include the following:

- For beaches addressed by these TMDLs, monitoring locations should consist of, at a minimum, the same locations used to collect data required under MS4 NPDES monitoring requirements and beach monitoring for Health and Safety Code section 115880.[68] If exceedances of the receiving water limitations are observed in the monitoring data, additional monitoring locations and/or other source identification methods must be implemented to identify the sources causing the exceedances. The additional monitoring locations and/or other source identification methods must also be used to demonstrate that the bacteria loads from the identified sources have been addressed and are no longer causing exceedances in the receiving waters.

[67] The State Water Board administers the awarding of grants funded from Proposition 13, Proposition 50, Clean Water Act section 319(h) and other federal appropriations to projects that can result in measurable improvements in water quality, watershed condition, and/or capacity for effective watershed management. Many of these grant fund programs have specific set-asides for expenditures in the areas of watershed management and TMDL project implementation for non-point source pollution.

[68] Commonly referred to as AB 411 monitoring

- For creeks addressed by these TMDLs, monitoring locations should consist of, at a minimum, a location at or near the mouth of the creek (e.g., Mass Loading Station or Mass Emission Station) and one or more locations upstream of the mouth (e.g., Watershed Assessment Stations). If exceedances of the receiving water limitations are observed in the monitoring data, additional monitoring locations and/or other source identification methods must be implemented to identify the sources causing the exceedances. The additional monitoring locations and/or other source identification methods must also be used to demonstrate that the bacteria loads from the identified sources have been addressed and are no longer causing exceedances in the receiving waters.

- Because there are dry weather and wet weather TMDLs, monitoring under both conditions is needed. Wet weather[69] monitoring should occur at least once within 24 hours of the end of a storm event[70] that occurs during the rainy season (i.e., October 1 through April 30). Dry weather[71] monitoring should occur at least on a monthly basis, and may be required more often during the summer months (e.g., weekly) when the REC-1 and REC-2 beneficial uses occur most frequently in the creeks and at the beaches.

Compliance with the TMDLs, WLAs, and LAs will be assessed primarily by comparing receiving water indicator bacteria results from the monitoring locations outlined above with receiving water limitations expressed in terms of the appropriate numeric REC-1 WQOs and allowable exceedance frequencies of the appropriate numeric REC-1 WQOs. The appropriate numeric WQOs and allowable exceedance frequencies are dependent upon the type of receiving water (i.e., beach or creek) and weather conditions (i.e., dry weather or wet weather), as shown in Tables 7-48 and 7-49.

**Table 7-48. Receiving Water Limitations for Beaches**

| | Wet Weather Days [a] | | Dry Weather Days [b] | |
|---|---|---|---|---|
| Indicator Bacteria | Wet Weather Numeric Objective [c] (MPN/100mL) | Wet Weather Allowable Exceedance [d] Frequency | Dry Weather Numeric Objective [e] (MPN/100mL) | Dry Weather Allowable Exceedance Frequency |
| Fecal Coliform | 400 | 22% | 200 | 0% |
| Total Coliform | 10,000 | 22% | 1,000 | 0% |
| Enterococcus | 104 | 22% | 35 | 0% |

a. Wet weather days defined as days with rainfall events of 0.2 inches or greater and the following 72 hours.

b. Dry weather days defined as days with less than 0.2 inch of rainfall observed on each of the previous 3 days.

c. Wet weather numeric objectives based on the single sample maximum water quality objectives in the California Ocean Plan (2005). Compliance with the wet weather TMDLs in the receiving water is based on the frequency that the wet weather days in any given year exceed the wet weather numeric objective, but 30-day geometric mean must also be met.

d. The wet weather allowable exceedance frequency is set at 22%. In the calculation of the wet weather TMDLs, the San Diego Regional Board chose to apply the 22 percent allowable exceedance frequency as determined for Leo Carillo Beach in Los Angeles County. At the time the wet weather watershed model was developed, the 22 percent exceedance frequency from Los Angeles County was the only reference beach exceedance frequency available. The 22 percent allowable exceedance frequency used to calculate the wet weather TMDLs is justified because the San Diego Region watersheds' exceedance frequencies will likely be close to the value calculated for Leo Carillo Beach, and is consistent with the exceedance frequency that was applied by the Los Angeles Regional Board.

e Dry weather numeric objectives based on the 30-day geometric mean water quality objectives in the California Ocean Plan (2005). Compliance with the dry weather TMDLs in the receiving water is based on the frequency that the dry weather days in any given year exceed the dry weather numeric objective.

[69] Defined as days with a storm with at least 0.2 inches of rainfall and the 72 hour period after the storm event
[70] The end of a storm event is when there is no more precipitation
[71] Defined as days with less than 0.2 inches of rainfall on each of the previous three days

**Table 7-49. Receiving Water Limitations for Creeks**

| | Wet Weather Days [a] | | Dry Weather Days [b] | |
|---|---|---|---|---|
| Indicator Bacteria | Wet Weather Numeric Objective [c] (MPN/100mL) | Wet Weather Allowable Exceedance [d] Frequency | Dry Weather Numeric Objective [e] (MPN/100mL) | Dry Weather Allowable Exceedance Frequency |
| Fecal Coliform | 400 | 22% | 200 | 0% |
| Enterococcus | 61 (104) [f] | 22% | 33 | 0% |

a. Wet weather days defined as days with rainfall events of 0.2 inches or greater and the following 72 hours.

b. Dry weather days defined as days with less than 0.2 inch of rainfall observed on each of the previous 3 days.

c. Wet weather numeric objectives based on the single sample maximum (or equivalent) water quality objectives in the Water Quality Control Plan for the San Diego Basin (1994). Compliance with the wet weather TMDLs in the receiving water is based on the frequency that the wet weather days in any given year exceed the wet weather numeric objective, but 30-day geometric mean must also be met.

d. The wet weather allowable exceedance frequency is set at 22%. In the calculation of the wet weather TMDLs, the San Diego Regional Board chose to apply the 22 percent allowable exceedance frequency as determined for Leo Carillo Beach in Los Angeles County. At the time the wet weather watershed model was developed, the 22 percent exceedance frequency from Los Angeles County was the only reference beach exceedance frequency available. The 22 percent allowable exceedance frequency used to calculate the wet weather TMDLs is justified because the San Diego Region watersheds' exceedance frequencies will likely be close to the value calculated for Leo Carillo Beach, and is consistent with the exceedance frequency that was applied by the Los Angeles Regional Board.

e. Dry weather numeric objectives based on the 30-day geometric mean (or equivalent) water quality objectives in Water Quality Control Plan for the San Diego Basin (1994). Compliance with the dry weather TMDLs in the receiving water is based on the frequency that the dry weather days in any given year exceed the dry weather numeric objective.

f. A wet weather numeric objective for *Enterococcus* of 104 MPN/100mL may be applied as a receiving water limitation for creeks, instead of 61 MPN/100mL, if one or more of the creeks addressed by these TMDLs (San Juan Creek, Aliso Creek, Tecolote Creek, Forrester Creek, San Diego River, and/or Chollas Creek) is designated with a "moderately to lightly used area" or less frequent usage frequency in the Basin Plan. Otherwise, the wet weather numeric objective of 61 MPN/100mL for Enterococcus will be used to assess compliance with the wet weather allowable exceedance frequency.

At the end of the TMDL Compliance Schedules, which are given in the following section, the receiving waters must meet the receiving water limitations above to be considered in compliance with these TMDLs, WLAs, and LAs. Determination of compliance with the TMDLs will be assessed differently for dry weather and wet weather as follows:

1. *Compliance with Dry Weather TMDLs*: At the end of the dry weather TMDL compliance schedule, the bacteria densities in the receiving waters for all dry weather days[72] must be less than or equal to the 30-day geometric mean REC-1 WQOs 100 percent of the time (i.e., dry weather days in a 30-day period shall not exceed the 30-day geometric mean REC-1 WQOs more than 0 percent of the time). In addition, the bacteria densities must be consistent with the single sample maximum REC-1 WQOs in the Ocean Plan for beaches, and the Basin Plan for creeks.

   The method and number of samples needed for calculating the 30-day geometric mean should be consistent with the number of samples required by the Ocean Plan for beaches, and the Basin Plan for creeks. Analysis of the monitoring results should also be consistent with the methods given in the Water Quality Control Policy For Developing California's Clean Water Act Section 303(d) List.

   Because the dry weather TMDLs are assigned entirely to the Municipal MS4s as WLAs, the Municipal MS4s are assumed to be the only source of bacteria during dry weather (i.e., dry weather TMDL = MS4 WLA). Discharges from other controllable sources (i.e., Caltrans, Agriculture) during dry weather are not expected and/or not allowed (i.e., WLA = 0 or LA = 0). If at the end of the dry weather TMDL compliance schedule the receiving waters exceed the 30-day geometric mean REC-1 WQOs more than

[72] Defined as days with less than 0.2 inches of rainfall on each of the previous three days

*Compliance with Wet Weather TMDLs*: At the end of the wet weather TMDL compliance schedule, the bacteria densities in the receiving waters for all wet weather days[73] cannot exceed the single sample maximum REC-1 WQOs more than the allowable exceedance frequency. In addition, the bacteria densities must be less than or equal to the 30-day geometric mean REC-1 WQOs 100 percent of the time (i.e., both dry and wet weather days in a 30-day period shall not exceed the 30-day geometric mean REC-1 WQOs more than 0 percent of the time).

As described in the minimum monitoring components above, wet weather samples should be collected within 24 hours of the end of a storm event that occurs during the rainy season (i.e., October 1 through April 30). At least one wet weather sample per storm is expected to be collected for each waterbody in each watershed (i.e., Pacific Ocean shoreline, creek mouth, and/or creek). Because of the many issues related to collecting wet weather samples from multiple sites within a short time frame, dischargers are expected to develop a wet weather monitoring and sampling approach in their BLRPs or CLRPs. If only one sample is collected for a storm event, the bacteria density for every wet weather day associated with that storm event shall be equal to the results from that one sample. If more than one sample is collected for a storm event, but not on a daily basis, the bacteria density for all the wet weather days not sampled shall be equal to the highest bacteria density result reported from samples collected. The exceedance frequency shall be calculated by dividing the number of wet weather days that exceed the single sample maximum REC-1 WQOs by the total number of wet weather days during the rainy season. If at the end of the wet weather TMDL Compliance Schedule the receiving waters exceed the single sample maximum REC-1 WQOs more than the allowable exceedance frequency, all controllable sources are responsible for demonstrating their discharges into the receiving waters are not causing the exceedances, or they will be considered out of compliance.

The data collected for compliance with the dry weather TMDLs, described above, shall be used in addition to the data collected for wet weather with the wet weather TMDLs to calculate the wet weather 30-day geometric mean. If at the end of the wet weather TMDL Compliance Schedule the receiving waters exceed the 30-day geometric mean REC-1 WQOs at any time, all controllable sources are responsible for demonstrating their discharges into the receiving waters are not causing the exceedances, or they will be considered out of compliance.

Because the Phase I MS4s are located at the base of the watersheds and have been identified as the most significant controllable source of bacteria, the municipal Phase I MS4s will have the primary responsible for monitoring the receiving waters. Caltrans will also have monitoring responsibilities. Phase II MS4s, agricultural dischargers, and other sources that are identified as significant sources (i.e.,

[73] Defined as days with a storm with at least 0.2 inches of rainfall and the 72 hour period after the storm event

causing or contributing to exceedances in the receiving waters) will also be responsible for monitoring the receiving waters. The municipal Phase I MS4s and other dischargers are responsible for reducing their bacteria loads and/or demonstrating their discharges into the receiving waters are not causing the exceedances.

The municipal MS4s may demonstrate that their discharges are not causing the exceedances in the receiving waters by providing data from their discharge points to the receiving waters, by providing data collected at jurisdictional boundaries, and/or by using other methods accepted by the San Diego Water Board. Otherwise, at the end of the wet weather TMDL compliance schedule, the municipal Phase I MS4s will be held responsible and considered out of compliance unless other information or evidence indicates another controllable or uncontrollable source is responsible for the exceedances in the receiving waters. If controllable sources other than discharges from the municipal Phase I MS4s are identified before or after the end of the wet weather TMDL Compliance Schedules as causing the exceedances, those controllable sources will be responsible for reducing their bacteria loads and/or demonstrating that discharges from those sources are not causing the exceedances. If controllable sources other than the Phase I MS4s are identified as causing the exceedances, and the Phase I MS4s have demonstrated they are not causing or contributing to the exceedances, the Phase I MS4s will not be considered out of compliance. The San Diego Water Board shall implement additional actions (e.g., issue enforcement actions, amend existing NPDES requirements or conditional waivers), as needed, to bring all those controllable sources into compliance with the wet weather TMDLs.

Between the effective date of these TMDLs and the end of the TMDL Compliance Schedules, monitoring is also required to demonstrate progress toward achieving and complying with the TMDLs, WLAs, and LAs. Progress can be demonstrated with reductions in exceedance frequencies in the receiving waters until the allowable exceedance frequencies ultimately are achieved at the end of the TMDL Compliance Schedules. Demonstrating progress toward attaining the TMDLs in the receiving waters will be assessed differently for dry weather and wet weather as follows:

1. *Measuring Progress Toward Attaining Dry Weather TMDLs*: For the dry weather TMDLs, available historical monitoring data from the years 1996-2002 should be used to calculate the "existing" dry weather exceedance frequency of the 30-day geometric mean REC-1 WQOs for each watershed. "Existing" dry weather exceedance frequencies may be calculated separately for each impaired waterbody listed, or an "existing" dry weather exceedance frequency may be calculated that is applicable to the entire watershed.

   The "existing" dry weather exceedance frequencies should be reduced until the final allowable dry weather exceedance frequency is achieved by the end of the dry weather TMDL Compliance Schedule. If the TMDL Compliance Schedules include interim milestones that must be achieved to demonstrate progress toward attaining the dry weather TMDLs, reductions in the exceedance frequencies in the receiving water may be used. For example, if the "existing" dry weather exceedance frequency is 60 percent, the final dry weather exceedance frequency is 0 percent, and an interim milestone requires a 50 percent reduction, the exceedance frequency in the receiving water should be 30 percent or less by the interim milestone date. By the end of the dry weather TMDL Compliance Schedule, the final allowable dry weather exceedance frequency of the 30-day geometric mean REC-1 WQOs is 0 percent in the receiving waters for both beaches and creeks.

*Measuring Progress Toward Attaining Wet Weather TMDLs*: For the wet weather TMDLs, the number of wet days and number of wet exceedance days during the critical wet year from the wet weather model were used to calculate the "existing" wet weather exceedance frequency that needs to be reduced to the allowable wet weather exceedance frequency. For example, if a watershed had 69 wet weather days during the critical wet year, and the wet weather model predicted that all the subwatersheds had an average of 41 wet weather exceedance days during the critical wet year, the "existing" wet weather exceedance frequency is 41/69=59%. For the watershed addressed by these TMDLs, the number of wet weather exceedance days for each indicator bacteria predicted by the wet weather model for the critical wet year are summarized below in Table 7-50:

**Table 7-50. Modeled Estimate of Critical Year "Existing" Wet Weather Exceedance Frequencies by Watershed**

| Watershed | Number of Wet Days in Critical Wet Year | "Existing" Wet Weather Exceedance Frequency of Single Sample Maximum REC-1 WQO [a] | | |
|---|---|---|---|---|
| | | Fecal Coliform | Total Coliform | Enterococcus |
| San Joaquin Hills HSA/ Laguna Beach HSA | 69 | 52% | 54% | 55% |
| Aliso HSA | 69 | 59% | 59% | 62% (62%) [b] |
| Dana Point HSA | 69 | 50% | 50% | 50% |
| Lower San Juan HSA | 76 | 66% | 66% | 74% (72%) [b] |
| San Clemente HA | 73 | 47% | 47% | 50% |
| San Luis Rey HU | 90 | 68% | 66% | 76% |
| San Marcos HA | 49 | 57% | 57% | 59% |
| San Dieguito HU | 98 | 43% | 44% | 49% |
| Miramar Reservoir HA | 94 | 30% | 30% | 30% |
| Scripps HA | 57 | 52% | 52% | 52% |
| Tecolote HA | 57 | 75% | 75% | 81% (79%) [b] |
| Mission San Diego HSA/ Santee HSA | 86 | 70% | 63% | 79% (76%) [b] |
| Chollas HSA | 65 | 60% | 60% | 63% (63%) [b] |

a. Calculated by taking the average number of wet days that are predicted by the wet weather model to exceed the single sample maximum REC-1 water quality objective (400 MPN/100mL for fecal coliform, 10,000 MPN/100mL for total coliform, and 61 or 104 MPN/100mL) divided by the total number of wet days in the critical wet year (1993).

b. Allowable exceedance frequency calculated based on an *Enterococcus* single sample maximum REC-1 water quality objective of 61 MPN/100mL. Allowable exceedance frequency in parenthesis calculated based on an Enterococcus single sample maximum REC-1 water quality objective of 104 MPN/100mL, which may be applicable if the usage frequency of the creeks in these watersheds are designated as "moderately to lightly used area" or less frequent usage frequency in the Basin Plan.

The "existing" wet weather exceedance frequencies should be reduced until the final allowable wet weather exceedance frequency is achieved by the end of the wet weather TMDL Compliance Schedule. If the TMDL Compliance Schedules include interim milestones that must be achieved to demonstrate progress toward attaining the wet weather TMDLs, reductions in the exceedance frequencies in the receiving water may be used. For example, if the "existing" wet weather exceedance frequency is 59 percent, the final wet weather exceedance frequency is 22 percent, and an interim milestone requires a 50 percent reduction, the exceedance frequency in the receiving water should be 41 percent or less by the interim milestone date. By the end of the wet weather TMDL Compliance Schedule, the allowable wet weather exceedance frequency is 22 percent in the receiving waters for both beaches and creeks.

The specific receiving waters (i.e., specific beaches and creek segments) identified on the 2002 303(d) List are shown in the TMDL Compliance Schedule in the following section. Because the REC-1 WQOs and allowable exceedance frequencies must be met throughout the 20 waterbodies addressed by these bacteria TMDLs, monitoring data from these locations and any other beach segments and/or creek monitoring points in the watersheds addressed by these TMDLs may be used to determine compliance.

Because the municipal MS4s are the most significant controllable sources of bacteria and the Phase I MS4s often discharge directly to the receiving waters addressed by these TMDLs, the municipal Phase I MS4s will be primarily responsible for conducting the monitoring. Caltrans will also have monitoring responsibilities. Phase II MS4s, agricultural dischargers, and other sources that are identified as significant sources (i.e., causing or contributing to exceedances in the receiving waters) will also be responsible for monitoring the receiving waters. Additional monitoring locations and frequency may be required to identify sources that need additional controls to reduce bacteria loads. While this TMDL Implementation Plan recommends monitoring at one or two locations for each waterbody, monitoring only one or two locations in the receiving waters may not provide the data to differentiate between and locate sources of bacteria in the watershed. Therefore, the municipal Phase I MS4s and other dischargers may wish to establish additional monitoring locations at key jurisdictional boundaries as part of their monitoring programs, especially in watersheds where Caltrans and Agriculture have been identified as sources contributing bacteria loads to the receiving waters.

Investigative orders, enforcement actions, WDRs, or conditional waiver of WDRs issued by the San Diego Water Board should require monitoring program plans that include, as applicable, the minimum monitoring locations and frequencies outlined above, but also provide the dischargers an opportunity to propose additional or alternative monitoring locations and frequency of monitoring events. The San Diego Water Board may also issue investigative orders, enforcement actions, WDRs, or conditional waiver of WDRs that specify additional or alternative monitoring, monitoring locations, and/or frequency of monitoring events.

The San Diego Water Board will coordinate, to the extent possible, the monitoring that is required by the dischargers, to minimize the monitoring resources required and maximize the temporal and spatial coverage of the data collection.

## *TMDL COMPLIANCE SCHEDULE*

The purpose of these TMDLs is to restore the impaired beneficial uses of the waterbodies addressed through mandated reductions of bacteria from controllable point and nonpoint sources discharging to impaired waters. The requirements of these TMDLs mandate that the San Diego Water Board require dischargers improve water quality conditions in impaired waters by achieving the assigned WLAs and LAs. After the controllable sources achieve their assigned WLAs and LAs, the TMDLs in the receiving waters will be met and beneficial uses restored.

Until the dischargers achieve their assigned WLAs and LAs, the beneficial uses of the waterbodies addressed by this project will likely remain impaired, and the dischargers will continue violating one or more Basin Plan waste discharge prohibitions. The San Diego Water Board recognizes that restoring the beneficial uses of the waterbodies impaired by elevated bacteria levels will require time and multiple approaches to implement. Therefore, the bacteria TMDLs are expected to be implemented in a phased approach with a monitoring component to identify bacteria sources, determine the effectiveness of each phase, and guide the selection of BMPs, as outlined in the BMP programs proposed in the BLRPs or CLRPs that are accepted by the San Diego Water Board.

### *(1) Prioritization of Waterbodies*

“Impaired” waters were prioritized based on several factors, because the waterbodies included in these TMDLs are numerous and diverse in terms of geographic location, swimmer accessibility and use, and degree of contamination.

Dischargers accountable for attaining load reductions in multiple watersheds may have difficulty providing the same level of effort simultaneously in all watersheds. In order to address these concerns a scheme for prioritizing implementation of bacteria reduction strategies in waterbodies within watersheds was developed. The prioritization scheme is largely based on the following criteria:

- Level of beach (marine or freshwater) swimmer usage;
- Frequency of exceedances of WQOs; and
- Existing programs designed to reduce bacteria loading to surface waters.

Dischargers were placed into one of three groups (North, Central, and South), based on geographic location. Group N consists of dischargers located in watersheds within Orange County, the northernmost region watersheds included in these TMDLs. Group C consists of dischargers located in watersheds in northern San Diego County, outside the City of San Diego limits, the central region watersheds included in these TMDLs. Group S consists of dischargers who are located in watersheds within and south of the City of San Diego limits, the southernmost region watersheds included in these TMDLs. Table 7-51 shows the dischargers in each of the three groups.

**Table 7-51. Responsible Municipalities and Lead Jurisdictions†**

| | | | | |
|---|---|---|---|---|
| San Joaquin Hills HSA (901.11) & Laguna Beach HSA (901.12) | Pacific Ocean Shoreline | Cameo Cove at Irvine Cove Dr. - Riviera Way | City of Laguna Beach<br>**County of Orange**<br>Orange County Flood Control District<br>Caltrans<br>Owners/operators of small MS4s* | N |
| | | at Heisler Park – North | | |
| | Pacific Ocean Shoreline | at Main Laguna Beach | City of Aliso Viejo<br>**County of Orange**<br>City of Laguna Beach<br>City of Laguna Woods<br>Orange County Flood Control District<br>Caltrans<br>Owners/operators of small MS4s* | |
| | | Laguna Beach at Ocean Avenue | | |
| | | Laguna Beach at Laguna Avenue | | |
| | | Laguna Beach at Cleo Street | | |
| | | Arch Cove at Bluebird Canyon Road | | |
| | | Laguna Beach at Dumond Drive | | |
| Aliso HSA (901.13) | Pacific Ocean Shoreline | Laguna Beach at Lagunita Place/Blue Lagoon Place at Aliso Beach | City of Aliso Viejo<br>City of Laguna Beach<br>City of Laguna Hills<br>City of Laguna Niguel<br>City of Laguna Woods<br>City of Lake Forest<br>City of Mission Viejo<br>**County of Orange**<br>Orange County Flood Control District<br>Caltrans<br>Owners/operators of small MS4s* | N |
| | Aliso Creek | The entire reach (7.2 miles) and associated tributaries Aliso Hills Channel, English Canyon Creek, Dairy Fork Creek, Sulphur Creek, and Wood Canyon Creek | | |
| | Aliso Creek (mouth) | At creek mouth | | |
| Dana Point HSA (901.14) | Pacific Ocean Shoreline | Aliso Beach at West Street | City of Dana Point<br>City of Laguna Beach<br>City of Laguna Niguel<br>**County of Orange**<br>Orange County Flood Control District<br>Caltrans<br>Owners/operators of small MS4s* | N |
| | | Aliso Beach at Table Rock Drive | | |
| | | 1000 Steps Beach at Pacific Coast Hwy at Hospital (9th Ave) | | |
| | | at Salt Creek (large outlet) | | |
| | | Salt Creek Beach at Salt Creek service road | | |
| | | Salt Creek Beach at Dana Strand Road | | |

**Table 7-51. Responsible Municipalities and Lead Jurisdictions† (Cont'd)**

| | | | | |
|---|---|---|---|---|
| Lower San Juan HSA (901.27) | Pacific Ocean Shoreline | At San Juan Creek | City of San Juan Capistrano<br>City of Mission Viejo<br>City of Laguna Hills<br>City of Laguna Niguel<br>City of Dana Point<br>City of Rancho Santa Margarita<br>**County of Orange**<br>Orange County Flood Control District<br>Caltrans<br>Owners/operators of small MS4s* | N |
| | San Juan Creek | Lower 1 mile | | |
| | San Juan Creek (mouth) | At creek mouth | | |
| San Clemente HA (901.30) | Pacific Ocean Shoreline | Poche Beach | City of San Clemente<br>**County of Orange**<br>Orange County Flood Control District<br>Dana Point<br>Caltrans<br>Owners/operators of small MS4s* | N |
| | | Ole Hanson Beach Club Beach at Pico Drain | | |
| | | San Clemente City Beach at El Portal Street Stairs | | |
| | | San Clemente City Beach at Mariposa Street | | |
| | | San Clemente City Beach at Linda Lane | | |
| | | San Clemente City Beach at South Linda Lane | | |
| | | San Clemente City Beach at Lifeguard Headquarters | | |
| | | Under San Clemente Municipal Pier | | |
| | | San Clemente City Beach at Trafalgar Canyon (Trafalgar Lane) | | |
| | | San Clemente State Beach at Riviera Beach | | |
| | | San Clemente State Beach at Cypress Shores | | |
| San Luis Rey HU (903.00) | Pacific Ocean Shoreline | at San Luis Rey River Mouth | **City of Oceanside**<br>City of Vista<br>County of San Diego<br>Caltrans<br>Owners/operators of small MS4s*<br>Controllable nonpoint sources | C |

| | | | | |
|---|---|---|---|---|
| San Marcos HA (904.50) | Pacific Ocean Shoreline | at Moonlight State Beach | City of Carlsbad<br>**City of Encinitas**<br>City of Escondido<br>City of San Marcos<br>County of San Diego<br>Caltrans<br>Owners/operators of small MS4s*<br>Controllable nonpoint sources | C |
| San Dieguito HU (905.00) | Pacific Ocean Shoreline | at San Dieguito Lagoon Mouth | City of Del Mar<br>**City of Escondido**<br>City of Poway<br>City of San Diego<br>City of Solana Beach<br>County of San Diego<br>Caltrans<br>Owners/operators of small MS4s*<br>Controllable nonpoint sources | C/S |
| Miramar Reservoir HA (906.10) | Pacific Ocean Shoreline | Torrey Pines State Beach at Del Mar (Anderson Canyon) | City of Del Mar<br>**City of Poway**<br>City of San Diego<br>County of San Diego<br>Caltrans<br>Owners/operators of small MS4s* | S |
| Scripps HA (906.30) | Pacific Ocean Shoreline | La Jolla Shores Beach at El Paseo Grande | **City of San Diego**<br>Owners/operators of small MS4s* | S |
| | | La Jolla Shores Beach at Caminito Del Oro | | |
| | | La Jolla Shores Beach at Vallecitos | | |
| | | La Jolla Shores Beach at Ave de la Playa | | |
| | | at Casa Beach, Children's Pool | | |
| | | South Casa Beach at Coast Blvd. | | |
| | | Whispering Sands Beach at Ravina Street | | |
| | | Windansea Beach at Vista de la Playa | | |
| | | Windansea Beach at Bonair Street | | |
| | | Windansea Beach at Playa del Norte | | |
| | | Windansea Beach at Palomar Ave. | | |
| | | at Tourmaline Surf Park | | |
| | | Pacific Beach at Grand Ave. | | |

**Table 7-51. Responsible Municipalities and Lead Jurisdictions† (Cont'd)**

| | | | | |
|---|---|---|---|---|
| Tecolote HA (906.50) | Tecolote Creek | Tecolote Creek | **City of San Diego**<br>Owners/operators of small MS4s* | S |
| Mission San Diego HSA (907.11) & Santee HSA (907.12) | Forrester Creek | Lower 1 mile | **City of El Cajon**<br>City of Santee<br>County of San Diego<br>Caltrans<br>Owners/operators of small MS4s* | S |
| | San Diego River, Lower | Lower 6 miles | **City of El Cajon**<br>City of La Mesa<br>City of San Diego<br>City of Santee<br>County of San Diego<br>Caltrans<br>Owners/operators of small MS4s*<br>Padre Dam Water Treatment Facility | S |
| | Pacific Ocean Shoreline | At San Diego River Mouth at Dog Beach | | |
| Chollas HSA (908.22) | Chollas Creek | Lower 1.2 miles | City of La Mesa<br>City of Lemon Grove<br>**City of San Diego**<br>County of San Diego<br>San Diego Unified Port District<br>Caltrans<br>Owners/operators of small MS4s* | S |

† Developed based on the 2002 Clean Water Act Section 303(d) List
*Owners/operators of small MS4s are listed in Appendix Q.
** As listed on the 2002 Clean Water Act Section 303(d) List
*** Listings on the 2006 and 2008 303(d) List compared to listing shown above are provided in Appendix T to the Technical Report.

**Table 7-52. Prioritized List of Impaired Waters for TMDL Implementation**

| | | | |
|---|---|---|---|
| San Joaquin Hills HSA (901.11) & Laguna Beach HSA (901.12) | Pacific Ocean Shoreline | Cameo Cove at Irvine Cove Dr. - Riviera Way | 1 |
| | | at Heisler Park – North | 1 |
| | Pacific Ocean Shoreline | at Main Laguna Beach | 1 |
| | | Laguna Beach at Ocean Avenue | 1 |
| | | Laguna Beach at Laguna Avenue | 1 |
| | | Laguna Beach at Cleo Street | 1 |
| | | Arch Cove at Bluebird Canyon Road | 1 |
| | | Laguna Beach at Dumond Drive | 1 |
| Aliso HSA (901.13) | Pacific Ocean Shoreline | Laguna Beach at Lagunita Place/Blue Lagoon Place at Aliso Beach | 1 |
| | Aliso Creek | The entire reach (7.2 miles) and associated tributaries Aliso Hills Channel, English Canyon Creek, Dairy Fork Creek, Sulphur Creek, and Wood Canyon Creek | 3 |
| | Aliso Creek (mouth) | At creek mouth | 3 |
| Dana Point HSA (901.14) | Pacific Ocean Shoreline | Aliso Beach at West Street | 1 |
| | | Aliso Beach at Table Rock Drive | 1 |
| | | 1000 Steps Beach at Pacific Coast Hwy at Hospital (9th Ave) | 1 |
| | | at Salt Creek (large outlet) | 1 |
| | | Salt Creek Beach at Salt Creek service road | 2 |
| | | Salt Creek Beach at Dana Strand Road | 2 |
| Lower San Juan HSA (901.27) | Pacific Ocean Shoreline | At San Juan Creek | 1 |
| | San Juan Creek | Lower 1 mile | 3 |
| | San Juan Creek (mouth) | At creek mouth | 1 |

| | | | |
|---|---|---|---|
| San Clemente HA (901.30) | Pacific Ocean Shoreline | at Poche Beach (large outlet) | 1 |
| | | Ole Hanson Beach Club Beach at Pico Drain | 1 |
| | | San Clemente City Beach at Linda Lane | 1 |
| | | San Clemente State Beach at Riviera Beach | 1 |
| | | San Clemente City Beach at Mariposa Street | 2 |
| | | San Clemente State Beach at Cypress Shores | 2 |
| | | San Clemente City Beach at Lifeguard Headquarters | 2 |
| | | Under San Clemente Municipal Pier | 2 |
| | | San Clemente City Beach at El Portal Street Stairs | 2 |
| | | San Clemente City Beach at South Linda Lane | 3 |
| | | San Clemente City Beach at Trafalgar Canyon (Trafalgar Lane) | 3 |
| San Luis Rey HU (903.00) | Pacific Ocean Shoreline | at San Luis Rey River Mouth | 2 |
| San Marcos HA (904.50) | Pacific Ocean Shoreline | at Moonlight State Beach | 1 |
| San Dieguito HU (905.00) | Pacific Ocean Shoreline | at San Dieguito Lagoon Mouth | 1 |
| Miramar Reservoir HA (906.10) | Pacific Ocean Shoreline[a] | Torrey Pines State Beach at Del Mar (Anderson Canyon) | 1 |
| Scripps HA (906.30) | Pacific Ocean Shoreline | La Jolla Shores Beach at El Paseo Grande | 1 |
| | | La Jolla Shores Beach at Caminito Del Oro | 1 |
| | | La Jolla Shores Beach at Vallecitos | 1 |
| | | La Jolla Shores Beach at Ave de la Playa | 1 |
| | | at Casa Beach, Children's Pool | 1 |
| | | South Casa Beach at Coast Blvd. | 1 |
| | | Whispering Sands Beach at Ravina Street | 1 |
| | | Windansea Beach at Vista de la Playa | 1 |
| | | Windansea Beach at Bonair Street | 1 |
| | | Windansea Beach at Playa del Norte | 1 |
| | | Windansea Beach at Palomar Ave. | 1 |
| | | at Tourmaline Surf Park | 1 |
| | | Pacific Beach at Grand Ave. | 1 |
| Tecolote HA (906.10) | Tecolote Creek | The entire reach and associated tributaries | 1 |

**Table 7-52. Prioritized List of Impaired Waters for TMDL Implementation † (Cont'd)**

| | | | |
|---|---|---|---|
| Mission San Diego HSA (907.11) & Santee HSA (907.12) | San Diego River, Lower | Lower 6 miles | 3 |
| | Pacific Ocean Shoreline | At San Diego River Mouth at Dog Beach | 3 |
| | Forrester Creek | Lower 1 mile | 3 |
| Chollas HSA (908.22) | Chollas Creek | Bottom 1.2 miles | 3 |

† Developed based on the 2002 Clean Water Act Section 303(d) List
a As listed on the 2002 Clean Water Act Section 303(d) List
b Listings on the 2006 and 2008 303(d) List compared to listing shown above are provided in Appendix T to the Technical Report.

Beginning with the 2008 303(d) List, specific beach segments of the Pacific Ocean shoreline are listed individually, and may not be identified in the same way as those segments listed in the table above. Several of the segments or areas in the list above have been delisted or redefined in the 2008 303(d) List. In addition, other segments or areas have been added to the Pacific Ocean shorelines listed above. The TMDLs that address the Pacific Ocean shorelines identified in the 2002 303(d) List are assumed to be applicable to all the beaches located on the shorelines of the hydrologic subareas (HSAs), hydrologic areas (HAs), and hydrologic units (HUs) listed above, or as listed individually in the 2008 and future 303(d) Lists.

The prioritized list above recognizes that there are segments or areas where bacterial water quality improvements are most likely to occur first (Priority 1), and segments or areas where bacterial water quality improvements are most likely to require more time to achieve (Priority 3). In some cases, receiving water limitations are already being met, resulting in the delisting of those segments or areas from the 2006 and/or 2008 303(d) Lists. The protection of the REC-1 beneficial use of those delisted segments or areas, however, must also be maintained, and those segments or areas must remain off future iterations of the 303(d) List.

The BLRPs or CLRPs that are developed are expected to focus on implementing BMP programs to reduce bacteria loads to those segments or areas where exceedances of the receiving water limitations continue to occur. The BMP programs that are included in the BLRPs or CLRPs should include short-term and long-term implementation strategies. The short-term strategies should be able to result in bacteria load reductions that can result in achieving the TMDLs for Priority 1 segments or areas. The long-term strategies should be able to result in bacteria load reductions that will result in achieving the TMDLs in all segments or areas by the end of the TMDL compliance schedules and maintain the protection of the REC-1 beneficial use after the end of the TMDL compliance schedules.

In the segments or areas where the receiving water limitations are being met, the BLRPs or CLRPs also need to include a monitoring component to ensure that protection of the REC-1 beneficial use is maintained. If receiving water limitations are exceeded in the future in those locations, the BLRPs or CLRPs must include the implementation of a BMP program that will ensure that the TMDLs will be achieved by the end of the TMDL compliance schedules.

### *(2) Compliance Schedule*

Full implementation of the TMDLs for indicator bacteria shall be completed as soon as possible, but no later than 10 years[74] from the effective date[75] for both the dry weather and wet weather TMDLs, unless an alternative compliance schedule is approved as part of a Comprehensive Load Reduction Plan, as described in the following section. The effective date of these TMDLs is April 4, 2011.

The San Diego Water Board will require the Phase I MS4s to submit Bacteria Load Reduction Plan (BLRPs) outlining a proposed BMP program that will be capable of achieving the necessary load reductions required to attain the bacteria TMDLs in the receiving waters, acceptable to the Regional Board within 18 months after the effective date of these TMDLs. The Phase I MS4 BLRPs should be incorporated into their Watershed Runoff Management Programs. Caltrans will also be required to develop and submit BLRPs outlining a proposed BMP program that will be capable of achieving the necessary load reductions required to attain the TMDLs in the receiving waters, acceptable to the Regional Board, within 18 months after the effective date of these TMDLs. To the extent possible, the Phase I MS4s and Caltrans should develop and coordinate the elements of their BLRPs together. The BLRPs will allow the Phase I MS4s and Caltrans to propose a compliance schedule for WQBELs that implement the bacteria TMDLs. The compliance schedule for the Phase I MS4s and Caltrans to attain their respective WLAs and the TMDLs in the receiving waters will be based on the BMP program proposed in the BLRPs.

For watersheds in Table 7-52 where there are no longer any impairments listed on the 2008 303(d) List, the Phase I MS4s and Caltrans are not required to submit a BLRP or CLRP within 18 months of the effective date of these TMDLs. If, however, any segment of a waterbody for the watershed (Pacific Ocean shoreline, creek, or mouth as shown in Table7-36) is re-listed on a future 303(d) List for any type of indicator bacteria, the Phase I MS4s and Caltrans will be required to submit a BLRP or CLRP within 6 months of the adoption of the 303(d) List by the San Diego Regional Board.

If the Phase I MS4s and Caltrans choose to submit BLRPs that address only bacteria, the proposed schedule for compliance with the wet weather and dry weather TMDLs cannot extend beyond 10 years from the effective date, and must include at least a milestone for achieving a 50 percent exceedance frequency reduction. Additional milestones for achieving exceedance frequency reductions (e.g., 25 and 75 percent) are encouraged, but may also be required by the Regional Board. If the BLRPs do not include a proposed compliance schedule that is acceptable to the Regional Board, the compliance schedule will be as follows.

The compliance schedule for achieving the dry weather and wet weather bacteria TMDLs (Tables 7-53 and 7-54, respectively) are structured in a phased manner, with 100 percent of dry weather exceedance frequency reductions, and 100 percent of wet weather exceedance frequency reductions within 10 years from the effective date. At the end of the dry weather TMDL compliance schedule, the receiving waters must not exceed the 30-day geometric mean REC-1 WQOs more than 0 percent of the time. At the end of the wet weather TMDL compliance schedule, the receiving waters must not exceed the single sample maximum REC-1 WQOs more than the wet weather allowable exceedance frequency. All of these reductions are aimed at restoring water quality to a level that supports REC-1 beneficial uses in the ocean shoreline and in impaired creeks. These reductions required by the compliance schedule vary on the timeline based on the priority scheme described in Table 7-52. Intermediate milestone reductions in bacteria wasteloads are required sooner in the higher priority waters.

[74] If a Comprehensive Load Reduction Plan (CLRP) is developed to address several pollutants, including bacteria, the implementation of the wet weather bacteria TMDLs shall be completed as soon as possible, but no later than 20 years from the effective date. See Alternative Compliance Schedules under section (j)(3).

[75] The effective date is the date the Office of Administrative Law approves this Basin Plan amendment.

**Table 7-53. Dry Weather Compliance Schedule and Milestones for Exceedance Frequency Reductions**

| | | | |
|---|---|---|---|
| 5 | 50% (All Dry Weather) | | |
| 6 | | 50% (All Dry Weather) | |
| 7 | | | 50% (All Dry Weather) |
| 10+ | 100% (All Dry Weather) | 100% (All Dry Weather) | 100% (All Dry Weather) |

**Table 7-54. Wet Weather Compliance Schedule and Milestones for Achieving Exceedance Frequency Reductions**

| | | | |
|---|---|---|---|
| 5 | 50% (All Wet Weather) | | |
| 6 | | 50% (All Wet Weather) | |
| 7 | | | 50% (All Wet Weather) |
| 10+ | 100% (All Wet Weather ) | 100% (All Wet Weather ) | 100% (All Wet Weather ) |

The first four years of the compliance schedules above do not require any exceedance frequency reductions from current conditions. These years will provide the dischargers time to identify sources, develop plans and implement enhanced and expanded BMPs capable of achieving the mandated decreases in exceedance frequencies of the REC-1 WQOs in the impaired beaches and creeks. The Regional Board may also include additional milestones for achieving exceedance frequency reductions (e.g., 25 and 75 percent).

If appropriate and acceptable to the Regional Board, the proposed compliance schedules included in the BLRPs will be incorporated into the various TMDL implementing orders, such as the municipal Phase I MS4 stormwater WDRs and NPDES requirements. Otherwise, the compliance schedules given above will be implemented.

***(3) Alternative Compliance Schedules***

The dischargers to Chollas Creek in the Chollas HSA watershed will have to address reductions from multiple water quality improvement projects in addition to bacteria, namely TMDLs for copper, lead, zinc, and diazinon,[76] and a trash reduction program. Addressing multiple pollutants (in addition to bacteria) will require the development and submittal of a Comprehensive Load Reduction Plan (CLRP) by the Phase I MS4s and Caltrans. The CLRP will allow the Phase I MS4s and Caltrans to propose a compliance schedule to address impairments due to loads from multiple pollutants, including bacteria.

[76] As described in *Total Maximum Daily Loads for Dissolved Copper, Lead, and Zinc in Chollas Creek, Tributary to San Diego Bay*, adopted under Resolution No. R9-2007-0043, and *Total Maximum Daily Load for Diazinon in Chollas Creek Watershed, San Diego County*, adopted under Resolution No. R9-2002-0123.

Full implementation of the TMDLs for indicator bacteria included under the CLRP for the Chollas HSA watershed shall be completed as soon as possible, but cannot extend beyond 10 years for the dry weather bacteria TMDLs and 20 years for the wet weather bacteria TMDLs. The proposed compliance schedules for the bacteria TMDLs included under the CLRP must include at least a milestone for achieving a 50 percent exceedance frequency reduction. Additional milestones for achieving exceedance frequency reductions (e.g., 25 and 75 percent) are encouraged. If the CLRP for the Chollas HSA watershed does not include a proposed compliance schedule, specifically for bacteria, the compliance schedule will be as given in Table 7-55.

**Table 7-55. Alternative Compliance Schedule Chollas Creek**

| Compliance Year* | Exceedance Frequency Reduction Milestone** |
|---|---|
| 7 | 50% for dry weather |
| 10 | 100% for dry weather<br>50% for wet weather |
| 20 | 100% for wet weather |

* Year after effective date for the TMDL that initiated the development of the CLRP.
** The Regional Board may also include additional milestones for achieving exceedance frequency reductions (e.g., 25 and 75 percent).

Likewise, dischargers in other bacteria-impaired watersheds may also find that undertaking concurrent load reduction programs for other pollutant constituents (e.g. metals, pesticides, trash, nutrients, sediment, etc.) together with the bacteria load reduction requirements in these TMDLs, is more cost effective, and has fewer potential environmental impacts from structural BMP construction. In these cases, the dischargers may develop and submit a CLRP for all constituents of concern in lieu of the BLRP, and to propose an appropriately tailored alternative compliance schedule. Proposed alternative compliance schedules tailored under this provision may not extend beyond 10 years for the dry weather bacteria TMDLs and 20 years for the wet weather bacteria TMDLs from the effective date, and must include at least a milestone for achieving a 50 percent exceedance frequency reduction. Additional milestones for achieving exceedance frequency reductions (e.g., 25 and 75 percent) are encouraged, but may also be required by the Regional Board.

If appropriate and acceptable to the Regional Board, the proposed alternative compliance schedules included in the CLRPs will be incorporated into the various TMDL implementing orders. Otherwise, the alternative compliance schedule given above as an example for Chollas Creek will be implemented for a CLRP that is developed for any other watershed.

## *TMDL IMPLEMENTATION MILESTONES*

Accomplishing the goals of the implementation plan will be achieved by cooperative participation from all responsible parties, including the San Diego Water Board. Major milestones are described in Table 7-56.

**Table 7-56. TMDL Implementation Milestones**

| | | | |
|---|---|---|---|
| 1 | Obtain approval of Beaches and Creeks Indicator Bacteria TMDLs from the State Water Board, OAL, and USEPA. | San Diego Water Board | Effective date[a] April 4, 2011 |
| 2 | Issue investigative orders to Phase I MS4s and Caltrans requiring the development and submittal of BLRPs or CLRPs acceptable to the Regional Board within 18 months of effective date | San Diego Water Board | As soon as possible (if necessary) |
| 3 | Issue, reissue, or revise general WDRs and NPDES requirements for the Phase I MS4s to incorporate the requirements for complying with the TMDLs and MS4 WLAs. | San Diego Water Board | Within 5 years of effective date[b] |
| 4 | Issue, reissue, or revise general WDRs and NPDES requirements for Caltrans to incorporate the requirements for complying with the TMDLs and Caltrans WLAs. | San Diego Water Board, State Water Board | Within 5 years of effective date[b] |
| 5 | Issue, reissue, or revise the WDRs and NPDES requirements for POTWs and wastewater collection systems to incorporate new requirements for sewer line surveillance and maintenance, consistent with the zero WLA. | San Diego Water Board | Within 5 years of effective date[b] |
| 6 | Meet 50% Dry Weather exceedance frequency reductions required to achieve TMDLs in receiving waters in Priority 1 watersheds. | Municipal Dischargers,[d] Caltrans, Agriculture/Livestock Dischargers | 5 years after effective date[b] |
| 7 | Meet 50% Wet Weather exceedance frequency reductions required to achieve TMDLs in receiving waters in Priority 1 watersheds. | Municipal Dischargers,[d] Caltrans, Agriculture/Livestock Dischargers | 5 years after effective date[b] |
| 8 | Meet 50% Dry Weather exceedance frequency reductions required to achieve TMDLs in receiving waters in Priority 2 watersheds. | Municipal Dischargers,[d] Caltrans, Agriculture/Livestock Dischargers | 6 years after effective date[b] |
| 9 | Meet 50% Wet Weather exceedance frequency reductions required to achieve TMDLs in receiving waters in Priority 2 watersheds. | Municipal Dischargers,[d] Caltrans, Agriculture/Livestock Dischargers | 6 years after effective date[b] |
| 10 | Meet 50% Dry Weather exceedance frequency reductions required to achieve TMDLs in receiving waters in Priority 3 watersheds. | Municipal Dischargers,[d] Caltrans, Agriculture/Livestock Dischargers | 7 years after effective date[b] |
| 11 | Meet 50% Wet Weather exceedance frequency reductions required to achieve TMDLs in receiving waters in Priority 3 watersheds. | Municipal Dischargers,[d] Caltrans, Agriculture/Livestock Dischargers | 7 years after effective date[b] |
| 12 | Meet 100% Dry Weather exceedance frequency reductions required to achieve TMDLs in receiving waters in all watersheds. | Municipal Dischargers,[d] Caltrans, Agriculture/Livestock Dischargers | 10 years after effective date[b,c] |
| 13 | Meet 100% Wet Weather exceedance frequency reductions required to achieve TMDLs in receiving waters in all watersheds. | Municipal Dischargers,[d] Caltrans, Agriculture/Livestock Dischargers | 10 to 20 years after effective date[b,c] |

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# *TOTAL MAXIMUM DAILY LOADS FOR SEDIMENT IN LOS PEÑASQUITOS LAGOON*

On June 13, 2012, the San Diego Water Board adopted *Resolution No. R9-2012-0033, A Resolution Amending the Water Quality Control Plan For The San Diego Basin (9) to Incorporate the Sediment Total Maximum Daily Load for Los Peñasquitos Lagoon.* The TMDL Basin Plan Amendment was subsequently approved by the State Water Resources Control Board (State Board) on January 21, 2014, the Office of Administrative Law (OAL) on July 14,2014 and the USEPA on October 30, 2014. For purposes of state law, Resolution No. R9-2012-0033 became effective following OAL approval on October 30, 2014.

## *PROBLEM STATEMENT*

Under section 303(d) of the Clean Water Act (CWA), states are required to identify waters whose beneficial uses have been impaired due to specific constituents. Los Peñasquitos Lagoon was placed on the Section 303(d) list of Water Quality Limited Segments in 1996 for sedimentation and siltation with an estimated 469 acres affected. The Lagoon is subject to the development of a total maximum daily load (TMDL) (US EPA, 2009).

The Lagoon is an estuarine system that is part of the Torrey Pines State Natural Reserve. In addition to its marine influence, the Lagoon receives freshwater inputs from an approximately 60,000-acre watershed comprised of three major canyons (Carroll Canyon, Los Peñasquitos Canyon, and Carmel Canyon). Given the status of "Natural Preserve" by the California State Parks, the Lagoon is one of the few remaining native saltmarsh lagoons in southern California, providing a home to several endangered species (California State Parks, 2009). The Lagoon is ecologically diverse, supporting a variety of plant species, and provides nursery grounds and habitat for numerous bird, fish, and small mammal populations. The Lagoon also serves as a stopover for the Pacific Flyway, offering migratory birds a safe place to rest and feed, as well as providing refuge for coastal marine species that use the Lagoon to feed and hide from predators.

The San Diego Basin Plan states, "The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses." Beneficial uses listed in the Basin Plan for the Lagoon include contact water recreation; non-contact water recreation (although access is not permitted in some areas per California State Parks); preservation of biological habitats of special significance; estuarine habitat; wildlife habitat; rare, threatened or endangered species; marine habitat; migration of aquatic organisms; spawning, reproduction and/or early development; and shellfish harvesting. The beneficial uses that are most sensitive to increased sedimentation are estuarine habitat (EST) and preservation of biological habitats of special significance (BIOL). Estuarine uses may include preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (such as marine mammals or shorebirds).

Impacts associated with increased and rapid sedimentation include: reduced tidal mixing within Lagoon channels, degraded and (in some cases) net loss of saltmarsh vegetation, increased vulnerability to flooding for surrounding urban and industrial developments, increased turbidity associated with siltation in Lagoon channels, and constricted wildlife corridors.

The Los Peñasquitos Lagoon Enhancement Plan and Program (1985), San Diego Basin Plan, and Clean Water Act section 303(d) highlight sedimentation as a significant impact associated with urban development and a leading cause in the rapid loss of saltmarsh habitat in the Lagoon. Sediment reduction is a management priority.

The Lagoon's 565 acres include 262 acres of tidal saltmarsh (including salt panne, tidal channels, and mudflats) and non-tidal saltmarsh and 132 acres of freshwater marsh, herbaceous wetland, and woody riparian (for example southern willow scrub and mulefat scrub) habitats. The remaining 171 acres of saltmarsh and brackish marsh vegetation are impaired by excessive sedimentation, which converted the coastal saltmarsh to *Lolium perenne* infested non-tidal saltmarsh, freshwater marsh, and woody riparian habitats. (California State Parks, 2011) The environmental processes that support wetland habitats in the Lagoon have been altered by urban development in three ways:

1) Increase in the volume and frequency of freshwater input,
2) Increase in sediment deposition, and
3) Decrease in the tidal prism.

These factors have led to decreases in tidal and non-tidal saltmarsh habitats and increases in freshwater habitats and the abundance of non-native species.

## *NUMERIC TARGET*

The sediment water quality standard applies to sediment loading to the Lagoon and the accumulation of sediment in the Lagoon. The minimum protective target would be to reduce watershed sediment loads to non-anthropogenic levels and return the Lagoon to non-anthropogenic conditions with consideration given to background loading and other factors that also lend to impairment of beneficial uses. The numeric targets are calculated upon the historic condition (mid-1970s) when the sediment water quality standard was once met.

A historic coverage for the Los Peñasquitos watershed was developed for this period using US Geological Survey topographic maps from the 1970s. This land-use distribution was used to calculate the watershed numeric target using the LSPC watershed model. This historic (mid-1970s) sediment load of 12,360 tons per critical wet period (211 days), or 58.6 tons per day, represents the sediment TMDL watershed numeric target.

An analysis of the vegetation types present in the Lagoon was developed for the mid-1970s using historic aerial photographs from which the Lagoon numeric target was calculated. The Lagoon numeric target is expressed as an increasing trend in the total area of tidal and non-tidal saltmarsh toward 346 acres. This target acreage represents 80 percent of the total acreage of tidal and non-tidal saltmarsh present in 1973.

## *WATERSHED POINT AND NON-POINT SEDIMENT SOURCES*

Sources of sediment include erosion of canyon banks, exposed soils, bluffs, scouring stream banks, and tidal influx. Some of these processes are exacerbated by anthropogenic disturbances, such as land development within the watershed. Land development transforms the natural landscape by exposing sediment and converting pervious surfaces to impervious surfaces, which increases the volume and velocity of runoff resulting in scouring of sediment, primarily below storm water outfalls that discharge into canyon areas. Sediment loads are transported downstream to the Lagoon during storm events causing deposits on the salt flats and in Lagoon channels. These sediment deposits have gradually built-up over time due to increased sediment loading and inadequate flushing, which directly and indirectly affects Lagoon functions and salt marsh characteristics.

There are two broad categories of sediment sources to the Lagoon: 1) watershed sources, and 2) the Pacific Ocean. The watershed sources consist of all of point and non-point sources of sediment in the watershed area draining to Los Peñasquitos Lagoon. The total sediment contribution from all watershed sources, currently, is presented as the total wasteload allocation (WLA). The watershed sources of sediment due to past historical activities that have resulted in accumulated sediment in the Lagoon over time are presented as the Watershed

## *RESPONSIBLE PARTIES*

Responsible parties include the following: Phase I Municipal Separate Storm Sewer Systems (MS4s) copermittees (the County of San Diego, City of San Diego, City of Del Mar, and City of Poway), Phase II MS4 permittees, Caltrans, general construction storm water NPDES permittees, and general industrial storm water NPDES permittees.

## *LINKAGE ANALYSIS*

Reducing watershed sediment loads from the year 2000 levels to historic levels is a necessary component for restoring and providing long-term protection of the Lagoon's beneficial uses. Deposition of watershed sediment contributes to elevation increases within the Lagoon, leading to an increase in height relative to mean sea level. Elevation is a critical variable that determines the productivity, diversity, and stability of saltmarshes. The long-term existence of the saltmarsh depends on the success of the dominant plants, such as Sarcoconia pacifica (also referred to as Salicornia virginica) and Frankenia salina, and their close relationship to sediment supply, soil salinity, sea level change, and tidal range.

Reduced sediment loading consistent with the watershed numeric target will encourage the establishment of native vegetation in degraded areas. To represent the linkage between source contributions and receiving water response, models were developed to simulate source loadings and transport of sediment into the Lagoon. The models provide an important tool to evaluate year 2000 conditions, to evaluate historic conditions, and to calculate TMDL load reductions.

The Lagoon was capable of assimilating these historic sediment loads under historic Lagoon conditions. Because the Lagoon has evolved through time and accumulated over 40 years of watershed sediment loads, it cannot be assumed that the Lagoon, in the year 2010 conditions, can assimilate the same historic sediment loads. Evaluation of the extent of vegetation types in the Lagoon provides the necessary tool to assess how the Lagoon responds to watershed sediment load reductions and to establish a target Lagoon condition under which the Lagoon can again assimilate the historic sediment loads.

## *TMDL, ALLOCATIONS, AND LOAD REDUCTIONS*

**TMDL = 12,360 tons of sediment per year**

The maximum load of sediment that Los Peñasquitos Lagoon can receive from all sources and still meet the sediment water quality objective is 12,360 tons per year.

**Wasteload Allocations to Watershed = 2,580 tons/year**

As the primary point source to the Lagoon, a wasteload allocation (WLA) of 2,580 tons/year was assigned to the responsible parties. A 67 percent sediment load reduction from the Year 2000 load to the historical (mid-1970s) load is required of the responsible parties.

**Load Allocations to Ocean = 9,780 tons/year**

The ocean is a nonpoint source of sediment to the Lagoon and was assigned a load allocation (LA) of 9,780 tons/year. Because the ocean is a natural background source, load reductions are not required of the ocean.

**Watershed Load Allocations to Lagoon**

Past historical watershed loading has led to accumulated sediment, erosion, and scouring in the Lagoon causing impairment to the Lagoon habitats. The Lagoon numeric target is set as the compliance for this LA: maintain at least 346 acres of tidal and non-tidal saltmarsh, represents 80 percent of the total acreage of tidal and non-tidal saltmarsh present in 1973.

**Margin of Safety = Implicit**

Conservative assumptions were used in selecting the TMDL numeric targets to provide an implicit margin of safety.

**Critical Location**

Due to the variability and dynamic nature of conditions within the Lagoon (e.g., mouth closures, tidal fluctuations, sediment fate and transport, etc.), the entire modeled Lagoon area was assessed as the critical location. Load reductions for sediment were based on achieving the numeric TMDL target across the Lagoon.

**Critical Condition**

The wet season that includes the 1993 El Nino storm events (October 1, 1992 April 10, 1993) was selected as the critical condition time period for TMDL development. This is one of the wettest periods on record over the past several decades. Because of the large amount of rainfall, sediment loads were significantly higher during this period than in other years with less rainfall.

**Seasonal Considerations**

Sources of sediment are similar for both dry and wet weather seasons (the two general seasons in the San Diego region). Despite the similarity of wet/dry sources, transport mechanisms can vary between the two seasons. Throughout the TMDL monitoring period, the greatest transport of sediment occurred during rainfall events. It is recognized that dry weather will contribute a de minimis discharge of sediment; however, model calibration and TMDL development focused on wet weather conditions as sediment transport is dramatically higher during wet weather.

## *MARGIN OF SAFETY (MOS)*

An implicit MOS was incorporated through application of conservative assumptions.

# *IMPLEMENTATION PLAN*

**Actions San Diego Water Board May Take**

The San Diego Water Board may exercise any of its authorities under the Water Code to compel responsible parties to comply with this TMDL.

**Responsible Parties Identification**

Under this TMDL, the responsible parties are collectively assigned a single WLA, which they are responsible for meeting. An aggregate WLA allows for flexibility in achieving the load reduction required to meet the TMDL and improve Lagoon conditions. Responsible parties include: Phase I MS4 copermittees (the County of San Diego, City of San Diego, City of Del Mar, and the City of Poway), Phase II MS4 permittees, Caltrans, and the General Construction and General Industrial Storm Water NPDES permittees.

The San Diego Water Board encourages cooperation among all the responsible parties. All the responsible parties in the Los Peñasquitos watershed must reduce their collective sediment load. Responsible parties include, but are not limited to, specific identification of General construction and industrial stormwater permittees, such as sand and gravel operation facilities in the watershed *that have capacity for long-term potential loadings into the watershed*.

The San Diego Water Board recommends all parties enter into a Memorandum of Understanding (MOU), or a similar formal joint effort, to collaboratively and more successfully implement the adaptive management framework.

All responsible entities identified must submit a Comprehensive Load Reduction Plan (CLRP) or SWPPP as appropriate and are strongly encouraged to jointly submit a CLRP to the San Diego Water Board within 18 months of the effective date of the TMDL.

The San Diego Water Board expects responsible parties to cooperate in TMDL implementation (e.g., load reduction, lagoon monitoring, lagoon restoration) as necessary to achieve compliance with this TMDL. Responsible Parties that have or are likely to cause or contribute to the CWA Section 303(d) listed impairment for sediment, and are not participating in TMDL implementation, shall be compelled to meet their compliance obligations through other regulatory authorities of the San Diego Water Board.

Any Responsible Party identified is required to develop pollutant reduction plan that includes description and schedule for implementing BMPs to reduce sediments from being discharged from their facility, property, etc. The plan must describe how the facility plans to meet the water quality objectives and pollutant reductions set forth in the TMDL.

Any Responsible Party as identified for this TMDL shall contribute information regarding the amount of sediments/sedimentation from their facility/entity. This may be produced from existing monitoring plans or by developing a monitoring plan for those entities that currently do not have any discharge monitoring on site. The TMDL has identified a "collective" wasteload allocation that includes several sources of sediments into the watershed. By developing individual site/permitee monitoring plans for flow and TSS discharges, it will be feasible to estimate individual site contributions in the future. Monitoring should address, at minimum, representative values of flow rates and TSS concentrations from the individual permittee's site(s) whenever long-term discharges occur.

**Phased Implementation via the Adaptive Management Approach**

A common problem in natural resource management involves a temporal sequence of decisions (or implementation actions), in which the best action at each decision point depends on the state of the managed system. Adaptive management is a structured iterative implementation process that offers flexibility for responsible parties to monitor implementation actions, determine the success of such actions and ultimately, base future management decisions upon the measured results of completed implementation actions and the current state of the system. This process enhances the understanding and estimation of predicted outcomes and ensures refinement of necessary activities to better guarantee desirable results. In this way, understanding of the resource can be enhanced over time, and management can be improved.

Adaptive management entails applying the scientific method to the TMDL. A National Research Council review of US EPA's TMDL program strongly suggests that the key to improving the application of science in the TMDL program is to apply the scientific method to TMDL implementation (NRC 2001). For a TMDL, applying the scientific method involves 1) taking immediate actions commensurate with available information, 2) defining and implementing a program for refining the information on which the immediate actions are based, and 3) modifying actions as necessary based on new information. This approach allows the Lagoon to make progress toward attaining water quality standards while regulators and stakeholders improve the understanding of the system through research and observation of how it responds to the immediate actions.

Implementation actions to achieve the required WLA and improve the specified numeric targets will be implemented via an iterative process, whereby the information collected at each step will be used to inform the implementation of the next phase. The project will be adjusted, as necessary, based on the latest information collected to optimize the efficiency of implementation efforts. Ultimately, the path moving forward is to create the physical conditions related to remediating sediment impacts associated with this TMDL. The implementation effort can be divided into three primary phases for this TMDL, as described below:

- Phase I Implementation includes elements to reduce the amount of sediment that is transported from the watershed to the Lagoon. An important component of Phase I will be to secure the relationships and agreements between cooperating parties and to develop a detailed scope of work with priorities.

  Phase I includes the following elements:

  - Incorporate interim limits into WDRs and NPDES permits;
  - Implement structural and nonstructural BMPs throughout the watershed; and
  - Develop and initiate a comprehensive monitoring program, which includes compliance monitoring and targeted special studies.

  If appropriate, the TMDL will be reconsidered by the San Diego Water Board at the end of Phase I to consider completed special studies or policy.

- Phase II includes the implementation of additional watershed actions that are targeted to reducing sediment loads from high priority areas, as well as lagoon-specific actions that may be needed to facilitate recovery of beneficial uses that have been affected by various complex processes, including sedimentation, nuisance flows, reduced tidal circulation, and other factors. These actions may include Lagoon sediment remediation efforts, re-connecting the Lagoon's historic tidal channels, and maintenance of the Lagoon inlet in collaboration with State Parks, the San Diego Water Board, the Los Angeles-San Diego-San Luis Obispo (LOSSAN) Rail Corridor Agency, US EPA, and the watershed responsible parties. Phase II may also include additional upstream protections and BMP implementation to further reduce watershed sediment contributions. Responsible parties will develop, prioritize, and implement Phase II elements based on data from compliance monitoring and special studies.

- Phase III includes implementation of secondary and additional remediation actions, as necessary, to be in compliance with the required WLA allocation by the end of the compliance schedule.

**Develop and Submit a Load Reduction Plan**

Responsible parties are required to prepare and submit for San Diego Water Board review, comment, and revision, a Load Reduction Plan that demonstrates how they will comply with this TMDL. The San Diego Water Board expects that Load Reduction Plans will be developed collaboratively by the responsible parties within the watershed. The Load Reduction Plan shall be submitted to the San Diego Water Board within 18 months of the TMDL effective date, and reviewed by the San Diego Water Board Executive Officer within six months of submittal (this period will likely include a round of revisions by the responsible parties based on San Diego Water Board staff comments).

The Load Reduction Plan shall establish a watershed-wide, programmatic, adaptive management approach for implementation and include a detailed description of implementation actions, identified and planned by the responsible parties, to meet the requirements of this TMDL. Implementation actions identified by the Load Reduction Plan may include source control techniques, structural and/or non-structural storm water BMPs, and/or special studies that refine the understanding of sediment and pollutant sources within the watershed. The Load Reduction Plan shall include a description and objective of each implementation action, potential BMP locations, a timeline for project or BMP completion, and a monitoring plan to measure the effectiveness of implementation actions.

Storm Water Pollution Prevention Plans (SWPPPs) prepared by Phase II MS4s, Industrial Permittees, and Construction Permittees pursuant to their respective statewide general NPDES permits fulfill these entities responsibility to prepare a Load Reduction Plan. Permittees within the Los Peñasquitos watershed shall update their SWPPPs within 12 months of the TMDL effective date with any additional BMPs, monitoring, etc. to account for their site's potential to impact the receiving waterbody with respect to sediment. Sites identified through monitoring data or site inspections as posing an increased risk to the receiving water body may be directed to perform additional monitoring by the San Diego Water Board Executive Officer to quantify sediment load contributions to the receiving waterbody.

**Comprehensive Approach**

The comprehensive approach to the Load Reduction Plan requires that implementation efforts address all current TMDLs, current 303(d) listed waterbody/pollutant combinations, and other targeted impairments within the Los Peñasquitos watershed. A comprehensive approach to the Load Reduction Plan is consistent with implementation planning currently underway to address all of the impaired segments that were included in the approved bacteria TMDLs for San Diego Region Beaches and Creeks (San Diego Water Board, 2010).

## Load Reduction Plan Framework

With increased land development and inadequate management of runoff from impervious areas, increasing amounts of sediment are deposited into the Lagoon annually. To minimize the effects of runoff, proper sediment control can be achieved through the execution of implementation actions such as BMPs. Sediment implementation actions can be grouped into the four categories as summarized below.

1) *Preservation and Restoration*
   Significant areas of land have been set aside for open space. Such land acquisition and preservation prevents natural areas from being developed and disturbed. Additionally, the restoration of riparian buffers and wetlands can include the stabilization of steep slopes with native riparian vegetation. This not only helps restore the habitat but also the natural function of the stream.

2) *Education & Outreach*
   As a source control technique, education and outreach can function as pollution prevention to reduce or eliminate the amount of sediment generated at its source. Education and outreach can be targeted at specific land user groups and/or staff involved with site maintenance. As an example, implementation actions such as municipal incentives can be used to encourage proper irrigation and landscaping and can significantly reduce volumes of runoff.

3) *Retrofitting, New Development, & Site Management*
   Land development (MS4 contribution) is the primary source of anthropogenic sediment contribution above historical conditions. Development can expose sediment and contribute excessive amounts of sediment to the Lagoon. Additionally, increased imperviousness associated with development can lead to increased storm water runoff and soil erosion or gullying within the MS4 and receiving waters. Appropriate site management can partially or fully mitigate the effects of development. The Load Reduction Plan must identify and prioritize BMPs based on an analysis of opportunities and cost/benefit considerations. Furthermore, the Load Reduction Plan must detail BMP projects and locations. Storm water BMPs can be implemented to reduce the effects of pollutant loading and increased storm water flows from development. Structural BMPs include incorporation of low impact development (LID) and storm flow hydrograph matching into new projects. The same structural BMPs can be utilized to retrofit existing sites or be applied as regional MS4 BMPs to treat pollutants and/or flows prior to discharge into receiving waters.

4) *Monitoring:*
   A coordinated monitoring plan is needed to establish existing watershed conditions (baseline conditions) from which future changes and anticipated improvement in water quality can be measured. Additional monitoring could focus on sensitive species, areas of saltmarsh coverage, extent of invasive plant species, BMP effectiveness, and/or reduction in impervious coverage. Additionally, monitoring is crucial in the assessment of implementation actions to gain an understanding of performance for future adaptive management actions.

## Load Reduction Plan Implementation

The Load Reduction Plan must be implemented within 90 days upon receipt of San Diego Water Board comments and recommendation, but in any event, no later than 6 months after submittal.

## *MONITORING*

Monitoring is required to measure the progress of pollutant load reductions and improvements in water and saltmarsh habitat acreage. The information presented below is intended to be a brief overview of the goals of the monitoring. Special studies may be planned to improve understanding of key aspects related to achievement of WLAs and LAs, restore the beneficial uses, and to assist in the modification of structural and non-structural BMPs if necessary. The goals of monitoring include:

1) To determine compliance with the assigned wasteload and load allocations.

2) To monitor the effect of implementation actions proposed by responsible parties to improve water and saltmarsh habitat quality including proposed structural and non-structural BMPs to reduce storm water run-off and sediment loading, and remediation actions to remove sediment from the Lagoon.

3) To monitor the extent of vegetation habitat acreages in the Lagoon and determine if additional implementation action should be required.

4) To implement the monitoring in a manner consistent with other TMDL implementation plans and regulatory actions within the Los Peñasquitos watershed.

The proposed monitoring program shall be included in the Load Reduction Plan submitted to the San Diego Water Board Executive Officer for review.

**Watershed Monitoring**

Responsible parties must conduct suspended sediment, bedload, and flow monitoring to calculate total sediment loading to the Lagoon for each wet period (October 1 thru April 30) throughout the 20-year compliance period. The responsible parties must monitor enough storm events throughout to quantify sediment loading over each wet period. The compliance point for the WLA shall be the Lagoon as measured through the cumulative sediment loading from Los Peñasquitos, Carroll Canyon, and Carmel Creeks prior to entering the Lagoon. The responsible parties must monitor as many stations as necessary to quantify sediment loading to the Lagoon. Because of the natural variability in sediment delivery rates, sediment loading shall be evaluated using a 3-year, weighted rolling average. The first average must be calculated following the third critical wet period after the TMDL effective date.

Responsible parties are encouraged to collaborate or coordinate their efforts with other regional and local monitoring programs to avoid duplication and reduce associated costs.

**Lagoon Monitoring**

The responsible parties shall monitor the Lagoon annually in the Fall for changes in extent of the vegetation types. Aerial photos of the Lagoon must be acquired, digitized onscreen (at an approximate 1:2,500 scale), interpreted, and mapped into generalized classifications. Vegetation types must be classified as saltmarsh, non-tidal saltmarsh, freshwater marsh, non-tidal saltmarsh – *Lolium perrene* infested, freshwater marsh, southern willow scrub/mulefat scrub, herbaceous wetland, or upland land cover (urban, beach, dune, upland vegetation, etc.). Vegetation type classifications are described in the *Sediment TMDL for Los Peñasquitos Lagoon Staff Report*. Ground truthing may be performed after aerial photo interpretation to distinguish between vegetation types.

## *COMPLIANCE SCHEDULE*

The implementation schedule for this TMDL follows the form of an adaptive management strategy, tracks implementation progress with established milestones or interim goals, and sets forth a final compliance date. It is impractical for land managers to actually measure sediment loading on a daily basis; thus, compliance with the TMDL is most appropriately expressed as an average annual load and should be evaluated as a long-term running average to account for natural fluctuations and inaccuracies in estimating sediment loads.

Pursuant to State Board Resolution No. 2000-015 and 2000-030 a TMDL compliance schedule must be as short as practicable, but in no case shall it exceed 20 years from the effective date of the Basin Plan amendment. This timeline in Table {Insert Table number} takes into consideration the planning needs of the responsible parties and other stakeholders to establish a Load Reduction Plan, time needed to address multiple impairments, and provides adequate time to measure temporal disparities between reductions in upland loading and the corresponding Lagoon water quality response. Current studies and other implementation actions or projects are underway to reduce sediment loading to the Lagoon and to gain a better understanding of source contributions. A variety of such projects will continue throughout the development of the Load Reduction Plan, ensuring there are no gaps in implementation efforts throughout the process.

At the end of the TMDL compliance schedule, as outlined in Table 7-57, waters must meet the Lagoon's sediment water quality standard and therefore, the Lagoon numeric target. The final lagoon numeric target requires the successful restoration of tidal and non-tidal salt marsh to achieve a lagoon total of 346 acres. This can either mean:

1. Successful restoration of 80 percent of the 1973 acreage of lagoon salt marsh habitat (346 acres); or

2. Demonstrate that implementation actions are active on and/or affecting 346 acres with continued monitoring to ensure 80 percent target achievement.

If at any point during the implementation plan, monitoring data or special studies indicate that WLAs or LAs will be attained but the Lagoon numeric target may not be achieved, the San Diego Water Board shall reconsider the TMDL to modify WLAs and LAs to ensure that the Lagoon numeric target is attained.

**Table 7-57. Los Peñasquitos Lagoon Sediment TMDL Implementation Compliance Schedule**

| Item | Implementation Action | Responsible Party | Date |
|---|---|---|---|
| **1** | Obtain approval by OAL of Los Peñasquitos Lagoon Sediment TMDL = Establishes effective date of TMDL | San Diego Water Board, San Diego County, City of San Diego, City of Poway, City of Del Mar, Caltrans, General Storm Industrial and Construction permittees | Estimated June 2013 |
| **2a** | Issue, reissue, or revise general WDRs and NPDES requirements for Phase I MS4s, including Caltrans, to incorporate requirements for complying with TMDL and WLAs | San Diego Water Board and State Water Board | Completed during permit renewal - within 5 years of applicable permit date, and every 5 years thereafter. |
| **2b** | Issue, reissue, or revise general WDRs and NPDES requirements for Construction and Industrial NPDES to incorporate requirements for complying with TMDL and WLAs | San Diego Water Board and State Water Board | Completed during permit renewal - within 5 years of applicable permit date, and every 5 years thereafter. |

| Item | Implementation Action | Responsible Party | Date |
|---|---|---|---|
| **2c** | Issue, reissue, or revise general WDRs and NPDES requirements for Phase II NPDES permittees to incorporate requirements for complying with TMDL and WLAs | San Diego Water Board and State Water Board | Completed during permit renewal - within 5 years of applicable permit date, and every 5 years thereafter. |
| **3a** | Completion of Load Reduction Plans | Phase 1 MS4s and Caltrans | Within 18 months of OAL effective date for sediment TMDL |
| **3b** | Approval of Load Reduction Plan | San Diego Water Board Executive Officer | Within 6 months of submittal |
| **3c** | Phased, adaptive implementation of Load Reduction Plan | Phase 1 MS4s and Caltrans | In accordance with Load Reduction Strategy – ongoing throughout the implementation |
| **3d** | Revision of SWPPPs | Construction, industrial, and Phase II Permittees | Within 12 months of OAL effective date for sediment TMDL |
| **4a** | Submit annual Progress Report to the San Diego Water Board due January 31 each year | Phase 1 MS4s | Annually after reissuance of NPDES WDR |
| **4b** | Submit annual Progress Report to the San Diego Water Board due April 1 each year | Caltrans | Annually after reissuance of NPDES WDR |
| **5** | Enforcement Actions | San Diego Water Board | As needed |
| **6** | Refine Load Reduction Plan | Phase 1 MS4s and Caltrans | As warranted by completion of special studies, additional monitoring and data compilation. |
| **7** | Reopen and reconsider TMDL | San Diego Water Board | As defensible through the collection of additional data and significant findings by the watershed stakeholders. |
| **8** | Meet Interim Milestone #1: Attain 20 percent required reduction in sediment loading (equivalent to 6691 tons of sediment per year) and/or show progress in improving Lagoon conditions consistent with the specified targets | MS4s and NPDES permittees | Within 5 years of approved TMDL |
| **9** | Meet Interim Milestone #2: Attain 40 percent required reduction in sediment loading (equivalent to 5663 tons of sediment per year) and/or show progress in improving Lagoon conditions consistent with the specified targets | MS4s and NPDES permittees | Within 9 years of approved TMDL |

| Item | Implementation Action | Responsible Party | Date |
|---|---|---|---|
| **10** | Meet Interim Milestone #3: Attain 60 percent required reduction in sediment loading (equivalent to 4636 tons of sediment per year) and/or show progress in improving Lagoon conditions consistent with the specified targets | MS4s and NPDES permittees | Within 13 years of approved TMDL |
| **11** | Meet Interim Milestone #4: Attain 80 percent required reduction in sediment loading (equivalent to 3608 tons of sediment per year) and/or show progress in improving Lagoon conditions consistent with the specified targets | MS4s and NPDES permittees | Within 15 years of approved TMDL |
| **12** | Meet Final Milestone: Achieve Lagoon numeric target: the successful restoration of tidal and non-tidal salt marsh to achieve a lagoon total of 346 acres.[77] | All Phase I, Phase II MS4s, Caltrans, and general construction and industrial NPDES enrollees, and other WDR and NPDES permittees in the watershed[78] | Within 20 years of approved TMDL |

*Note: TMDL implementation schedule may be altered due to TMDL reconsideration; additionally, enforcement actions by the San Diego Water Board will be taken as necessary.*

[77] This can either mean:
1. Successful restoration of 80 percent of the 1973 acreage of lagoon salt marsh habitat (346 acres); or
2. Demonstrate that implementation actions are active on and/or affecting 346 acres with continued monitoring to ensure 80 percent target achievement.

[78] For general construction and industrial permittees and other NPDES/WDR permittees, this applies to those facilities that have potential for long-term loadings into the watershed.

# APPENDICES

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# *APPENDIX A*

## *GLOSSARY*

**Areas of Special Biological Significance (ASBS) -** ASBS are those areas designated by the State Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All Areas of Special Biological Significance are also classified as a subset of State Water Quality Protection Areas.

**Basin Plan -** The plan for the protection of water quality prepared by the Regional Water Quality Control Board in response to the Porter-Cologne Water Quality Control Act. The Basin Plan for the San Diego Region is also known as the Water Quality Control Plan for the San Diego Basin (9) and contains Water Quality Standards for the federal Clean Water Act.

**Beneficial Uses -** The uses of water necessary for the survival or well being of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals "Beneficial Uses" of the waters of the State that may be protected against include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Existing beneficial uses are uses that were attained in the surface or ground water on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. "Beneficial Uses" are equivalent to "Designated Uses" under federal law. [California Water Code section 13050(f)].

**Best Management Practices (BMPs) -** The practice or combination of practices that are determined to be the most effective, practicable means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals (including technological, economic, and institutional considerations).

**Bioaccumulation -** The accumulation of contaminants in the tissues of organisms through any route, including respiration, ingestion, or direct contact with contaminated water, sediment, food, or dredged material.

**California Water Code, Division 7 -** a.k.a. Porter Cologne Water Quality Control Act.

**Capping -** The controlled, accurate placement of contaminated material at an open-water site, followed by a covering or cap of clean isolating material.

**CEQA -** California Environmental Quality Act of 1970.

**Clean Water Act -** a.k.a. Federal Water Pollution Control Act.

**Confined Disposal -** Placement of dredged material within dikes nearshore or upland confined disposal facilities that enclose the disposal area above any adjacent water surface, isolating the dredged material from adjacent waters during placement. Confined disposal does not refer to subaqueous capping or contained aquatic disposal.

**Contaminant -** A chemical or biological substance in a form that can be incorporated into, onto, or be ingested by and that harms aquatic organisms, consumers of aquatic organisms, or users of the aquatic environment.

# *GLOSSARY (continued)*

**Contaminated Sediment or Contaminated Dredged Material -** Contaminated sediments or contaminated dredged materials are defined as those that have been demonstrated to cause an unacceptable adverse effect on human health or the environment

**Contamination –** This means an impairment of the quality of the waters of the state by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. "Contamination" includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.

**Dredged Material -** Material excavated from waters of the United States or ocean waters. The term dredged material refers to material which has been dredged from a water body, while the term sediment refers to material in a water body prior to the dredging process.

**Dredged Material Discharge -** The term dredged material discharge means any addition of dredged material into waters of the United States or ocean waters. The term includes open-water discharges; discharges resulting from unconfined disposal operations (such as beach nourishment or other beneficial uses); discharges from confined disposal facilities that enter waters of the United States (such as effluent, surface runoff, or leachate); and overflow from dredge hoppers, scows, or other transport vessels.

**Effluent Limitations -** Limitations on the volume of each waste discharge, and the quantity and concentrations of pollutants in the discharge. The limitations are designed to ensure that the discharge does not cause water quality objectives to be exceeded in the receiving water and does not adversely affect beneficial uses.

**Ephemeral -** Water bodies, or segments thereof, that contain water only for a short period following precipitation events.

**Hydrologic Area -** A major logical subdivision of a hydrologic unit which includes both water-bearing and nonwater-bearing formations. It is best typified by a major tributary of a stream, a major valley, or a plain along a stream containing one or more ground water basins and having closely related geologic, hydrologic, and topographic characteristics. Area boundaries are based primarily on surface drainage boundaries. However, where strong subsurface evidence indicates that a division of ground water exists, the area boundary may be based on subsurface characteristics.

**Hydrologic Subarea -** A major logical subdivision of a hydrologic area which includes both water-bearing and nonwater-bearing formations.

**Hydrologic Unit -** A classification embracing one of the following features which are defined by surface drainage divides: (1) in general, the total watershed area, including water-bearing and nonwater-bearing formations, such as the total drainage area of the San Diego River Valley; and (2) in coastal areas, two or more small contiguous watersheds having similar hydrologic characteristics, each watershed being directly tributary to the ocean and all watersheds emanating from one mountain body located immediately adjacent to the ocean.

**Implementation Plan -** Basin Plan chapter which describes the actions by the Regional Board and others that are necessary to achieve and maintain the designated beneficial uses and water quality objectives of the Region's waters.

**Intermittent -** Water bodies, or segments thereof, that contain water for extended periods during the year, but not at all times.

**Interrupted -** Water bodies or streams that contain perennial segments or pools, with intervening intermittent or ephemeral segments.

# *GLOSSARY (continued)*

**Leachate -** Water or any other liquid that may contain dissolved (leached) soluble materials, such as organic salts and mineral salts, derived from a solid material. For example, rainwater that percolates through a confined disposal facility and picks up dissolved contaminants is considered leachate.

**Major Federal Action -** Includes actions with effects that may be major and that are potentially subject to federal control and responsibility. Major refers to the context (meaning that the action must be analyzed in several contexts, such as the effects on the environment, society, regions, interests, and locality) and intensity (meaning the severity of the impact). It can include (a) new and continuing activities, projects, and programs entirely or partly financed, assisted, conducted, regulated, or approved by federal agencies; (b) new or revised agency rules, regulations, plans, policies, or procedures; and (c) legislative proposals. Action does not include funding assistance solely in the form of general revenue-sharing funds where there is no federal agency control over the subsequent use of such funds. Action does not include judicial or administrative civil or criminal enforcement action.

**National Pollution Discharge Elimination System (NPDES) -** These permits pertain to the discharge of waste to surface waters only. All State and Federal NPDES permits are also WDRs.

**Nonpoint Sources -** This refers to pollutants from diffuse sources that reach water through means other than a discernable, confined, and discrete conveyance.

**Non-Storm Water Discharge -** Any discharge to a storm water conveyance system that is not composed entirely of storm water.

**Nuisance -** Means anything which meets all of the following requirements: (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; and (3) Occurs during or as a result of the treatment or disposal of waste.

**Open-Water Disposal -** Placement of dredged material in rivers, lakes, estuaries, or oceans via pipeline or surface release from hopper dredges or barges.

**Person -** Also includes any city, county, district, the state or any department or agency thereof. "Person" includes the United States, to the extent authorized by federal law.

**pH -** Term used to refer to the hydrogen ion concentration of water. The acidity or alkalinity of water is measured by the pH factor.

**Point Sources -** This refers to pollutants discharged to water through any discernable, confined, and discrete conveyance.

**Pollution -** Means an alteration of the quality of the waters of the state by wastes to a degree which unreasonably affects either of the following: (1) The waters for beneficial uses, or (2) Facilities which serve those beneficial uses. "Pollution" may include "contamination."

**Porter-Cologne Water Quality Control Act (Porter-Cologne Act) -** This is also known as the California Water Code.

**Quality of the Water –** "Quality of the water(s)" refers to chemical, physical, biological, bacteriological, radiological, and other properties and characteristics of water which affect its use.

# *GLOSSARY (continued)*

**Reclaimed water –** a.k.a. "recycled water" means water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource.

**Regional Board -** a.k.a. California Regional Water Quality Control Board.

**Region -** a.k.a., San Diego Basin (9).

**Sewage, Domestic -** Waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works. [40 CFR 503.9(g)]

**Sewage Sludge -** A solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works [40 CFR 503.9(w)].

**State Board -** a.k.a. State Water Resources Control Board.

**State Water Quality Protection Areas (SWQPAs)** – These are nonterrestrial marine or estuarine areas designated to protect marine species or biological communities from an undesirable alteration in natural water quality. All Areas of Special Biological Significance (ASBS) that were previously designated by the State Board in Resolutions No. 74-28, 74-32, and 75-61 are also classified as a subset of State Water Quality Protection Areas and require special protections afforded by this Plan.

**Statewide Plan -** A water quality control plan adopted by the State Water Resources Control Board in accordance with the provisions of Water Code sections 13240 through 13244, for waters where water quality standards are required by the Federal Water Pollution Control Act. Such plans supersede regional water quality control plans for the same waters to the extent of a conflict [California Water Code section 13170].

**Triennial Review -** Review of the Basin Plan which is required to be done every three years by the federal Clean Water Act [section 303(c)(1)].

**Waste -** Includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation of whatever nature, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

**Waste Discharge Requirements (WDRs) -** The name of permits issued by the Regional Board for the discharge of waste to land. The discharge of waste to land may potentially impact ground water quality. These permits require that waste not be discharged in a manner that would cause an exceedance of applicable water quality objectives or adversely affect beneficial uses designated in the Basin Plan.

**Water Quality Criteria -** Numerical or narrative limits for constituents or characteristics of water designed to protect specific designated uses of the water. When criteria are met, water quality will generally protect the designated use [40 CFR section 131.3(b)]. This term is also used to describe scientific information on the relationship that the effect of a constituent concentration has on human health, aquatic life, or other uses of water, such as the criteria in the USEPA "Gold Book". California's water quality criteria are called "water quality objectives". See "water quality standard".

# *GLOSSARY (continued)*

**Water Quality Control -** Means the regulation of any activity or factor which may affect the quality of the water of the state and includes the prevention and correction of water pollution and nuisance.

**Water Quality Control Plans -** There are two types of water quality control plans - Basin Plans and Statewide Plans. Regional Boards adopt Basin Plans for each region based upon surface water hydrologic basin boundaries. The Regional Basin Plans designates or describes (1) existing and potential beneficial uses of ground and surface water; (2) water quality objectives to protect the beneficial uses; (3) implementation programs to achieve these objectives; and (4) surveillance and monitoring activities to evaluate the effectiveness of the water quality control plan. The Statewide Plans address water quality concerns for surface waters that overlap Regional Board boundaries, are statewide in scope, or are otherwise considered significant and contain the same four elements. Statewide Water Quality Control Plans include the Ocean Plan, the Enclosed Bays and Estuaries Plan, the Inland Surface Waters Plan, and the Thermal Plan. A water quality control plan consists of a designation or establishment for the waters within a specified area of (1) beneficial uses to be protected, (2) water quality objectives, and (3) a program of implementation needed for achieving water quality objectives [California Water Code section 13050(j)].

**Water Quality Goal -** The most stringent, applicable, numerical water quality limit for a constituent or parameter of concern in a specific body of ground or surface water at a specific site that is chosen to protect either (1) existing water quality or (2) beneficial uses of water. In the first case, the water quality goal is set equal to the background level in the body of water. In the second case, the water quality goal is set at the less stringent of either (a) the numerical limit which implements all applicable water quality objectives or (b) the background level.

**Water Quality Objectives -** Numerical or narrative limits on constituents or characteristics of water designed to protect designated beneficial uses of the water. [California Water Code section 13050(h)]. California's water quality objectives are established by the State and Regional Water Boards in the Water Quality Control Plans. See "water quality standards".

**Water Quality Standards -** Provisions of State or federal law which consist of a designated use or uses for waters of the United States and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the Act [40 CFR section 131.3(i)]. A water quality standard under the Federal Clean Water Act is equivalent to a beneficial use designation plus a water quality objective. n California, water quality standards are promulgated by the State and Regional Water Boards in Water Quality Control Plans. Water quality standards are enforceable limits for the bodies of surface or ground waters for which they are established.

**Waters of the State -** Any water, surface or underground, including saline waters within the boundaries of the State [California Water Code section 13050(e)].

# *ACRONYMS*

ACL.....Administrative Civil Liability

Adj. SAR .....adjusted sodium adsorption ratio

AF .....acre-foot (acre-feet)

af/y .....acre-foot (acre-feet) per year

AG.....attorney general

AGR .....beneficial use of agricultural supply

AQUA .....beneficial use of aquaculture

ASBS .....beneficial use of Area of Special Biological Significance

BAT .....Best Available Technology

BCT .....Best Control Technology

BEP .....Bays and Estuaries Plan

BIOL .....beneficial use of preservation of biological habitats of special significance

BMP .....Best Management Practice

BOD .....Biological Oxygen Demand

BPTCP .....Bay Protection and Toxic Cleanup Program

º C .....degrees Centigrade

Ca .....Calcium

Cal-EPA's .....California Environmental Protection Agency

CAOs .....Cleanup and Abatement Orders

CBOD.. .....carbonaceous biochemical oxygen demand

CCR .....California Code of Regulations

CDFFP .....California Department of Forestry and Fire Protection, Rainbow Conservation Camp

CDOs.....Cease and Desist Orders

CEQA .....California Environmental Quality Act

CERCLA .....Comprehensive, Environmental Response, Compensation, and Liability Act, commonly referred to as Superfund

CFR .....Code of Federal Regulations

CIWMB .....California Integrated Waste Management Board

COLD .....Beneficial use of cold freshwater habitat

COMM.....Beneficial use of commercial and sport fishing

CTR.....California Toxics Rule

Cu .....copper

CWA .....federal Clean Water Act

CWS .....Clean Water Strategy

CZARA.....Coastal Zone Act Reauthorization Amendments

DA .....district attorney

DDE Dichlorodiphenyldichloroethylene

DDT.....Dichlorodiphenyltrichloroethane

DFG .....Department of Fish and Game

DoD .....Department of Defense

DHS .....Department of Health Services

DPR .....Department of Pesticide Regulation

DTSC .....Department of Toxic Substance Control

DWR .....Department of Water Resources

*E. coli* .....*Escherichia coli*

EIR .....Environmental Impact Report

EIS .....Environmental Impact Statement

EST .....beneficial use of estuarine habitat

## *ACRONYMS (continued)*

ET ..... evapotranspiration

ETI ..... evapotranspiration-infiltration

$^{o}F$ ..... degrees Fahrenheit

FFA ..... Federal Facility Agreement

FRSH ..... beneficial use of freshwater replenishment

ft ..... foot (feet)

GIS ..... geographic information system

Gold Book ..... Quality Criteria for Water, 1986

GWR ..... beneficial use of ground water recharge

HA ..... hydrologic area

$HCO_3$ ..... bicarbonate

HEP ..... Health Evaluation Plan

HSA ..... hydrologic subarea

HU ..... hydrologic unit

IND ..... beneficial use of industrial service supply

ISWP ..... Inland Surface Waters Plan

K ..... potassium

kg/yr ..... kilogram per year

kg N/yr ..... kilogram nitrogen per year

kg P/yr ..... kilogram phosphorus per year

L ..... liter

LA ..... Load Allocation

m ..... meter(s)

mg ..... milligram

MAA ..... Management Agency Agreement

MAR ..... beneficial use of marine habitat

MBAS ..... Methylene Blue-Activated Substances

MEP ..... Maximum Extent Practicable

mg ..... milligram(s)

Mg ..... magnesium

mg/L ..... milligram(s) per liter

mg N/L ..... milligram(s) nitrogen per liter

mg P/L ..... milligram(s) phosphorus per liter

MGD ..... Million Gallons per Day

MIGR ..... beneficial use of migration of aquatic organisms

MPRSA ..... Marine Protection, Research and Sanctuaries Act of 1972

ml ..... milliliter(s)

MLLW ..... Mean Lower Low Water

MMs ..... Management Measures

MOS ..... Margin of Safety

MOU ..... Memorandum of Understanding

MPs ..... Management Practices

MRCD ..... Mission Resource Conservation District

MS4 ..... Municipal Separate Storm Sewer System

MSD ..... Marine Sanitation Device

MUN ..... beneficial use of municipal and domestic supply

Mussel Watch .... State Mussel Watch

MWD ..... Metropolitan Water District of Southern California

NASSCO ..... National Steel and Shipbuilding Company

Na ..... sodium

NAV ..... beneficial use of navigation

ND ..... Negative Declaration

NEPA ..... National Environmental Policy Act of 1969

ng/l ..... nanograms per liter

No ..... number(s)

$NO_3$ ..... nitrate

NPDES ..... National Pollutant Discharge Elimination System

## *ACRONYMS (continued)*

NPSMP ..... Nonpoint Source Management Plan

NRCS ..... Natural Resources Conservation Service

NRMP..... Nutrient Reduction and Management Plan

NOV ..... Notice of Violation

NTO ..... Notice to Comply

NTU ..... turbidity unit

O,P'-DDD ..... O,P'-Dichlorodiphenyldichloroethane

O,P'-DDE ..... O,P'-Dichlorodiphenyldichloroethylene

OWTS ..... onsite wastewater treatment system(s)

P,P'-DDD ..... P,P'-Dichlorodiphenyldichloroethane

P,P'-DDE ..... P,P'-Dichlorodiphenyldichloroethylene

P,P'-DDMS..... P,P'-Dichloroiphenylmonochlorosaturatedethan

PAH ..... polyaromatic hydrocarbon

PCB ..... polychlorinated biphenyl

pH ..... hydrogen ion concentration

POTW ..... Publicly Owned Treatment Works

POW ..... beneficial use of hydropower generation

ppb ..... part(s) per billion (ng/g)

ppm ..... part(s) per million (ug/g)

Primary Network.. Primary Water Quality Monitoring Network

PROC ..... beneficial use of industrial process supply

QA ..... Quality Assurance

QAPP ..... Quality Assurance Program Plan

RARE ..... beneficial use of rare, threatened, or endangered species

RCD ..... Resource Conservation District

RCRA ..... Resource Conservation and Recovery Act of 1976

REC-1 ..... beneficial use of contact water recreation

REC-2 ..... beneficial use of non-contact water recreation

ROWD ..... Report of Waste Discharge

RV ..... Recreational Vehicle

SAL ..... beneficial use of inland saline water habitat

SANDAG..... San Diego Association of Governments

SAR ..... sodium adsorbtion ratio

SCE ..... Southern California Edison

SDG&E ..... San Diego Gas and Electric Company

SHELL ..... beneficial use of shellfish harvesting

SIYB..... Shelter Island Yacht Basin

SOCs ..... synthetic organic chemicals

SONGS ..... San Onofre Nuclear Generating Station

SPWN ..... beneficial use of spawning, reproduction, and/or early development

SRF ..... State Revolving Fund

SWAT ..... Solid Waste Assessment Test

SWP ..... State Water Project

SWRCB ..... California State Water Resources Control Board

TBT ..... tributyl tin

TDS ..... total dissolved solids

TKN..... total Kjeldahl nitrogen

TMDL ..... Total Maximum Daily Load

TSM ..... Toxic Substances Monitoring

TSO..... time schedules

TSS ..... total suspended solids

## *ACRONYMS (continued)*

UCCE ..... University of California Cooperative Extension

µg ..... microgram(s)

µg/l ..... micrograms per liter

UHC ..... underwater hull cleaning

USCG ..... United States Coast Guard

USEPA ..... United States Environmental Protection Agency

USGS ..... United States Geologic Survey

UST ..... underground storage tank

WARM ..... beneficial use of warm freshwater habitat

WDR ..... Waste Discharge Requirement

WILD ..... beneficial use of wildlife habitat

WLA ..... Waste Load Allocation

WQA ..... Water Quality Assessment

WQLS ..... Water Quality Limited Segment

WQLZ ..... Water Quality Limited Zone

WRR ..... Water Reclamation Requirement

# *APPENDIX B*

## *REGIONAL GROWTH FORECASTS*

### *APPENDIX B - 1. SUMMARY OF THE REGIONAL GROWTH FORECAST FOR VARIOUS LAND USES WITHIN THESAN DIEGO ASSOCIATION OF GOVERNMENTS' (SANDAG) SPHERE OF INFLUENCE FOR THE SAN DIEGO REGION.*

| HU 901 - 911 | Year 1990 | Year 2000 | Year 2010 | Year 2015 |
|---|---|---|---|---|
| **TOTAL ACRES** | 1,895,749 | 1,895,749 | 1,895,749 | 1,895,749 |
| **Developed Acres** | 395,746 | 428,622 | 539,895 | 660,646 |
| **Low Density Single Family** | 52,556 | 61,663 | 127,357 | 227,763 |
| **Single Family** | 141,512 | 159,132 | 194,286 | 207,021 |
| **Multiple Family** | 24,068 | 26,288 | 31,139 | 33,564 |
| **Mobile Homes** | 5,344 | 5,127 | 4,774 | 4,468 |
| **Other Residential** | 1,095 | 1,095 | 1,095 | 1,095 |
| **Industrial** | 35,043 | 36,167 | 38,790 | 40,034 |
| **Retail** | 24,850 | 25,733 | 27,238 | 28,084 |
| **Office** | 2,642 | 2,756 | 3,135 | 3,327 |
| **Schools** | 10,309 | 10,624 | 11,130 | 11,359 |
| **Agriculture** | 3,544 | 3,546 | 3,546 | 3,546 |
| **Parks** | 83,119 | 83,119 | 83,119 | 83,119 |
| **Roads & Freeways** | 11,665 | 13,372 | 14,288 | 17,267 |

## *APPENDIX B - 2. SUMMARY OF THE REGIONAL GROWTH FORECAST FOR VARIOUS LAND USES WITHIN THE SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS' SPHERE OF INFLUENCE.*

| HU 901 - 911 | Year 1994 |
|---|---|
| **TOTAL ACRES** | 460,572 |
| **Developed Acres** | 121,766 |
| **Low Density Single Family** | 3,793 |
| **Single Family** | 24,395 |
| **Multiple Family** | 6,388 |
| **Mobile Homes** | 1,045 |
| **Other Residential** | 9,484 |
| **Industrial** | 3,087 |
| **Retail** | 20,060 |
| **Office** | 1,262 |
| **Schools** | 1,291 |
| **Agriculture** | 46,887 |
| **Parks** | 2,523 |
| **Roads & Freeways** | 1,551 |

# *APPENDIX B - 3. REGIONAL GROWTH FORECAST FOR VARIOUS LAND USES WITHIN SANDAG'S SPHERE OF INFLUENCE BY HYDROLOGIC UNITS.*

### *San Juan Hydrologic Unit (Hydrologic Unit Basin 901)**

| HU 901 | Year 1990 | Year 2000 | Year 2010 | Year 2015 |
|---|---|---|---|---|
| **TOTAL ACRES** | 100,823 | 100,823 | 100,823 | 100,823 |
| **Developed Acres** | 6,137 | 6,137 | 6,137 | 6,137 |
| **Low Density Single Family** | 0 | 0 | 0 | 0 |
| **Single Family** | 152 | 152 | 152 | 152 |
| **Multiple Family** | 100 | 100 | 100 | 100 |
| **Mobile Homes** | 142 | 142 | 142 | 142 |
| **Other Residential** | 27 | 27 | 27 | 27 |
| **Industrial** | 2,816 | 2,816 | 2,816 | 2,816 |
| **Retail** | 0 | 0 | 0 | 0 |
| **Office** | 0 | 0 | 0 | 0 |
| **Schools** | 8 | 8 | 8 | 8 |
| **Agriculture** | 0 | 0 | 0 | 0 |
| **Parks** | 2,487 | 2,487 | 2,487 | 2,487 |
| **Roads & Freeways** | 405 | 405 | 405 | 405 |

### *Santa Margarita Hydrologic Unit (Hydrologic Unit Basin 902)**

| HU 902 | Year 1990 | Year 2000 | Year 2010 | Year 2015 |
|---|---|---|---|---|
| **TOTAL ACRES** | 122,902 | 122,902 | 122,902 | 122,902 |
| **Developed Acres** | 8,600 | 9,011 | 11,957 | 13,362 |
| **Low Density Single Family** | 2,090 | 2,340 | 5,137 | 5,965 |
| **Single Family** | 727 | 879 | 1,013 | 1,548 |
| **Multiple Family** | 459 | 460 | 464 | 470 |
| **Mobile Homes** | 61 | 61 | 61 | 61 |
| **Other Residential** | 11 | 11 | 11 | 11 |
| **Industrial** | 4,573 | 4,580 | 4,585 | 4,588 |
| **Retail** | 330 | 332 | 337 | 340 |
| **Office** | 0 | 0 | 0 | 0 |
| **Schools** | 50 | 50 | 50 | 50 |
| **Agriculture** | 0 | 0 | 0 | 0 |
| **Parks** | 148 | 148 | 148 | 148 |
| **Roads & Freeways** | 151 | 151 | 151 | 182 |

* This is the Regional Growth Forecast for the area within SANDAG's Sphere of Influence only; that portion covered within SCAG's Sphere of Influence is not shown.

## *APPENDIX B - 3 (continued)*

### *San Luis Rey Hydrologic Unit (Hydrologic Unit Basin 903)*

| HU 903 | Year 1990 | Year 2000 | Year 2010 | Year 2015 |
|---|---|---|---|---|
| **TOTAL ACRES** | 351,640 | 351,640 | 351,640 | 351,640 |
| **Developed Acres** | 37,262 | 42,289 | 60,999 | 79,877 |
| **Low Density Single Family** | 14,985 | 16,599 | 29,134 | 44,539 |
| **Single Family** | 5,019 | 8,196 | 13,963 | 17,066 |
| **Multiple Family** | 1,722 | 1,889 | 2,057 | 2,077 |
| **Mobile Homes** | 620 | 392 | 391 | 391 |
| **Other Residential** | 86 | 86 | 86 | 86 |
| **Industrial** | 1,531 | 1,543 | 1,634 | 1,653 |
| **Retail** | 1,068 | 1,144 | 1,295 | 1,364 |
| **Office** | 60 | 66 | 78 | 75 |
| **Schools** | 360 | 369 | 374 | 384 |
| **Agriculture** | 161 | 161 | 161 | 161 |
| **Parks** | 11,005 | 11,005 | 11,005 | 11,005 |
| **Roads & Freeways** | 646 | 786 | 825 | 1,052 |

### *Carlsbad Hydrologic Unit (Hydrologic Unit Basin 904)*

| HU 904 | Year 1990 | Year 2000 | Year 2010 | Year 2015 |
|---|---|---|---|---|
| **TOTAL ACRES** | 132,554 | 132,554 | 132,554 | 132,554 |
| **Developed Acres** | 56,749 | 64,927 | 79,666 | 92,898 |
| **Low Density Single Family** | 6,834 | 8,348 | 12,617 | 19,299 |
| **Single Family** | 27,365 | 32,713 | 40,582 | 46,007 |
| **Multiple Family** | 5,385 | 5,863 | 7,097 | 7,181 |
| **Mobile Homes** | 1,715 | 1,715 | 1,448 | 1,389 |
| **Other Residential** | 103 | 103 | 103 | 103 |
| **Industrial** | 4,133 | 4,330 | 5,059 | 5,483 |
| **Retail** | 4,274 | 4,496 | 4,944 | 5,183 |
| **Office** | 376 | 420 | 556 | 612 |
| **Schools** | 1,517 | 1,568 | 1,759 | 1,841 |
| **Agriculture** | 274 | 274 | 274 | 274 |
| **Parks** | 3,387 | 3,387 | 3,387 | 3,387 |
| **Roads & Freeways** | 1,386 | 1,710 | 1,840 | 2,140 |

## *APPENDIX B - 3 (continued)*

### *San Dieguito Hydrologic Unit (Hydrologic Unit Basin 905)*

| HU 905 | Year 1990 | Year 2000 | Year 2010 | Year 2015 |
|---|---|---|---|---|
| **TOTAL ACRES** | 217,586 | 217,586 | 217,586 | 217,586 |
| **Developed Acres** | 38,210 | 42,855 | 62,662 | 83,105 |
| **Low Density Single Family** | 9,559 | 12,482 | 24,900 | 42,295 |
| **Single Family** | 14,271 | 15,802 | 22,695 | 24,991 |
| **Multiple Family** | 1,146 | 1,220 | 1,379 | 1,492 |
| **Mobile Homes** | 140 | 140 | 140 | 140 |
| **Other Residential** | 8 | 8 | 8 | 8 |
| **Industrial** | 904 | 941 | 1,066 | 1,098 |
| **Retail** | 2,385 | 2,413 | 2,468 | 2,493 |
| **Office** | 142 | 147 | 218 | 269 |
| **Schools** | 442 | 466 | 481 | 488 |
| **Agriculture** | 770 | 772 | 772 | 772 |
| **Parks** | 8,011 | 8,011 | 8,011 | 8,011 |
| **Roads & Freeways** | 432 | 453 | 526 | 1,049 |

### *Penasquitos Hydrologic Unit (Hydrologic Unit Basin 906)*

| HU 906 | Year 1990 | Year 2000 | Year 2010 | Year 2015 |
|---|---|---|---|---|
| **TOTAL ACRES** | 92,823 | 92,823 | 92,823 | 92,823 |
| **Developed Acres** | 47,609 | 50,663 | 56,484 | 61,032 |
| **Low Density Single Family** | 988 | 1,071 | 2,110 | 4,910 |
| **Single Family** | 20,740 | 22,441 | 25,240 | 25,484 |
| **Multiple Family** | 4,081 | 4,532 | 5,313 | 5,786 |
| **Mobile Homes** | 322 | 333 | 273 | 210 |
| **Other Residential** | 67 | 67 | 67 | 67 |
| **Industrial** | 4,736 | 4,954 | 5,701 | 6,051 |
| **Retail** | 3,641 | 3,882 | 4,107 | 4,243 |
| **Office** | 714 | 726 | 766 | 783 |
| **Schools** | 2,628 | 2,715 | 2,835 | 2,888 |
| **Agriculture** | 745 | 745 | 745 | 745 |
| **Parks** | 7,353 | 7,353 | 7,353 | 7,353 |
| **Roads & Freeways** | 1,595 | 1,844 | 1,974 | 2,515 |

## *APPENDIX B - 3 (continued)*

### *San Diego Hydrologic Unit (Hydrologic Unit Basin 907)*

| HU 907 | Year 1990 | Year 2000 | Year 2010 | Year 2015 |
|---|---|---|---|---|
| **TOTAL ACRES** | 289,243 | 289,243 | 289,243 | 289,243 |
| **Developed Acres** | 82,095 | 84,372 | 99,269 | 118,659 |
| **Low Density Single Family** | 8,802 | 9,399 | 18,364 | 36,328 |
| **Single Family** | 27,121 | 26,068 | 33,000 | 33,468 |
| **Multiple Family** | 4,187 | 4,342 | 4,688 | 4,959 |
| **Mobile Homes** | 1,178 | 1,178 | 1,178 | 1,170 |
| **Other Residential** | 96 | 96 | 96 | 96 |
| **Industrial** | 5,524 | 5,524 | 5,823 | 6,001 |
| **Retail** | 5,079 | 5,168 | 5,347 | 5,408 |
| **Office** | 713 | 749 | 831 | 877 |
| **Schools** | 2,098 | 2,124 | 2,157 | 2,188 |
| **Agriculture** | 216 | 216 | 216 | 216 |
| **Parks** | 24,521 | 24,521 | 24,521 | 24,521 |
| **Roads & Freeways** | 2,590 | 2,936 | 3,049 | 3,427 |

### *Pueblo San Diego Hydrologic Unit (Hydrologic Unit Basin 908)*

| HU 908 | Year 1990 | Year 2000 | Year 2010 | Year 2015 |
|---|---|---|---|---|
| **TOTAL ACRES** | 44,368 | 44,368 | 44,368 | 44,368 |
| **Developed Acres** | 33,226 | 33,402 | 34,177 | 34,374 |
| **Low Density Single Family** | 0 | 0 | 0 | 0 |
| **Single Family** | 15,950 | 15,902 | 15,780 | 15,548 |
| **Multiple Family** | 3,817 | 3,967 | 4,797 | 5,233 |
| **Mobile Homes** | 151 | 151 | 133 | 102 |
| **Other Residential** | 162 | 162 | 162 | 162 |
| **Industrial** | 4,340 | 4,373 | 4,394 | 4,399 |
| **Retail** | 4,235 | 4,251 | 4,289 | 4,296 |
| **Office** | 415 | 416 | 419 | 421 |
| **Schools** | 1,178 | 1,179 | 1,194 | 1,196 |
| **Agriculture** | 0 | 0 | 0 | 0 |
| **Parks** | 1,641 | 1,641 | 1,641 | 1,641 |
| **Roads & Freeways** | 1,337 | 1,361 | 1,368 | 1,376 |

## *APPENDIX B - 3 (continued)*

### *Sweetwater Hydrologic Unit (Hydrologic Unit Basin 909)*

| HU 909 | Year 1990 | Year 2000 | Year 2010 | Year 2015 |
|---|---|---|---|---|
| **TOTAL ACRES** | 147,593 | 147,593 | 147,593 | 147,593 |
| **Developed Acres** | 56,400 | 59,870 | 73,470 | 90,120 |
| **Low Density Single Family** | 5,686 | 6,262 | 16,882 | 32,718 |
| **Single Family** | 22,859 | 25,084 | 27,149 | 27,329 |
| **Multiple Family** | 2,004 | 2,273 | 2,686 | 2,962 |
| **Mobile Homes** | 443 | 443 | 436 | 436 |
| **Other Residential** | 90 | 90 | 90 | 90 |
| **Industrial** | 1,229 | 1,302 | 1,364 | 1,380 |
| **Retail** | 2,380 | 2,500 | 2,644 | 2,712 |
| **Office** | 141 | 152 | 174 | 182 |
| **Schools** | 1,262 | 1,278 | 1,356 | 1,388 |
| **Agriculture** | 164 | 164 | 164 | 164 |
| **Parks** | 19,036 | 19,036 | 19,036 | 19,036 |
| **Roads & Freeways** | 1,104 | 1,285 | 1,490 | 1,723 |

### *Otay Hydrologic Unit (Hydrologic Unit Basin 910)*

| HU 910 | Year 1990 | Year 2000 | Year 2010 | Year 2015 |
|---|---|---|---|---|
| **TOTAL ACRES** | 100,465 | 100,465 | 100,465 | 100,465 |
| **Developed Acres** | 15,762 | 19,416 | 30,411 | 45,290 |
| **Low Density Single Family** | 2,198 | 2,818 | 8,514 | 21,814 |
| **Single Family** | 4,729 | 6,785 | 11,040 | 11,628 |
| **Multiple Family** | 799 | 1,152 | 1,849 | 2,418 |
| **Mobile Homes** | 466 | 466 | 466 | 377 |
| **Other Residential** | 338 | 338 | 338 | 338 |
| **Industrial** | 3,664 | 3,737 | 3,897 | 3,964 |
| **Retail** | 1,044 | 1,106 | 1,239 | 1,354 |
| **Office** | 17 | 17 | 32 | 40 |
| **Schools** | 429 | 498 | 523 | 537 |
| **Agriculture** | 1,155 | 1,155 | 1,155 | 1,155 |
| **Parks** | 665 | 665 | 665 | 665 |
| **Roads & Freeways** | 257 | 679 | 692 | 998 |

## *APPENDIX B - 3 (continued)*

### *Tijuana Hydrologic Unit (Hydrologic Unit Basin 911)*

| HU 911 | Year 1990 | Year 2000 | Year 2010 | Year 2015 |
|---|---|---|---|---|
| **TOTAL ACRES** | 295,751 | 295,751 | 295,751 | 295,751 |
| **Developed Acres** | 13,695 | 15,731 | 24,661 | 35,792 |
| **Low Density Single Family** | 1,411 | 2,344 | 9,700 | 19,895 |
| **Single Family** | 2,578 | 3,109 | 3,672 | 3,801 |
| **Multiple Family** | 398 | 489 | 710 | 885 |
| **Mobile Homes** | 108 | 108 | 108 | 51 |
| **Other Residential** | 107 | 107 | 107 | 107 |
| **Industrial** | 1,593 | 2,016 | 2,450 | 2,602 |
| **Retail** | 414 | 440 | 569 | 671 |
| **Office** | 62 | 63 | 63 | 64 |
| **Schools** | 339 | 370 | 393 | 393 |
| **Agriculture** | 57 | 57 | 57 | 57 |
| **Parks** | 4,866 | 4,866 | 4,866 | 4,866 |
| **Roads & Freeways** | 1,763 | 1,763 | 1,967 | 2,399 |

# *APPENDIX C*

## *WATER QUALITY CRITERIA*

The literature contains many different water quality criteria designed to protect specific beneficial uses of water. A summary of the specific numerical water quality criteria considered by the Regional Board for designation as water quality objectives is described in Table C-1, Water Quality Criteria - Inorganic Constituents; and Table C-2, Water Quality Criteria - Organic Constituents. The water quality criteria summarized in Tables C-1 and C-2 provided the basis for the Regional Board's designation of many of the specific numerical water quality objectives described earlier in this Chapter.

The water quality criteria presented in Tables C-1 and C-2 are not enforceable water quality objectives. The purpose of presenting the information summarized in these tables is to allow interested persons to compare available water quality criteria to the specific water quality objectives designated by the Regional Board described in Chapter 3.

A summary of the available types of numerical water quality criteria considered by the Regional Board for designation as numerical water quality objectives are summarized below.

- ***Maximum Contaminant Levels (MCLs):***

MCLs are part of the drinking water standards adopted both by the California Department of Health Services (DHS), Office of Drinking Water in Title 22 of the California Code of Regulations (CCR), Division 4, Chapter 15, "*Domestic Water Quality and Monitoring*" and by the USEPA under the Safe Drinking Water Act. The State MCL drinking water standards must be at least as stringent as those adopted by USEPA. Primary MCLs are derived from the one in a million incremental cancer risk estimate for carcinogens and from threshold toxicity levels for non-carcinogens. Secondary MCLs are derived from human welfare considerations (e.g., taste or odor).

- ***Maximum Contaminant Level Goals (MCL Goals):***

MCL Goals are promulgated by USEPA under the National Primary Drinking Water Regulations as the first step in establishing MCLs. MCL Goals are set at levels which represent no adverse health risks.

- ***State "Action" Levels:***

Action levels are published by the DHS's Office of Drinking Water and are based mainly on health effects. The 10-6 incremental cancer risk estimates are used for carcinogens and threshold toxicity limits are used for other constituents.

- ***Proposition 65 Regulatory Limits:***

Proposition 65 limits are established under the California Safe Drinking Water and Toxic Enforcement Act of 1986 for known human carcinogens and reproductive toxins. For carcinogens the No-Significant-Risk-Levels are set at the one-in-100,000 incremental cancer risk level. 1/1000 of the No-Observable-Effect Level (NOEL) is used for reproductive toxicants.

- ***National Ambient Water Quality Criteria:***

These criteria are published by USEPA under the federal Clean Water Act to protect human health and welfare and freshwater and marine aquatic life. These criteria are found in: *Quality Criteria for Water, 1986* - the "*Gold Book*"; the Ambient Water Quality Criteria volumes (1980, 1984, 1986, 1987, and 1989); Quality Criteria for Water (1976) - the "*Red Book*"; and Water Quality Criteria, 1972 - the "*Blue Book*".

- ***Health Advisories and Water Quality Advisories:***

These advisories are published by USEPA's Office of Water. Short-term (10 days or less), long-term (7 years or less), and lifetime exposure health advisories for non-carcinogens and suspected human health carcinogens are included where sufficient data exist.

- ***Suggested No-Adverse-Response Levels (SNARLS):***

These human health-related criteria are published by the National Academy of Sciences in the Drinking Water and Health Volumes. Incremental cancer risk estimates are presented separately for carcinogens.

- ***Water Quality for Agriculture:***

Water Quality for Agriculture was published by the Food and Agriculture Organization of the United Nations in 1985, which contains criteria protective of agricultural uses of water.

- ***Water Quality Criteria:***

Water Quality Criteria was written by McKee and Wolf and published by the State Water Resources Control Board in 1963 and 1978. It contains criteria for human health and welfare, aquatic life, agricultural use, industrial use, and various other beneficial uses.

| Inorganic Constituent | BASIN PLAN | | | | Drinking Water Standards (California & Federal) Maximum Contaminant Levels (MCLs) | | |
|---|---|---|---|---|---|---|---|
| | Ocean Waters (1) "‡" = carcinogen | Bays and Estuaries | Inland Surface Waters | Ground Water | California Dept.of Health Services | | USEPA Primary MCL |
| | | | | | Primary MCL | Secondary MCL | |
| Ammonia | 600 (2) | $NH_3$ not > 0.025 mg/l | $NH_3$ not > 0025 mg/l | | | | |
| Antimony | 1,200 | | | | | | 6 (8) |
| Arsenic | 8 | | | | 50 | | 50 |
| Beryllium | 0.033 ‡ | | | | | | 4 (8) |
| Boron | | | 0.5 mg/l or as noted in Table 3-1 | 0.5 mg/l or as noted in Table 3-2 | | | |
| Bromide | | | | | | | |
| Cadmium | 1 | | | | 10 | | 5 |
| Chloride | | | 250 mg/l or as noted in Table 3-1 | 60 mg/l or as noted in Table 3-2 | | 250,000 (7) | |
| Chlorine | 2 (3) | | | | | | |
| Chromium (III) | 190,000 | | | | | | |
| Chromium (VI) | 2 (4) | | | | | | |
| Chromium (total) | 2 (4) | | | | 50 | | 100 |
| Color | | | 20 units or as noted in Table 3-1 | 15 units or as noted in Table 3-2 | | 15 units | |
| Copper | 3 | | | | | 1,000 | 1,300 (9) |
| Cyanide | 1 | | | | | | 200 (8) |
| Fluoride | | | 1.0 mg/l or as noted in Table 3-1 | 1.0 mg/l or as noted in Table 3-2 | 1,400 to 2,400 (5) | | 4,000 |
| Iron | | | 0.3 mg/l or as noted in Table 3-1 | 0.3 mg/l or as noted in Table 3-2 | | 300 | |
| Lead | 2 | | | | 50 | | 15 (9) |
| Manganese | | | 0.05 mg/l or as noted in Table 3-1 | 0.05 mg/l or as noted in Table 3-2 | | 50 | |
| Mercury (inorganic) | 0.04 | | | | 2 | | 2 |
| Nickel | 5 | | | | | | 100 (8) |
| Nitrate | | | 5 mg/l or as noted in Table 3-1 | 5 mg/l or as noted in Table 3-2 | 45,000 (6) | | 10,000 (10) |
| Oxygen, dissolved | Shall not be depressed >10% | Shall not be less than 5.0 mg/l with designated MAR. The annual mean DO shall not be less than 7 mg/l more than 10% of the time. | Shall not be less than 5.0 mg/l in inland surface waters with WARM or less than 6.0 m/l in waters with COLD beneficial use The annual mean D.O. conc. shall not be less than 7 mg/l more than 10% of the time. | | | | |

Table C-1 -- Values are in ug/l (ppb) unless otherwise indicated. Numbers in parenthesis indicate endnotes following the tables.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

# Table C-1. WATER QUALITY CRITERIA - INORGANIC CONSTITUENTS

| Inorganic Constituent | Drinking Water Standards (Federal) Maximum Contaminant Levels | | California Recommended Public Health Level (RPHL) | Health Advisories or Suggested No-Adverse-Response Levels (SNARLs) for toxicity other than cancer risk | | US EPA Integrated Risk Information System (IRIS) Reference Dose | One-in-a-Million Incremental Cancer Risk Estimates for Drinking Water | | | California Proposition 65 Regulatory Level as a Water Quality Criterion (19) | Agricultural Water Quality Goals (21) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | USEPA | | Department of Health Services | USEPA | National Academy of Sciences (NAS) | as a Water Quality Criterion (16) | Cal/EPA Cancer Potency Factor as a Water Quality Criterion (17) | USEPA Integrated Risk Information System (IRIS) | USEPA Health Advisory or SNARL | | |
| | Secondary MCL | MCL Goal | | | | | | | | | |
| Ammonia | | | | 30,000 (14) | | | | | (D) | | |
| Antimony | | 6 (8) | | 3 | | 2.8 | | | (D) | | |
| Arsenic | | | | | | | | 0.02 | 0.02 (A,14) | 5 | 100 |
| Beryllium | | 4 (8) | | 4,000 / 20,000 (7-yr,14,15) | | | | 0.008 | 0.008 (B,14) | (18) | 100 |
| Boron | | | | 600 (14) | | 630 | | | (D) | | 750 (22) /700 |
| Bromide | | | | | 2,300 | | | | | | |
| Cadmium | | 5 | | 5 | 5 | 3.5 | (18) | | (D) | (18) | 10 |
| Chloride | 250,000 | | | | | | | | | | 106,000 |
| Chlorine | | | | | | 1,050 | | | (D) | | |
| Chromium (III) | | | | | | | | | | | |
| Chromium (VI) | | | | | | | 0.083 | | (A) | (18) | 100 |
| Chromium (total) | | 100 | | 100 | | 35 | | | (D) | | |
| Color | 15 units | | | | | | | | | | |
| Copper | 1,000 | 1,300 | | | | | | | (D) | | 200 |
| Cyanide | | 200 (8) | | 200 | | 150 | | | (D) | | |
| Fluoride | 2,000 | 4,000 | | | | 840 | | | (D) | | 1,000 |
| Iron | 300 | | | | | | | | | | 5,000 |
| Lead | | zero | | | | | | | (B) | 0.25 (20) | 5,000 |
| Manganese | 50 | | | | | 980 | | | | | 200 |
| Mercury (inorganic) | | 2 | 2 (13) | 2 | | 2.1 | | | (D) | | |
| Nickel | | 100 (8) | | 100 | | 140 | (18) | | (D) | (18) | 200 |
| Nitrate | | 10,000 (2) | | 10,000 (2) | | 11,000 (2) | | | (D) | | |
| Oxygen, dissolved | | | | | | | | | | | |

Table C-1 -- Values are in ug/l (ppb) unless otherwise indicated. Numbers in parenthesis indicate endnotes following the tables.

# Table C-1. WATER QUALITY CRITERIA - INORGANIC CONSTITUENTS

| Inorganic Constituent | Drinking Water Standards (Federal) Maximum Contaminant Levels | | California Recommended Public Health Level (RPHL) | Health Advisories or Suggested No-Adverse-Response Levels (SNARLs) for toxicity other than cancer risk | | US EPA Integrated Risk Information System (IRIS) | One-in-a-Million Incremental Cancer Risk Estimates for Drinking Water | | | California Proposition 65 Regulatory Level as a Water Quality Criterion (19) | Agricultural Water Quality Goals (21) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | USEPA | | | | | | Cal/EPA Cancer | USEPA | USEPA | | |
| | Secondary MCL | MCL Goal | Department of Health Services | USEPA | National Academy of Sciences (NAS) | Reference Dose as a Water Quality Criterion (16) | Potency Factor as a Water Quality Criterion (17) | Integrated Risk Information System (IRIS) | Health Advisory or SNARL | | |
| pH | 6.5 to 8.5 unts | | | | | | | | | | |
| Phosphorus | | | | 0.1 (23) | | | | | (D) | | |
| Radioactivity, Gross Alpha | | zero | | | | | | | (A) | | |
| Radioactivity, Gross Beta | | zero | | | | | | | 0.04 mrem/yr (A,14) | | |
| Radium 226 + 228 | | zero (13) | | | | | | | 0.22–0.26 pCi/l (A,14) | | |
| Selenium | | 50 | | | | 35 | | | | | 20 |
| Settleable solids | | | | | | | | | | | |
| Silver | | | | 100 (14) | | 35 | | | (D) | | |
| Sodium | | | | 2,000 (24) | | | | | | | |
| Strontium-90 | | | | | | | | | (A) | | |
| Sulfate | 250,000 | 400,000 - 500,000 (13) | | | | | | | | | |
| Total dissolved solids (TDS) | 500,000 | | | | | | | | | | 450,000 |
| Thallium | | 0.5 (8) | | 0.4 | | 0.5 | | | | | |
| Tritium | | | | | | | | | (A) | | |
| Turbidity | | | | | | | | | | | |
| Uranium | | zero (13) | | | 35 | | | | 1.7 pCi/l (A) | | |
| Zinc | 5,000 | | | 2,000 | | 2,100 | | | (D) | | 2,000 |

Table C-1 -- Values are in ug/l (ppb) unless otherwise indicated. Numbers in parenthesis indicate endnotes following the tables.

# Table C-1. WATER QUALITY CRITERIA - INORGANIC CONSTITUENTS

| Inorganic Constituent | USEPA National Ambient Water Quality Criteria | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Health and Welfare Protection | | | Freshwater Aquatic Life Protection | | | | | | |
| | | | | Recommended Criteria | | | | Additional Toxicity Information | | |
| | Non-Cancer Public Health Effects | One-in-a-Million Incremental Cancer Risk Estimate | Taste & Odor or Welfare | Continuous Concentration (4-day Average) | 24-hour Average | Maximum Concentration (1-hour Average)[c] | Maximum (Instantaneous) | Acute | Chronic | Other |
| Ammonia | | | | (26) | | (26) | | | | |
| Antimony | 14 / 4300 (25) | | | 30 (13,27) | | 88 (13,27) | | 9,000 | 1,600 | 610 (42) |
| Arsenic | | 0.018 / 0.14 (25) | | 190 (27) | | 360 (27) | | 850 (41) | | 48 (43) |
| Beryllium | | | | | | | | 130 | 5.3 | |
| Boron | | | | | | | | | | |
| Bromide | | | | | | | | | | |
| Cadmium | | | | 0.55 (28,29) | | 1.4 (28,36) | | | | |
| Chloride | 250,000 | | | 230,000 (30) | | 860,000 (30) | | | | |
| Chlorine | | | | 11 (31) | | 19 (31) | | | | |
| Chromium (III) | | | | 98 (28,32) | | 820 (28,37) | | | | |
| Chromium (VI) | | | | 11 | | 16 | | | | |
| Chromium (total) | | | | | | | | | | |
| Color | | | | | | | | | | |
| Copper | | | 1000 | 5.4 (28,33) | | 7.5 (28,38) | | | | |
| Cyanide | 700 / 220,000 (25) | | | 5.2 | | 22 | | | | |
| Fluoride | | | | | | | | | | |
| Iron | | | 300 | | | | 1000 | | | |
| Lead | | | | 0.99 (28,34) | | 25 (28,39) | | | | |
| Manganese | | | 50 | | | | | | | |
| Mercury (inorganic) | 0.14 / 0.15 (25) | | | 0.012 | | 2.4 | | | | |
| Nickel | 610 / 4600 (25) | | | 73 (28,35) | | 653 (28,40) | | | | |
| Nitrate | 10,000 (2) | | | | | | | | | |
| Oxygen, dissolved | | | | (22) | (22) | | | | | |

Table C-1 -- Values are in ug/l (ppb) unless otherwise indicated. Numbers in parenthesis indicate endnotes following the tables.

# Table C-1. WATER QUALITY CRITERIA - INORGANIC CONSTITUENTS

| Inorganic Constituent | USEPA National Ambient Water Quality Criteria | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Health and Welfare Protection | | | Freshwater Aquatic Life Protection | | | | | | |
| | | | | Recommended Criteria | | | | Additional Toxicity Information | | |
| | Non-Cancer Public Health Effects | One-in-a-Million Incremental Cancer Risk Estimate | Taste & Odor or Welfare | Continuous Concentration (4-day Average) | 24-hour Average | Maximum Concentration (1-hour Average) | Maximum (Instantaneous) | Acute | Chronic | Other |
| pH | | | 5 to 9 units | | | | 6.5 to 9.0 units | | | |
| Phosphorus | | | | | | | | | | |
| Radioactivity, Gross Alpha | | | | | | | | | | |
| Radioactivity, Gross Beta | | | | | | | | | | |
| Radium 226 + 228 | | | | | | | | | | |
| Selenium | | | | 5 | | 20 | | | | |
| Settleable solids | | | | | | | | | | |
| Silver | | | | 0.12 (13) | | 0.84 (28,44) | | | 0.12 | |
| Sodium | | | | | | | | | | |
| Strontium-90 | | | | | | | | | | |
| Sulfate | | | 250,000 | | | | | | | |
| Total dissolved solids (TDS) | | | | | | | | | | |
| Thallium | 1.7 / 6.3 (25) | | | | | | | 1,400 | 40 | 20 (46) |
| Tritium | | | | | | | | | | |
| Turbidity | | | | | | | | | | |
| Uranium | | | | | | | | | | |
| Zinc | | | | | | 54 (28,45) | | | | |

Table C-1 -- Values are in ug/l (ppb) unless otherwise indicated. Numbers in parenthesis indicate endnotes following the tables.

# Table C-1. WATER QUALITY CRITERIA - INORGANIC CONSTITUENTS

| Inorganic Constituent | USEPA National Ambient Water Quality Criteria Saltwater Aquatic Life Protection | | | | | | California Ocean Plan Numerical Water Quality Objectives | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Recommended Criteria | | Additional Toxicity Information | | | | Human Health Protection | Marine Aquatic Life Protection | | | | |
| | Continuous Concentration (4-day Average) | Maximum Concentration (1-hour) | Maximum (Instantaneous) | Acute | Chronic | Other | (30-day Average) "‡" = carcinogen | 6-month Median | 30-day Average | 7-day Average | Daily Maximum | Instantaneous Maximum |
| Ammonia | 35 (47) | 233 (47) | | | | | | 600 (2) | | | 2,400 (2) | 6,000 (2) |
| Antimony | 500 (13,27) | 1,500 (13,27) | | | | | 1,200 | | | | | |
| Arsenic | 36 (27) | 69 (27) | | 2,319 (41) | | 13 (43) | | 8 | | | 32 | 80 |
| Beryllium | | | | | | | 0.033 ‡ | | | | | |
| Boron | | | | | | | | | | | | |
| Bromide | | | | | | | | | | | | |
| Cadmium | 9.3 | 43 | | | | | | 1 | | | 4 | 10 |
| Chloride | | | | | | | | | | | | |
| Chlorine | 7.5 (48) | 13 (48) | | | | | | 2 (3) | | | 8 (3) | 60 (3) |
| Chromium (III) | | | | 10,300 (49) | | | 190,000 | | | | | |
| Chromium (VI) | 50 | 1,100 | | | | | | 2 (4) | | | 8 (4) | 20 (4) |
| Chromium (total) | | | | | | | | 2 (4) | | | 8 (4) | 20 (4) |
| Color | | | | | | | | | | | | |
| Copper | 2.9 | 2.9 | | | | | | 3 | | | 12 | 30 |
| Cyanide | 1 | 1 | | | | | | 1 | | | 4 | 10 |
| Fluoride | | | | | | | | | | | | |
| Iron | | | | | | | | | | | | |
| Lead | 5.6 | 140 | | | | | | 2 | | | 8 | 20 |
| Manganese | | | 100 | | | | | | | | | |
| Mercury (inorganic) | 0.025 | 2.1 | | | | | | 0.04 | | | 0.16 | 0.4 |
| Nickel | 8.3 | 75 | | | | | | 5 | | | 20 | 50 |
| Nitrate | | | | | | | | | | | | |
| Oxygen, dissolved | | | | | | | | | | | | |

Table C-1 -- Values are in ug/l (ppb) unless otherwise indicated. Numbers in parenthesis indicate endnotes following the tables.

# Table C-1. WATER QUALITY CRITERIA - INORGANIC CONSTITUENTS

| Inorganic Constituent | USEPA National Ambient Water Quality Criteria Saltwater Aquatic Life Protection | | | | | | California Ocean Plan Numerical Water Quality Objectives | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Recommended Criteria | | | Additional Toxicity Information | | | Human Health Protection | Marine Aquatic Life Protection | | | | |
| | Continuous Concentration (4-day Average) | Maximum Concentration (1-hour) | Maximum (Instantaneous) | Acute | Chronic | Other | (30-day Average) "‡" = carcinogen | 6-month Median | 30-day Average | 7-day Average | Daily Maximum | Instantaneous Maximum |
| pH | | | 6.5 to 8.5 units | | | | | | | | | 6.0 to 9.0 units |
| Phosphorus | | | 0.1 (50) | | | | | | | | | |
| Radioactivity, Gross Alpha | | | | | | | | | | | | 15 pCi/l (12) |
| Radioactivity, Gross Beta | | | | | | | | | | | | 50 pCI/l |
| Radium 226 + 228 | | | | | | | | | | | | 5 pCi/l |
| Selenium | 71 | 300 | | | | | | 15 | | | 60 | 150 |
| Settleable solids | | | | | | | | | 1,000 | 1,500 | | 3,000 |
| Silver | 0.92 (13) | 2.3 | | | | | | 0.7 | | | 2.8 | 7 |
| Sodium | | | | | | | | | | | | |
| Strontium-90 | | | | | | | | | | | | 8 pCi/l |
| Sulfate | | | | | | | | | | | | |
| Total dissolved solids (TDS) | | | | | | | | | | | | |
| Thallium | | | | 2,130 | | | 14 | | | | | |
| Tritium | | | | | | | | | | | | 20,000 pCi/l |
| Turbidity | | | | | | | | | 75 NTU | 100 NTU | | 225 NTU |
| Uranium | | | | | | | | | | | | 20 pCi/l |
| Zinc | 86 | 95 | | | | | | 20 | | | 80 | 200 |

Table C-1 -- Values are in ug/l (ppb) unless otherwise indicated. Numbers in parenthesis indicate endnotes following the tables.

# ENDNOTES FOR TABLE C-1 - INORGANICS

(7-day) For exposure of 7 days or less.
(10-day) For exposure of 10 days or less.
(24-hr) For exposure of 24 hours or less.
(7-yr) For "longer-term" exposure (7 years or less, EPA).
(A) Known human carcinogen; sufficient epidemiologic evidence in humans.
(B) Probable human carcinogen; sufficient evidence from animal studies; no or inadequate human data.
(C) Possible human carcinogen; limited evidence from animal studies; no human data.
(D) Not classified as to human carcinogenicity; no data or inadequate evidence.
(E) Evidence of non-carcinogenicity for humans.
(1) Or as noted in the California Ocean Plan (Reference 28)
(2) Expressed as nitrogen.
(3) For total chlorine residual; for intermittent chlorine sources see Reference 26, Chapter IV, Table B.
(4) Value developed for chromium VI; may be applied to total chromium if valence unknown.
(5) MCL varies with air temperature; 2.4 mg/l (S 53.7 °F); 2.2 mg/l (53.8 – 58.3 °F); 2.0 mg/l (58.4 – 63.8 °F); 1.8 mg/l (63.9 – 70.6 °F); 1.6 mg/l (70.0 – 79.2 °F); 1.4 mg/l (79.3 – 90.5 °F).
(6) As $NO_3$.
(7) Recommended level; Upper level = 500 mg/l; Short-term level = 600 mg/l.
(8) Effective 17 January 1994.
(9) MCL includes this "Action level", to be exceeded in no more than 10 percent of samples.
(10) As nitrogen; in addition, MCL for total nitrate and nitrite = 10,000 µg/l (as N).
(11) Recommended level; Upper level = 1,000; Short-term level = 1,500 mg/l.
(12) Includes Radium 226 but excludes Radon and Uranium.
(13) Proposed.
(14) Draft / tentative / provisional.
(15) Calculated for child / for adult
(16) Assumes 70 kg body weight, 2 liters/day water consumption, and 20% relative source contribution. An additional uncertainty factor of 10 is used for Class C carcinogens.
(17) Assumes 70 kg body weight and 2 liters/day water consumption.
(18) Determined not to pose a risk of cancer through ingestion (Title 22, CCR, Division 2).
(19) Regulatory dose level divided by 2 liters per day average consumption; represents a 1-in-100,000 incremental cancer risk estimate unless otherwise noted.
(20) Based on reproductive toxicity
(21) Reference 19 unless noted otherwise.
(22) See Reference 16.
(23) For white phosphorus.
(24) Guidance level (Reference 3) assumes relative source contribution of 10% from drinking water.
(25) For consumption of water and aquatic organisms / for consumption of aquatic organisms only.
(26) Varies with pH and temperature.
(27) For the trivalent form.
(28) Value based on hardness of 40 mg/l; value increases with increasing hardness.
(29) For hardness in mg/l as CaCO3, criterion = e(0.7852 [ln (hardness)] –3.490) µg/l.
(30) For dissolved chloride associated with sodium; criterion probably will not be adequately protective when chloride is associated with potassium, calcium, or magnesium, rather than sodium.
(31) For total residual chlorine.
(32) For hardness in mg/l as CaCO3, criterion = e(0.8190 [ln (hardness)] + 1.561) µg/l.
(33) For hardness in mg/l as CaCO3, criterion = e(0.8545 [ln (hardness)] – 1.465) µg/l.
(34) For hardness in mg/l as CaCO3, criterion = e(1.273 [ln (hardness)] – 4.705) µg/l.
(35) For hardness in mg/l as CaCO3, criterion = e(0.8460 [ln (hardness)] + 1.1645) µg/l.
(36) For hardness in mg/l as CaCO3, criterion = e(1.128 [ln (hardness)] – 3.828) µg/l.
(37) For hardness in mg/l as CaCO3, criterion = e(0.8190 [ln (hardness)] + 3.688) µg/l.
(38) For hardness in mg/l as CaCO3, criterion = e(0.9422 [ln (hardness)] – 1.464) µg/l.
(39) For hardness in mg/l as CaCO3, criterion = e(1.273 [ln (hardness)] – 1.460) µg/l.
(40) For hardness in mg/l as CaCO3, criterion = e(0.8460 [ln (hardness)] + 3.3612) µg/l.
(41) For the pentavalent form.
(42) Toxicity to algae occurs.
(43) Based on reproductive toxicity.
(44) For hardness in mg/l as $CaCO_3$, criterion = e(1.72 [ln (hardness)] –6.52) µg/l.
(45) For hardness in mg/l as $CaCO_3$, criterion = e(0.8473 [ln (hardness)] + 0.8604) µg/l.
(46) Toxicity to one species of fish after 2,600 hours of exposure.
(47) Unionized ammonia concentrations.
(48) For sum of chlorine-produced oxidants.
(49) EC50 for eastern oyster embryos.
(50) For elemental phosphorus; marine or estuarine.

# Table C-2. WATER QUALITY CRITERIA - ORGANIC CONSTITUENTS

| Organic Constituent | BASIN PLAN | | | | Drinking Water Standards (California & Federal) Maximum Contaminant Levels (MCLs) | | | | | California Recommended Public Health Level (RPHL) Department of Health Services | California State Action Levels Department of Health Services | | Other Taste and Odor Thresholds | Health Advisories or Suggested No-Adverse Response Levels (SNARLS) for toxicity other than cancer risk | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ocean Waters (1) ‡ = carcinogen | Bays and Estuaries | Inland Surface Waters and Ground Waters | | California Dept. of Health Services | | US Environmental Protection Agency | | | | | | | USEPA | National Academy of Sciences |
| | | | Primary MCL | Secondary MCL | Primary MCL | Secondary MCL | Primary MCL | Secondary MCL | MCL Goal | | Toxicity | Taste & Odor | | | |
| Acenaphthylene | 0.0088 ‡ (2) | | | | | | | | | | | | | | |
| Acenaphthylene | 220 | | | | | | | | | | | | | | |
| Acrylonitrile | 0.10 ‡ | | | | | | | | | | | | | 1 / 4 (7-yr,13,14) | |
| Aldrin | 0.000022 ‡ | | | | | | | | | | 0.05 (LOQ) | | | 0.3 (10-day,14) | |
| Anthracene | 0.0088 ‡ (2) | | | | | | | | | | | | | | |
| Atrazine | | | 3 | | 3 | | 3 | | 3 | 3 (11) | | | | 3 | 150 |
| Bentazon | | | 18 | | 18 | | | | | 18 (11) | | | | 20 | |
| Benz(a)anthracene | 0.0088 ‡ (2) | | | | | | 0.1 (11) | | zero (11) | | | | | | |
| Benzene | 5.9 ‡ | | 1 | | 1 | | 5 | | zero | 0.35 (11) | | | | 200 (10-day) | |
| Benzidine | 0.000069 ‡ | | | | | | | | | | | | | | |
| Benzo(b)fluoranthene | 0.0088 ‡ (2) | | | | | | 0.2 (11) | | zero (11) | | | | | | |
| Benzo(k)fluoranthene | 0.0088 ‡ (2) | | | | | | 0.2 (11) | | zero (11) | | | | | | |
| Benzo(g,h,i)perylene | 0.0088 ‡ (2) | | | | | | | | | | | | | | |
| Benzo(a)pyrene | 0.0088 ‡ (2) | | | | | | 0.2 (12) | | zero (12) | | | | | | |
| alpha-BHC | 0.008 (3) | | | | | | | | | | 0.7 | | | | 500 (7-day,3) |
| beta-BHC | 0.008 (3) | | | | | | | | | | 0.3 | | | | 500 (7-day,3) |
| Gamma-BHC (Lindane) | 0.008 (3) | | 4 | | 4 | | 0.2 | | 0.2 | | | | | 0.2 | 500 (7-day,3) |
| delta-BHC | 0.008 (3) | | | | | | | | | | | | | | 500 (7-day,3) |
| technical-BHC | 0.008 (3) | | | | | | | | | | | | | | 500 (7-day) |
| Bis(2-chloroethoxy) methane | 4.4 | | | | | | | | | | | | | | |
| Bis(2-chloroethyl) ether | 0.045 ‡ | | | | | | | | | | | | | | |
| Bis(2-chloroisopropyl) ether | 1200 | | | | | | | | | | | | | 300 | |
| Bromodichloromethane | 130 ‡ (4) | | 100 (10) | | 100 (10) | | 100 (10) | | | | | | | 400 / 1,300 (7-yr,13,14) | |
| Bromoform | 130 ‡ (4) | | 100 (10) | | 100 (10) | | 100 (10) | | | | | | | 2,000 (10-day) | |
| Bromomethane | 130 ‡ (4) | | | | | | | | | | | | | 10 | |
| Carbofuran | | | 18 | | 18 | | 40 | | 40 | 18 (11) | | | | 40 | |
| Carbon tetrachloride | 0.90 ‡ | | 0.5 | | 0.5 | | 5 | | zero | 0.5 (11) | | | | 200 (10-day) | 200 (7-day) |
| Catechol | 30 (5) | | | | | | | | | | | | | | 2,200 (24-hr) |
| Chlordane | 0.000023 ‡ (6) | | 0.1 | | 0.1 | | 2 | | zero | 0.03 (11) | | | | 60 (10-day) | |
| Chlorobenzene | 570 | | 30 | | 30 | | 100 | | 100 | 30 (11) | | | | 100 | |
| 4-Chloro-m-cresol | 1 (7) | | | | | | | | | | | | | | |
| 4-Chloro-o-cresol | 1 (7) | | | | | | | | | | | | | | |
| 6-Chloro-m-cresol | 1 (7) | | | | | | | | | | | | | | |
| Chloroform | 130 ‡ | | 100 (10) | | 100 (10) | | 100 (10) | | | | | | | 4,000 (10-day) | |
| Chloromethane | 130 ‡ (4) | | | | | | | | | | | | | 3 | |
| 2-Chlorophenol | 1 (7) | | | | | | | | | | | | | 40 (14) | |
| 3-Chlorophenol | 1 (7) | | | | | | | | | | | | | | |
| 4-Chlorophenol | 1 (7) | | | | | | | | | | | | | | |
| Chrysene | 0.0088 ‡ (2) | | | | | | 0.2 (11) | | zero (11) | | | | | | |
| 2,4-D | | | 100 | | 100 | | 70 | | 70 | | | | | 70 | 87.5 |
| DBCP | | | 0.2 | | 0.2 | | 0.2 | | zero | 0.002 (11) | | | | 50 (10-day) | |
| DDD | 0.00017 ‡ (8) | | | | | | | | | | | | | | |
| DDE | 0.00017 ‡ (8) | | | | | | | | | | | | | | |
| DDT | 0.00017 ‡ (8) | | | | | | | | | | | | | | |
| Dibenz(a,h)anthracene | 0.0088 ‡ (2) | | | | | | 0.3 (11) | | zero (11) | | | | | | |
| Dibromochloromethane | 130 ‡ (4) | | 100 (10) | | 100 (10) | | 100 (10) | | | | | | | 60 (14) | 18,000 (24-hr) |
| Dibutyl phthalate | 3,500 | | | | | | | | | | | | | | 770 |
| 1,2-Dichlorobenzene | 5,100 (9) | | | | | | 600 | 10 (11) | 600 | | 130 (9) | 10 | | 600 | 300 (15) |
| 1,3-Dichlorobenzene | 5,100 (9) | | | | | | 600 | | 600 | | 130 (9) | 20 | | 600 | |

# Table C-2. WATER QUALITY CRITERIA - ORGANIC CONSTITUENTS

| Organic Constituent | BASIN PLAN | | | | Drinking Water Standards (California & Federal) Maximum Contaminant Levels (MCLs) | | | | | California Recommended Public Health Level (RPHL) Department of Health Services | California State Action Levels Department of Health Services | | Other Taste and Odor Thresholds | Health Advisories or Suggested No-Adverse Response Levels (SNARLS) for toxicity other than cancer risk | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ocean Waters (1) ‡ = carcinogen | Bays and Estuaries | Inland Surface Waters and Ground Waters | | California Dept. of Health Services | | US Environmental Protection Agency | | | | | | | USEPA | National Academy of Sciences |
| | | | Primary MCL | Secondary MCL | Primary MCL | Secondary MCL | Primary MCL | Secondary MCL | MCL Goal | | Toxicity | Taste & Odor | | | |
| 1,4-Dichlorobenzene | 18 ‡ | | 5 | | 5 | | 75 | 5 (11) | 75 | 5 (11) | | | | 75 | 94 (15) |
| 3,3'-Dichlorobenzidine | 0.0081 ‡ | | | | | | | | | | | | | | |
| 1,1-Dichloroethane | | | 5 | | 5 | | | | | 5 (11) | | | | | |
| 1,2-Dichloroethane | 130 ‡ | | 0.5 | | 0.5 | | 5 | | zero | 0.3 (11) | | | | 700 (10-day) | |
| 1,1-Dichloroethylene | 7,100 | | 6 | | 6 | | 7 | | 7 | 6 (11) | | | | 7 | 100 |
| cis-1,2-Dichloroethylene | | | 6 | | 6 | | 70 | | 70 | 6 (11) | | | | 70 | |
| trans-1,2-Dichloroethylene | | | 10 | | 10 | | 100 | | 100 | 10 (11) | | | | 100 | |
| Dichloromethane | 450 ‡ | | | | | | 5 (12) | | zero (12) | | 40 | | | 2,000 (10-day) | 5000 (7-day) |
| 2,3-Dichlorophenol | 1 (7) | | | | | | | | | | | | | | |
| 2,4-Dichlorophenol | 1 (7) | | | | | | | | | | | | | 20 | 2000 / 7000 (13) |
| 2,5-Dichlorophenol | 1 (7) | | | | | | | | | | | | | | |
| 2,6-Dichlorophenol | 1 (7) | | | | | | | | | | | | | | |
| 3,4-Dichlorophenol | 1 (7) | | | | | | | | | | | | | | |
| 1,2-Dichloropropane | | | 5 | | 5 | | 5 | | zero | 5 (11) | | | | 90 (10-day) | |
| 1,3-Dichloropropene | 8.9 ‡ | | 0.5 | | 0.5 | | | | | 0.2 (11) | | | | 30 (10-day) | |
| Dieldrin | 0.000040 ‡ | | | | | | | | | | 0.05 (LOQ) | | | 0.5 (10-day) | |
| Di(2-ethylhexyl)phthalate | 3.5 ‡ | | 4 | | 4 | | 6 (12) | | zero (12) | 4 (11) | | | | | 4,200 |
| Diethyl phthalate | 33,000 | | | | | | | | 5,000 (11) | | | | | 5,000 | |
| 2,4-Dimethylphenol | 30 (5) | | | | | | | | | | | 400 | | | |
| Dimethyl phthalate | 820,000 | | | | | | | | | | | | | | |
| 4,6-Dinitro-o-cresol | 30 (5) | | | | | | | | | | | | | | |
| Dinitrophenol | | | | | | | | | | | | | | | 110 |
| 2,4-Dinitrophenol | 4 | | | | | | | | | | | | | | 110 |
| 2,4-Dinitrotoluene | 2.6 ‡ | | | | | | | | | | | | | 500 (10-day) | |
| 1,2-Diphenylhydrazine | 0.16 ‡ | | | | | | | | | | | | | | |
| Endosulfan | 9 (16) | | | | | | | | | | | | | | |
| Endosulfan sulfate | 9 (16) | | | | | | | | | | | | | | |
| Endrin | 0.002 | | 0.2 | | 0.2 | | 2 (12) / 0.2 | | 2 (12) | | | | | 2 | |
| Ethylbenzene | 4,100 | | 680 | | 680 | | 700 | 30 (11) | 700 | 680 (11) | | | 29 (18) | 700 | |
| Ethylene dibromide (EDB) | | | 0.02 | | 0.02 | | 0.05 | | zero | 0.01 (11) | | | | 8 (10-day) | |
| Fluoranthene | 15 | | | | | | | | | | | | | | |
| Fluorene | 0.0088 ‡ (2) | | | | | | | | | | | | | | |
| Glyphosate | | | 700 | | 700 | | 700 (12) | | 700 (12) | 700 (11) | | | | 700 | |
| Heptachlor | 0.00072 ‡ (17) | | 0.01 | | 0.01 | | 0.4 | | zero | 0.01 (11) | | | | 10 (10-day) | |
| Heptachlor epoxide | 0.00072 ‡ (17) | | 0.01 | | 0.01 | | 0.2 | | zero | 0.007 (11) | | | | 0.1 (7-yr) | |
| Hexachlorobenzene | 0.00021 ‡ | | | | | | 1 (12) | | zero (12) | | | | | 50 (10-day) | 30 (7-day) |
| Hexachlorobutadiene | 14 ‡ | | | | | | | | | | | | | 1 | |
| Hexachlorocyclopentadiene | 58 | | | | | | 50 (12) | 8 (11) | 50 (12) | | | | | | |
| Hexachloroethane | 2.5 ‡ | | | | | | | | | | | | | 1 | |
| Indeno(1,2,3-c,d)pyrene | 0.0088 ‡ (2) | | | | | | 0.4 (11) | | zero (11) | | | | | | |
| Isophorone | 150,000 | | | | | | | | | | | | | 100 | |
| Methanes, halo- | 130 ‡ (4) | | | | | | 100 (10) | | | | | | | | |
| Methoxychlor | | | 100 | | 100 | | 40 | | 40 | | | | | 40 | 700 |
| Molinate | | | 20 | | 20 | | | | | 20 (11) | | | | | |
| Nitrobenzene | 4.9 | | | | | | | | | | | | | | 5 (7-day) |
| 2-Nitrophenol | 30 (5) | | | | | | | | | | | | | | 290 (7-day,19) |
| Nitrophenol | 30 (5) | | | | | | | | | | | | | | 290 (7-day) |
| 4-Nitrophenol | 30 (5) | | | | | | | | | | | | | 60 (14) | 290 (7-day,19) |

# Table C-2. WATER QUALITY CRITERIA - ORGANIC CONSTITUENTS

| Organic Constituent | BASIN PLAN | | | | Drinking Water Standards (California & Federal) Maximum Contaminant Levels (MCLs) | | | | | California Recommended Public Health Level (RPHL) Department of Health Services | California State Action Levels Department of Health Services | | Other Taste and Odor Thresholds | Health Advisories or Suggested No-Adverse Response Levels (SNARLS) for toxicity other than cancer risk | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ocean Waters (1) ‡ = carcinogen | Bays and Estuaries | Inland Surface Waters and Ground Waters | | California Dept. of Health Services | | US Environmental Protection Agency | | | | | | | USEPA | National Academy of Sciences |
| | | | Primary MCL | Secondary MCL | Primary MCL | Secondary MCL | Primary MCL | Secondary MCL | MCL Goal | | Toxicity | Taste & Odor | | | |
| N-Nitrosodimethylamine | 7.3 ‡ | | | | | | | | | | | | | | |
| N-Nitrosodiphenylamine | 2.5 ‡ | | | | | | | | | | | | | | |
| trans-Nonachlor | 0.000023 ‡ (6) | | | | | | | | | | | | | | |
| Oil & grease | 25,000 | | | | | | | | | | | | | | |
| Oxychlordane | 0.000023 ‡ (6) | | | | | | | | | | | | | | |
| PAHs | 0.0088 ‡ (2) | | | | | | see individual chemicals | | see individual chemicals | | | | | see individual chemicals | |
| Pentachlorophenol | 1 (7) | | | | | | 1 | | zero | | 30 | | | 300 (10-day) | 6 / 21 (13) |
| Phenanthrene | 0.0088 ‡ (2) | | | | | | | | | | | | | | |
| Phenol | 30 (5) | | | | | | | | | | | 5.0 (22) | | 4000 | |
| Phenols, chlorinated | 1 | | | | | | | | | | | | | | |
| Phenols, nitro- | 30 (5) | | | | | | | | | | | | | | |
| Phenols, non-chlorinated | 30 | | | | | | | | | | | | | | |
| Phthalate esters | | | see individual chemicals | | see individual chemicals | | see individual chemicals | | see individual chemicals | | | | | see individual chemicals | see individual chemicals |
| Phenanthrene | 0.0088 ‡ (2) | | 1 | | | | | | | | | | | | |
| Phenazopyridine | | | 1 | | | | | | | | | | | | |
| Phenazopyridine hydrochloride | | | 1 | | | | | | | | | | | | |
| Phenesterin | | | 1 | | | | | | | | | | | | |
| Phenobarbital | | | 1 | | | | | | | | | | | | |
| Phenol | 30 (5) | | 1 | | | | | | | | | 5.0 (22) | | 4,000 | |
| Phenols, chlorinated | 1 | | 1 | | | | | | | | | | | | |
| Phenols, nitro- | 30 (5) | | 1 | | | | | | | | | | | | |
| Phenols, non-chlorinated | 30 | | 1 | | | | | | | | | | | | |
| Phenoxybenzamine | | | 1 | | | | | | | | | | | | |
| Phenoxybenzamine hydrochloride | | | 1 | | | | | | | | | | | | |
| Phenyl glycidyl ether | | | 1 | | | | | | | | | | | | |
| o-Phenylphenate, sodium | | | 1 | | | | | | | | | | | | |
| Polychlorinated biphenyls | 0.000019 ‡ | | | | | | 0.5 (21) | | zero (21) | | | | | | 50 (7-day) |
| Pyrene | 0.0088 ‡ (2) | | | | | | | | | | | | | | |
| Resorcinol | 30 (5) | | | | | | | | | | | | | | 500 (7-day) |
| Simazine | | | 10 | | 10 | | 4 (12) | | 4 (12) | | | | | 4 | 1,505 |
| 2,3,7,8-TCDD (Dioxin) | 0.0000000039 ‡ (20) | | | | | | 0.00003 (12) | | zero (12) | | | | | 0.0001 (10-day) | 0.0007 |
| 1,1,2,2-Tetrachloroethane | 1,200 | | 1 | | 1 | | | | | 1 (11) | | | | | |
| Tetrachloroethylene (PCE) | 99 ‡ | | 5 | | 5 | | 5 | | zero | 0.7 (11) | | | | 2,000 (10-day) | |
| 2,3,4,6-Tetrachlorophenol | 1 (7) | | | | | | | | | | | | | | |
| 2,3,5,6-Tetrachlorophenol | 1 (7) | | | | | | | | | | | | | | |
| Thiobencarb | | | 70 | 1 | 70 | 1 | | | | 70 (11) | | | | | |
| Toluene | 85,000 | | | | | | 1,000 | 40 (11) | 1,000 | | 100 | | 42 (18) | 1,000 | 340 |
| Toxaphene | 0.00021 ‡ | | 5 | | 5 | | 3 | | zero | | | | | 40 (10-day) | 8.75 |
| 2,4,5-TP (Silvex) | | | 10 | | 10 | | 50 | | 50 | | | | | 50 | 5.25 |
| Tributyltin | 0.0014 | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | 540,000 | | 200 | | 200 | | 200 | | 200 | 200 (11) | | | | 200 | 3800 |
| 1,1,2-Trichloroethane | 43,000 | | 32 | | 32 | | 5 (12) | | 3 (12) | | | | | 3 | |
| Trichloroethylene (TCE) | 27 ‡ | | 5 | | 5 | | 5 | | zero | 2.5 (11) | | | | | |
| Trichlorofluoromethane | | | 150 | | 150 | | | | | 150 (11) | | | | 2,000 | 8,000 (7-day) |
| 2,4,5-Trichlorophenol | 1 (7) | | | | | | | | | | | | | | |
| 2,4,6-Trichlorophenol | 0.29 ‡ | | | | | | | | | | | | | | 2,500 (7-day) |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | | | 1,200 | | 1,200 | | | | | 1,200 (11) | | | | | |
| Trinitrophenol | 30 (5) | | | | | | | | | | | | | | 200 (7-day) |
| Vinyl chloride | 36 ‡ | | 0.5 | | 0.5 | | 2 | | zero | 0.15 (11) | | | | 3,000 (10-day) | |
| Xylene(s) | | | 1,750 | | 1,750 | | 10,000 | 20 (11) | 10,000 | 1,750 (11) | | | 17 (18) | 10,000 | |

# Table C-2. WATER QUALITY CRITERIA - ORGANIC CONSTITUENTS

| Organic Constituent | USEPA Integrated Risk Information System (IRIS) Reference Dose as a Water Quality Criterion (23) | One-in-a-Million Incremental Cancer Risk Estimates for Drinking Water | | | | California Proposition 65 Regulatory Level as a Water Quality Criterion | Agricultural Water Quality Goals (28) | USEPA National Ambient Water Quality Criteria | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Health and Welfare Protection | | | Freshwater Aquatic Life Protection Recommended Criteria | | |
| | | Cal/EPA Cancer Potency Factor as a Water Quality Criterion (23) | USEPA Integrated Risk Information System (IRIS) | USEPA Health Advisory or SNARL | National Academy of Sciences (NAS) Drinking Water and Health | | | Non-Cancer Public Health Effects | One-in-a-Million Incremental Cancer Risk Estimate | Taste and Odor or Welfare | Continuous Concentration (4-day Average) | 24-hour Average | Maximum Concentration (1-hour Average) |
| Acenaphthylene | | | | | | | | | | | | | |
| Acenaphthylene | | | | (C) | | | | 320 / 780 (29) | | | | | |
| Acrylonitrile | | 0.035 | 0.07 | 0.07 (B1) | 0.38 | 0.35 | | | 0.059 / 0.66 (29) | | | | |
| Aldrin | | 0.0021 | 0.002 | 0.002 (B2,14) | 0.003 | 0.02 | | | 0.00013 / 0.00014 (29) | | | | |
| Anthracene | 2,100 | | | (D) | | | | 9,600 / 110,000 (29) | | | | | |
| Atrazine | 3.5 | | 0.14 | (C) | | | | 25 (30) | | | | | |
| Bentazon | 18 | | | (D) | | | | | | | | | |
| Benz(a)anthracene | | | | (B2) | | | | | 0.0028 / 0.031 (32) | | | | |
| Benzene | | 0.35 | 1 | 1.0 (A) | | 3.5 | | | 1.2 / 71 (29) | | | | |
| Benzidine | | 0.00007 | | (A) | | 0.0005 | | | 0.00012 / 0.00054 (29) | | | | |
| Benzo(b)fluoranthene | | | | (B2) | | | | | 0.0028 / 0.031 (32) | | | | |
| Benzo(k)fluoranthene | | | | (B2) | | | | | 0.0028 / 0.31 (32) | | | | |
| Benzo(g,h,i)perylene | | | | (D) | | | | | | | | | |
| Benzo(a)pyrene | | 0.0029 | 0.003 | (B2) | | 0.03 | | | 0.0028 / 0.031 (32) | | | | |
| alpha-BHC | | | | | 0.33 | 0.15 | | | 0.0039 / 0.013 (29) | | | | |
| beta-BHC | | | | | 0.12 | 0.25 | | | 0.014 / 0.046 (29) | | | | |
| Gamma-BHC (Lindane) | 0.2 | 0.032 | | 0.03 (C) | 0.054 | 0.3 | | | 0.019 / 0.063 (29) | | | 0.08 | |
| delta-BHC | | | | | | | | | | | | | |
| technical-BHC | | 0.0088 | | | | 0.1 | | | 0.0123 | | | | |
| Bis(2-chloroethoxy) methane | | | | | | | | | | | | | |
| Bis(2-chloroethyl) ether | | 0.014 | | | 0.42 | 0.15 | | | 0.031 / 1.4 (29) | | | | |
| Bis(2-chloroisopropyl) ether | 280 | | | (D) | | | | 1,400 / 170,000 (29) | | | | | |
| Bromodichloromethane | | 0.27 | 1.4 | 0.6 (B2,14) | | 2.5 | | | 0.27 / 22 (29) | | | | |
| Bromoform | | | 4 | 4 (B2,14) | | | | | 4.3 / 360 (29) | | | | |
| Bromomethane | 7 | | | (D) | | | | 48 / 4,000 (29) | | | | | |
| Carbofuran | 35 | | | (E) | | | | | | | | | |
| Carbon tetrachloride | | 0.23 | 0.3 | 0.3 (B2) | 4.5 | 2.5 | | | 0.25 / 4.4 (29) | | | | |
| Catechol | | | | | | | | | | | | | |
| Chlordane | | 0.029 / 0.027 | 0.03 | 0.03 (B2) | 0.028 | 0.25 | | | 0.00057 / 0.00059 (29) | | | 0.0043 | |
| Chlorobenzene | 140 | | | (D) | 2.3 (25) | | | 680 / 21,000 (29) | | 20 | | | |
| 4-Chloro-m-cresol | | | | | | | | | | 3,000 | | | |
| 4-Chloro-o-cresol | | | | | | | | | | 1,800 | | | |
| 6-Chloro-m-cresol | | | | | | | | | | 20 | | | |
| Chloroform | | 1.1 / 0.43 | 6 | 6.0 (B2,14) | 0.26 / 5.6 (26) | 10 | | | 5.7 / 470 (29) | | | | |
| Chloromethane | 2.8 | | | (C) | | | | | | | | | |
| 2-Chlorophenol | 35 | | | (D) | | | | | | 0.1 | | | |
| 3-Chlorophenol | | | | | | | | | | 0.1 | | | |
| 4-Chlorophenol | | | | | | | | | | 0.1 | | | |
| Chrysene | | | | (B2) | | | | | 0.0028 / 0.31 (32) | | | | |
| 2,4-D | 70 | | | (D) | | | | 100 | | | | | |
| DBCP | | 0.005 | 0.03 | 0.03 (B2) | 0.051 | 0.05 | | | 0.025 | | | | |
| DDD | | 0.15 | | | | 1 (8) | | | 0.00083 / 0.00084 (29) | | | | |
| DDE | | 0.1 | | | | 1 (8) | | | 0.00059 / 0.00059 (29) | | | | |
| DDT | | 0.1 | 0.1 | (B2) | 0.042 | 1 (8) | | | 0.00059 / 0.00059 (29) | | | 0.0010 | |
| Dibenz(a,h)anthracene | | | | (B2) | | 0.1 | | | 0.0028 / 0.031 (32) | | | | |
| Dibromochloromethane | 14 | | | (C) | 0.6 | 3.5 | | | 0.41 / 34 (29) | | | | |
| Dibutyl phthalate | 700 | | | (D) | | | | 2700 / 12,000 (29) | | | | | |
| 1,2-Dichlorobenzene | 620 | | | (D) | | | | 2700 / 17,000 (29) | | | | | |
| 1,3-Dichlorobenzene | 620 | | | (D) | | | | 400 / 2,600 (31) | | | | | |

# Table C-2. WATER QUALITY CRITERIA - ORGANIC CONSTITUENTS

| Organic Constituent | USEPA Integrated Risk Information System (IRIS) Reference Dose as a Water Quality Criterion (23) | One-in-a-Million Incremental Cancer Risk Estimates for Drinking Water | | | | California Proposition 65 Regulatory Level as a Water Quality Criterion | Agricultural Water Quality Goals (28) | USEPA National Ambient Water Quality Criteria | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Health and Welfare Protection | | | Freshwater Aquatic Life Protection Recommended Criteria | | |
| | | Cal/EPA Cancer Potency Factor as a Water Quality Criterion (23) | USEPA Integrated Risk Information System (IRIS) | USEPA Health Advisory or SNARL | National Academy of Sciences (NAS) Drinking Water and Health | | | Non-Cancer Public Health Effects | One-in-a-Million Incremental Cancer Risk Estimate | Taste and Odor or Welfare | Continuous Concentration (4-day Average) | 24-hour Average | Maximum Concentration (1-hour Average) |
| 1,4-Dichlorobenzene | 70 | 0.88 | | (C) | | 10 | | 400 / 2,600 (31) | | | | | |
| 3,3'-Dichlorobenzidine | | 0.029 | | | | 0.3 | | | 0.04 / 0.077 (29) | | | | |
| 1,1-Dichloroethane | | | | | | 50 | | | | | | | |
| 1,2-Dichloroethane | | 0.5 | 0.4 | 0.4 (B2) | 0.71 | 5 | | | 0.38 / 99 (29) | | | | |
| 1,1-Dichloroethylene | 6.3 | | 0.06 | 0.06 (C) | | | | | 0.057 / 3.2 (29) | | | | |
| cis-1,2-Dichloroethylene | 70 | | | (D) | | | | | | | | | |
| trans-1,2-Dichloroethylene | 140 | | | (D) | | | | | | | | | |
| Dichloromethane | | 2.5 | 5 | 5 (B2) | | 25 | | | 4.7 / 1,600 (29) | | | | |
| 2,3-Dichlorophenol | | | | | | | | | | 0.04 | | | |
| 2,4-Dichlorophenol | 21 | | | (D) | | | | 93 / 790 (29) | | 0.3 | | | |
| 2,5-Dichlorophenol | | | | | | | | | | 0.5 | | | |
| 2,6-Dichlorophenol | | | | | | | | | | 0.2 | | | |
| 3,4-Dichlorophenol | | | | | | | | | | 0.3 | | | |
| 1,2-Dichloropropane | | 0.56 | 0.5 | 0.5 (B2) | | | | | | | | | |
| 1,3-Dichloropropene | | 0.19 | 0.2 | 0.2 (B2) | 0.45 | | | 10 / 1,700 (29) | | | | | |
| Dieldrin | | 0.0022 | 0.002 | 0.002 (B2) | 0.0019 | 0.02 | | | 0.00014 / 0.00014 (29) | | | 0.0019 | |
| Di(2-ethylhexyl)phthalate | | 4.2 | 3 | 3 (B2) | 2.4 | 40 | | | 1.8 / 5.9 (29) | | 360 (11) | | 400 (11) |
| Diethyl phthalate | 5,600 | | | (D) | | | | 23,000 / 120,000 (29) | | | | | |
| 2,4-Dimethylphenol | 140 | | | | | | | | | 400 | | | |
| Dimethyl phthalate | | | | (D) | | | | 313,000 / 2,900,000(29) | | | | | |
| 4,6-Dinitro-o-cresol | | | | | | | | 13.4 / 765 (29) | | | | | |
| Dinitrophenol | | | | | | | | 70 | | | | | |
| 2,4-Dinitrophenol | | | | | | | | 70 / 14,000 (29) | | | | | |
| 2,4-Dinitrotoluene | | 0.11 | 50 | 0.05 (B2) | | 1 | | | 0.11 / 9.1 (29) | | | | |
| 1,2-Diphenylhydrazine | | | | | | 0.4 | | | 0.040 / 0.54 (29) | | | | |
| Endosulfan | | | | | | | | 0.93 / 2.0 (29) | | | | 0.056 | |
| Endosulfan sulfate | | | | | | | | 0.93 / 2.0 (29) | | | | 0.056 (35) | |
| Endrin | 2.1 | | | (D) | | | | 0.76 / 0.81 (33,29) | | | | 0.0023 | |
| Ethylbenzene | 700 | | | (D) | | | | 3,100 / 29,000 (29) | | | | | |
| Ethylene dibromide (EDB) | | 0.0097 | 0.0004 | 0.0004 (B2) | 0.055 | 0.1 | | | | | | | |
| Fluoranthene | | | | (D) | | | | 300 / 370 (29) | | | | | |
| Fluorene | 280 | | | (D) | | | | 1,300 / 14,000 (29) | | | | | |
| Glyphosate | 700 | | | (D) | | | | | | | | | |
| Heptachlor | | 0.0061 / 0.0078 | 0.008 | 0.008 (B2) | 0.012 | 0.1 | | | 0.00021 / 0.00021 (29) | | | 0.0038 | |
| Heptachlor epoxide | | 0.0027 / 0.0038 | 0.004 | 0.004 (B2) | | 0.04 | | | 0.00010 / 0.00011 (29) | | | 0.0038 | |
| Hexachlorobenzene | | 0.019 | | 0.02 (B2) | 0.017 | 0.2 | | | 0.00075 / 0.00077 (29) | | 3.68 (11) | | 6 (11) |
| Hexachlorobutadiene | 1.4 | | | (C) | | | | | 0.44 / 50 (29) | | | | |
| Hexachlorocyclopentadiene | 49 | | | (D) | | | | 240 / 17,000 (29) | | 1 | | | |
| Hexachloroethane | | | | (C) | | 10 | | | 1.9 / 8.9 (29) | | | | |
| Indeno(1,2,3-c,d)pyrene | | | | (B2) | | | | | 0.0028 / 0.031 (32,29) | | | | |
| Isophorone | 140 | | | 40 (C) | | | | | 8.4 / 600 (29) | | | | |
| Methanes, halo- | | | | | | | | | | | | | |
| Methoxychlor | 35 | | | (D) | | | | 100 | | | | | |
| Molinate | 14 | | | | | | | | | | | | |
| Nitrobenzene | | | | | | | | 17 / 1,900 (29) | | 30 | | | |
| 2-Nitrophenol | | | | | | | | | | | | | |
| Nitrophenol | | | | | | | | | | | | | |
| 4-Nitrophenol | | | | (D) | | | | | | | | | |

# Table C-2. WATER QUALITY CRITERIA - ORGANIC CONSTITUENTS

| Organic Constituent | USEPA Integrated Risk Information System (IRIS) Reference Dose as a Water Quality Criterion (23) | One-in-a-Million Incremental Cancer Risk Estimates for Drinking Water | | | | California Proposition 65 Regulatory Level as a Water Quality Criterion | Agricultural Water Quality Goals (28) | USEPA National Ambient Water Quality Criteria | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Health and Welfare Protection | | | Freshwater Aquatic Life Protection Recommended Criteria | | |
| | | Cal/EPA Cancer Potency Factor as a Water Quality Criterion (23) | USEPA Integrated Risk Information System (IRIS) | USEPA Health Advisory or SNARL | National Academy of Sciences (NAS) Drinking Water and Health | | | Non-Cancer Public Health Effects | One-in-a-Million Incremental Cancer Risk Estimate | Taste and Odor or Welfare | Continuous Concentration (4-day Average) | 24-hour Average | Maximum Concentration (1-hour Average) |
| N-Nitrosodimethylamine | | 0.0022 | | | | 0.02 | | | 0.00069 / 8.1 (29) | | | | |
| N-Nitrosodiphenylamine | | 3.9 | | | | 40 | | | 5.0 / 16 (29) | | | | |
| trans-Nonachlor | | | | | | | | | | | | | |
| Oil & grease | | | | | | | | | | | | | |
| Oxychlordane | | | | | | | | | | | | | |
| PAHs | | | | | | | | | 0.0028 / 0.31 (29) | | | | |
| Pentachlorophenol | | 1.9 | 0.3 | 0.3 (B2) | | 20 | | | 0.28 / 8.2 (29) | 30 | (34) | | (36) |
| Phenanthrene | | | | | | | | | | | 6.3 (11) | | 30 (11) |
| Phenol | 4,200 | | | (D) | | | | 21,000 / 4,600,000 (29) | | 300 | | | |
| Phenols, chlorinated | | | | | | | | | | | | | |
| Phenols, nitro- | | | | | | | | | | | | | |
| Phenols, non-chlorinated | | | | | | | | | | | | | |
| Phthalate esters | | | | see individual chemicals | | see individual chemicals | | see individual chemicals | | | | | |
| Phenanthrene | | | | | | | | | | | 6.3 (11) | | 30 (11) |
| Phenazopyridine | | | | | | 2 | | | | | | | |
| Phenazopyridine hydrochloride | | | | | | 2.5 | | | | | | | |
| Phenesterin | | | | | | 0.0025 | | | | | | | |
| Phenobarbital | | | | | | 1 | | | | | | | |
| Phenol | 4,200 | | | (D) | | | | 21,000 / 4,600,000 (29) | | 300 | | | |
| Phenols, chlorinated | | | | | | | | | | | | | |
| Phenols, nitro- | | | | | | | | | | | | | |
| Phenols, non-chlorinated | | | | | | | | | | | | | |
| Phenoxybenzamine | | | | | | 0.1 | | | | | | | |
| Phenoxybenzamine hydrochloride | | | | | | 0.15 | | | | | | | |
| Phenyl glycidyl ether | | | | | | 2.5 (11) | | | | | | | |
| o-Phenylphenate, sodium | | | | | | 100 | | | | | | | |
| Polychlorinated biphenyls | | 0.0045 | 0.005 | 0.005 (B2) | 0.16 (37) | 0.045 | | | 0.000044/0.000045(29) | | | 0.014 | |
| Pyrene | 210 (14) | | | (D) | | | | 960 / 11,000 (29) | | | | | |
| Resorcinol | | | | | | | | | | | | | |
| Simazine | 3.5 | | | (C) | | | | | | | | | |
| 2,3,7,8-TCDD (Dioxin) | | 0.00000027 | 0.0000002 | 0.0000002 (B2) | | 0.0000025 | | | 1.3E-8 / 1.4E-8 (29) | | | | |
| 1,1,2,2-Tetrachloroethane | | | | (C) | | 1.5 | | | 0.17 / 11 (29) | | | | |
| Tetrachloroethylene (PCE) | | 0.69 | 0.7 | 0.7 (B2) | 3.6 | 7 | | | 0.8 / 8.85 (29) | | | | |
| 2,3,4,6-Tetrachlorophenol | | | | | | | | | | 1 | | | |
| 2,3,5,6-Tetrachlorophenol | | | | | | | | | | | | | |
| Thiobencarb | | | | | | | | | | | | | |
| Toluene | 1,400 | | | (D) | | 3,500 (38) | | 6,800 / 200,000 (29) | | | | | |
| Toxaphene | | 0.029 | 0.03 | 0.03 (B2) | | 0.3 | | | 0.00073 / 0.00075 (29) | | 0.0002 | | 0.73 |
| 2,4,5-TP (Silvex) | 53 | | | (D) | | | | 10 | | | | | |
| Tributyltin | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | 250 | | | (D) | 17 (25) | | | | | | | | |
| 1,1,2-Trichloroethane | 2.8 | | 0.6 | 0.6 (C) | | 5 | | | 0.60 / 42 (29) | | | | |
| Trichloroethylene (TCE) | | 2.3 (11) | 3 | 3 (B2) | 1.5 (25) | 25 | | | 2.7 / 81 (29) | | | | |
| Trichlorofluoromethane | 2,100 | | | (D) | | | | | 0.19 | | | | |
| 2,4,5-Trichlorophenol | | | | | | | | 2,600 | | 1 | 63 (100) | | 100 (11) |
| 2,4,6-Trichlorophenol | | 0.5 | 3 | 3 (B2,14) | | 5 | | | 2.1 / 6.5 (29) | 2 | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | | | | | | | | | | | | | |
| Trinitrophenol | | | | | | | | | | | | | |
| Vinyl chloride | | 0.13 | 0.015 | 0.015 (A) | 1.1 | 1.5 | | | 2 / 525 (29) | | | | |
| Xylene(s) | 14,000 | | | (D) | | | | | | | | | |

# Table C-2. WATER QUALITY CRITERIA - ORGANIC CONSTITUENTS

| Organic Constituent | USEPA Ambient Water Quality Criteria (cont.) Freshwater Aquatic Life Protection (cont.) Recommended Criteria (cont.) | | | | California Ocean Plan Numerical Water Quality Objectives | | | | | | USEPA National Ambient Water Quality Criteria Saltwater Aquatic Life Protection | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Marine Aquatic Life Protection | | | | | Recommended Criteria | | | | Additional Toxicity Information | | |
| | Maximum (Instantaneous) | Additional Toxicity Information | | | Human Health Protection (30-day Average) | | | | | | Continuous Concentration (4-day Average) | 24-hour Average | Maximum Concentration (1-hour Average) | Maximum (Instantaneous) | | | |
| | | Acute | Chronic | Other | "‡" = carcinogen | 6-month Median | 30-day Average | 7-day Average | Daily Maximum | Instantaneous Maximum | | | | | Acute | Chronic | Other |
| Acenaphthylene | | | | | 0.0088 ‡ (2) | | | | | | | | | | 300 (32) | | |
| Acenaphthylene | | 68 | 21 | | 220 | | | | | | | | | | 55 | | |
| Acrylonitrile | | 7,550 | | 2,600 (44) | 0.10 ‡ | | | | | | | | | | | | |
| Aldrin | 3 | | | | 0.000022 ‡ | | | | | | | | | 1.3 | | | |
| Anthracene | | | | | 0.0088 ‡ (2) | | | | | | | | | | 300 (32) | | |
| Atrazine | 1.0 (30) | | | | | | | | | | | | | | | | |
| Bentazon | | | | | | | | | | | | | | | | | |
| Benz(a)anthracene | | | | | 0.0088 ‡ (2) | | | | | | | | | | 300 (32) | | |
| Benzene | | 5,300 | | | 5.9 ‡ | | | | | | | | | | 5,100 | | 700 (47) |
| Benzidine | | 2,500 | | | 0.000069 ‡ | | | | | | | | | | | | |
| Benzo(b)fluoranthene | | | | | 0.0088 ‡ (2) | | | | | | | | | | 300 (32) | | |
| Benzo(k)fluoranthene | | | | | 0.0088 ‡ (2) | | | | | | | | | | 300 (32) | | |
| Benzo(g,h,i)perylene | | | | | 0.0088 ‡ (2) | | | | | | | | | | 300 (32) | | |
| Benzo(a)pyrene | | | | | 0.0088 ‡ (2) | | | | | | | | | | 300 (32) | | |
| alpha-BHC | | | | | | 0.004 (3) | | | 0.008 (3) | 0.012 (3) | | | | | | | |
| beta-BHC | | | | | | 0.004 (3) | | | 0.008 (3) | 0.012 (3) | | | | | | | |
| Gamma-BHC (Lindane) | 2.0 | | | | | 0.004 (3) | | | 0.008 (3) | 0.012 (3) | | | | 0.16 | | | |
| delta-BHC | | | | | | 0.004 (3) | | | 0.008 (3) | 0.012 (3) | | | | | | | |
| technical-BHC | | 100 | | | | 0.004 (3) | | | 0.008 (3) | 0.012 (3) | | | | | 0.34 | | |
| Bis(2-chloroethoxy) methane | | | | | 4.4 | | | | | | | | | | | | |
| Bis(2-chloroethyl) ether | | 238,000 (39) | 122 (43) | | 0.045 ‡ | | | | | | | | | | | | |
| Bis(2-chloroisopropyl) ether | | 238,000 (39) | 122 (43) | | 1200 | | | | | | | | | | | | |
| Bromodichloromethane | | 11,000 (40) | | | 130 ‡ (4) | | | | | | | | | | 12,000 (40) | 6,400 (40) | 11,500 (40,48) |
| Bromoform | | 11,000 (40) | | | 130 ‡ (4) | | | | | | | | | | 12,000 (40) | 6,400 (40) | 11,500 (40,48) |
| Bromomethane | | 11,000 (40) | | | 130 ‡ (4) | | | | | | | | | | 12,000 (40) | 6,400 (40) | 11,500 (40,48) |
| Carbofuran | | | | | | | | | | | | | | | | | |
| Carbon tetrachloride | | 35,200 | | | 0.90 ‡ | | | | | | | | | | 50,000 | 6,400 (40) | 11,500 (40,48) |
| Catechol | | | | | | 30 (5) | | | 120 (5) | 300 (5) | | | | | | | |
| Chlordane | 2.4 | | | | 0.000023 ‡ (6) | | | | | | | 0.004 | | 0.09 | | | |
| Chlorobenzene | | 250 (41) | | 50 (41,45) | 570 | | | | | | | | | | 160 (41) | 129 (41) | |
| 4-Chloro-m-cresol | | 30 | | | | 1 (7) | | | 4 (7) | 10 (7) | | | | | | | |
| 4-Chloro-o-cresol | | | | | | 1 (7) | | | 4 (7) | 10 (7) | | | | | | | |
| 6-Chloro-m-cresol | | | | | | 1 (7) | | | 4 (7) | 10 (7) | | | | | | | |
| Chloroform | | 28,900 | 1,240 | | 130 ‡ | | | | | | | | | | 12,000 (40) | 6,400 (40) | 11,500 (40,48) |
| Chloromethane | | 11,000 (40) | | | 130 ‡ (4) | | | | | | | | | | 12,000 (40) | 6,400 (40) | 11,500 (40,48) |
| 2-Chlorophenol | | 4,380 | | 2,000 (46) | | 1 (7) | | | 4 (7) | 10 (7) | | | | | | | |
| 3-Chlorophenol | | | | | | 1 (7) | | | 4 (7) | 10 (7) | | | | | | | |
| 4-Chlorophenol | | | | | | 1 (7) | | | 4 (7) | 10 (7) | | | | | 29,700 | | |
| Chrysene | | | | | 0.0088 ‡ (2) | | | | | | | | | | 300 (32) | | |
| 2,4-D | | | | | | | | | | | | | | | | | |
| DBCP | | | | | | | | | | | | | | | | | |
| DDD | | 0.6 | | | 0.00017 ‡ (8) | | | | | | | | | | 3.6 | | |
| DDE | | 1,050 | | | 0.00017 ‡ (8) | | | | | | | | | | 14 | | |
| DDT | 1.1 | | | | 0.00017 ‡ (8) | | | | | | | 0.001 | | 0.13 | | | |
| Dibenz(a,h)anthracene | | | | | 0.0088 ‡ (2) | | | | | | | | | | 300 (32) | | |
| Dibromochloromethane | | 11,000 (40) | | | 130 ‡ (4) | | | | | | | | | | 12,000 (40) | 6,400 (40) | 11,500 (40,48) |
| Dibutyl phthalate | | 940 (42) | 3 (42) | | 3,500 | | | | | | | | | | 2,944 (42) | | 3.4 (49,42) |
| 1,2-Dichlorobenzene | | 1,120 (31) | 763 (31) | | 5,100 (9) | | | | | | | | | | 1,970 (31) | 129 (41) | |
| 1,3-Dichlorobenzene | | 1,120 (31) | 763 (31) | | 5,100 (9) | | | | | | | | | | 1,970 (31) | 129 (41) | |

# Table C-2. WATER QUALITY CRITERIA - ORGANIC CONSTITUENTS

| Organic Constituent | USEPA Ambient Water Quality Criteria (cont.) Freshwater Aquatic Life Protection (cont.) Recommended Criteria (cont.) | | | | California Ocean Plan Numerical Water Quality Objectives | | | | | | USEPA National Ambient Water Quality Criteria Saltwater Aquatic Life Protection | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Marine Aquatic Life Protection | | | | | Recommended Criteria | | | | | | |
| | Maximum (Instantaneous) | Additional Toxicity Information | | | Human Health Protection (30-day Average) | 6-month Median | 30-day Average | 7-day Average | Daily Maximum | Instantaneous Maximum | Continuous Concentration (4-day Average) | 24-hour Average | Maximum Concentration (1-hour Average) | Maximum (Instantaneous) | Additional Toxicity Information | | |
| | | Acute | Chronic | Other | "‡" = carcinogen | | | | | | | | | | Acute | Chronic | Other |
| 1,4-Dichlorobenzene | | 1,120 (31) | 763 (31) | | 18 ‡ | | | | | | | | | | 1,970 (31) | 129 (41) | |
| 3,3'-Dichlorobenzidine | | | | | 0.0081 ‡ | | | | | | | | | | | | |
| 1,1-Dichloroethane | | | | | | | | | | | | | | | | | |
| 1,2-Dichloroethane | | 118,000 | 20,000 | | 130 ‡ | | | | | | | | | | 113,000 | | |
| 1,1-Dichloroethylene | | 11,600 (50) | | | 7100 | | | | | | | | | | 224,000 (50) | | |
| cis-1,2-Dichloroethylene | | 11,600 (50) | | | | | | | | | | | | | 224,000 (50) | | |
| trans-1,2-Dichloroethylene | | 11,600 (50) | | | | | | | | | | | | | 224,000 (50) | | |
| Dichloromethane | | 11,600 (50) | | | 450 ‡ | | | | | | | | | | 12,000 (40) | 6,400 (40) | 11,500 (40,48) |
| 2,3-Dichlorophenol | | | | | | 1 (7) | | | 4 (7) | 10 (7) | | | | | | | |
| 2,4-Dichlorophenol | | 2,020 | 365 | 70 (56) | | 1 (7) | | | 4 (7) | 10 (7) | | | | | | | |
| 2,5-Dichlorophenol | | | | | | 1 (7) | | | 4 (7) | 10 (7) | | | | | | | |
| 2,6-Dichlorophenol | | | | | | 1 (7) | | | 4 (7) | 10 (7) | | | | | | | |
| 3,4-Dichlorophenol | | | | | | 1 (7) | | | 4 (7) | 10 (7) | | | | | | | |
| 1,2-Dichloropropane | | 23,000 (51) | 5,700 (51) | | | | | | | | | | | | 10,300 (51) | 3,040 (51) | |
| 1,3-Dichloropropene | | 6,060 (52) | 244 (52) | | 8.9 ‡ | | | | | | | | | | 790 (52) | | |
| Dieldrin | 2.5 | | | | 0.000040 ‡ | | | | | | | 0.0019 | | 0.71 | | | |
| Di(2-ethylhexyl)phthalate | | 940 (42) | 3 (42) | | 3.5 ‡ | | | | | | 360 (11) | | 400 (11) | | 2,944 (42) | | 3.4 (49,42) |
| Diethyl phthalate | | 940 (42) | 3 (42) | | 33,000 | | | | | | | | | | 2,944 (42) | | 3.4 (49,42) |
| 2,4-Dimethylphenol | | 2120 | | | | 30 (5) | | | 120 (5) | 300 (5) | | | | | | | |
| Dimethyl phthalate | | 940 (42) | 3 (42) | | 820,000 | | | | | | | | | | 2,944 (42) | | 3.4 (49,42) |
| 4,6-Dinitro-o-cresol | | 230 (53) | | 150 (49,53) | 220 | 30 (5) | | | 120 (5) | 300 (5) | | | | | 4,850 (53) | | |
| Dinitrophenol | | 230 (53) | | 150 (49,53) | | 30 (5) | | | 120 (5) | 300 (5) | | | | | 4,850 (53) | | |
| 2,4-Dinitrophenol | | 230 (53) | | 150 (49,53) | 4 | 30 (5) | | | 120 (5) | 300 (5) | | | | | 4,850 (53) | | |
| 2,4-Dinitrotoluene | | 330 (54) | 230 (54) | | 2.6 ‡ | | | | | | | | | | 590 (54) | | 370 (54,48) |
| 1,2-Diphenylhydrazine | | 270 (9) | | | 0.16 ‡ | | | | | | | | | | | | |
| Endosulfan | 0.22 | | | | | 9 (16) | | | 18 (16) | 27 (16) | | 0.0087 | | 0.034 | | | |
| Endosulfan sulfate | | | | | | 9 (16) | | | 18 (16) | 27 (16) | | 0.0087 (35) | | | | | |
| Endrin | 0.18 | | | | | 0.002 | | | 0.004 | 0.006 | | 0.0023 | | 0.037 | | | |
| Ethylbenzene | | 32,000 | | | 4100 | | | | | | | | | | 430 | | |
| Ethylene dibromide (EDB) | | | | | | | | | | | | | | | | | |
| Fluoranthene | | 3,980 | | | 15 | | | | | | | | | | 40 | 16 | |
| Fluorene | | | | | 0.0088 ‡ (2) | | | | | | | | | | 300 (32) | | |
| Glyphosate | | | | | | | | | | | | | | | | | |
| Heptachlor | 0.52 | | | | 0.00072 ‡ (17) | | | | | | | 0.0036 | | 0.053 | | | |
| Heptachlor epoxide | 0.52 | | | | 0.00072 ‡ (17) | | | | | | | 0.0036 | | 0.053 | | | |
| Hexachlorobenzene | | 250 (41) | | 50 (41,45) | 0.00021 ‡ | | | | | | | | | | 160 (41) | 129 (41) | |
| Hexachlorobutadiene | | 90 | 9.3 | | 14 ‡ | | | | | | | | | | 32 | | |
| Hexachlorocyclopentadiene | | 7.0 | 5.2 | | 58 | | | | | | | | | | 7 | | |
| Hexachloroethane | | 980 | 540 | | 2.5 ‡ | | | | | | | | | | 940 | | |
| Indeno(1,2,3-c,d)pyrene | | | | | 0.0088 ‡ (2) | | | | | | | | | | 300 (32) | | |
| Isophorone | | 117,000 | | | 150,000 | | | | | | | | | | 12,900 | | |
| Methanes, halo- | | 11,000 | | | 130 ‡ (4) | | | | | | | | | | 12,000 | 6,400 | 11,500 (48) |
| Methoxychlor | 0.03 | | | | | | | | | | | | | 0.03 | | | |
| Molinate | | | | | | | | | | | | | | | | | |
| Nitrobenzene | | 27,000 | | | 4.9 | | | | | | | | | | 6,680 | | |
| 2-Nitrophenol | | 230 (53) | | 150 (49,53) | | 30 (5) | | | 120 (5) | 300 (5) | | | | | 4,850 (53) | | |
| Nitrophenol | | 230 (53) | | 150 (49,53) | | 30 (5) | | | 120 (5) | 300 (5) | | | | | 4,850 (53) | | |
| 4-Nitrophenol | | 230 (53) | | 150 (49,53) | | 30 (5) | | | 120 (5) | 300 (5) | | | | | 4,850 (53) | | |

# Table C-2. WATER QUALITY CRITERIA - ORGANIC CONSTITUENTS

| Organic Constituent | USEPA Ambient Water Quality Criteria (cont.) Freshwater Aquatic Life Protection (cont.) Recommended Criteria (cont.) | | | | California Ocean Plan Numerical Water Quality Objectives | | | | | | USEPA National Ambient Water Quality Criteria Saltwater Aquatic Life Protection | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Marine Aquatic Life Protection | | | | | Recommended Criteria | | | | Additional Toxicity Information | | |
| | Maximum (Instantaneous) | Additional Toxicity Information | | | Human Health Protection (30-day Average) | 6-month Median | 30-day Average | 7-day Average | Daily Maximum | Instantaneous Maximum | Continuous Concentration (4-day Average) | 24-hour Average | Maximum Concentration (1-hour Average) | Maximum (Instantaneous) | | | |
| | | Acute | Chronic | Other | "‡" = carcinogen | | | | | | | | | | Acute | Chronic | Other |
| N-Nitrosodimethylamine | | 5,850 (55) | | | 7.3 ‡ | | | | | | | | | | 3,300,000 (55) | | |
| N-Nitrosodiphenylamine | | 5,850 (55) | | | 2.5 ‡ | | | | | | | | | | 3,300,000 (55) | | |
| trans-Nonachlor | | | | | 0.000023 ‡ (6) | | | | | | | | | | | | |
| Oil & grease | | | | | | | 25,000 | 40,000 | | 75,000 | | | | | | | |
| Oxychlordane | | | | | 0.000023 ‡ (6) | | | | | | | | | | | | |
| PAHs | | | | | 0.0088 ‡ (2) | | | | | | | | | | 300 | | |
| Pentachlorophenol | | | | 1.74 (57) | | 1 (7) | | | 4 (7) | 10 (7) | 7.9 | | 13 | | | | |
| Phenanthrene | | | | | 0.0088 ‡ (2) | | | | | | 4.6 (11) | | 7.7 (11) | | 300 (32) | | |
| Phenol | | 10,200 | 2,560 | | | 30 (5) | | | 120 (5) | 300 (5) | | | | | 5,800 | | |
| Phenols, chlorinated | | | | | | 1 | | | 4 | 10 | | | | | | | |
| Phenols, nitro- | | 230 | | 150 (49) | | 30 (5) | | | 120 (5) | 300 (5) | | | | | 4,850 | | |
| Phenols, non-chlorinated | | | | | | 30 | | | 120 | 300 | | | | | | | |
| Phthalate esters | | 940 | 3 | | | | | | | | | | | | 2,944 | | 3.4 (49,42) |
| Phenanthrene | | | | | 0.0088 ‡ (2) | | | | | | 4.6 (11) | | 7.7 (11) | | 300 (32) | | |
| Phenazopyridine | | | | | | | | | | | | | | | | | |
| Phenazopyridine hydrochloride | | | | | | | | | | | | | | | | | |
| Phenesterin | | | | | | | | | | | | | | | | | |
| Phenobarbital | | | | | | | | | | | | | | | | | |
| Phenol | | 10,200 | 2,560 | | | 30 (5) | | | 120 (5) | 300 (5) | | | | | 5,800 | | |
| Phenols, chlorinated | | | | | | 1 | | | 4 | 10 | | | | | | | |
| Phenols, nitro- | | 230 | | 150 (49) | | 30 (5) | | | 120 (5) | 300 (5) | | | | | 4,850 | | |
| Phenols, non-chlorinated | | | | | | 30 | | | 120 | 300 | | | | | | | |
| Phenoxybenzamine | | | | | | | | | | | | | | | | | |
| Phenoxybenzamine hydrochloride | | | | | | | | | | | | | | | | | |
| Phenyl glycidyl ether | | | | | | | | | | | | | | | | | |
| o-Phenylphenate, sodium | | | | | | | | | | | | | | | | | |
| Polychlorinated biphenyls | | > 2 | | | 0.000019 ‡ | | | | | | | 0.03 | | | >10 | | |
| Pyrene | | | | | 0.0088 ‡ (2) | | | | | | | | | | 300 (32) | | |
| Resorcinol | | | | | | 30 (5) | | | 120 (5) | 300 (5) | | | | | | | |
| Simazine | 10 (58) | | | | | | | | | | | | | | | | |
| 2,3,7,8-TCDD (Dioxin) | | | | | 0.0000000039 ‡ (20) | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | | 9,320 (59) | 2,400 | | 1,200 | | | | | | | | | | 9,020 | | |
| Tetrachloroethylene (PCE) | | 5,280 | 840 | | 99 ‡ | | | | | | | | | | 10,200 | 450 | |
| 2,3,4,6-Tetrachlorophenol | | | | | | 1 (7) | | | 4 (7) | 10 (7) | | | | | | | |
| 2,3,5,6-Tetrachlorophenol | | | | | | 1 (7) | | | 4 (7) | 10 (7) | | | | | 440 | | |
| Thiobencarb | | | | | | | | | | | | | | | | | |
| Toluene | | 17,000 | | | 85,000 | | | | | | | | | | 6,300 | 5,000 | |
| Toxaphene | | | | | 0.00021 ‡ | | | | | | 0.0002 | | 0.21 | | | | |
| 2,4,5-TP (Silvex) | | | | | | | | | | | | | | | | | |
| Tributyltin | 0.026 (30) | | | | 0.0014 | | | | | | | | | 0.010 (30) | | | |
| 1,1,1-Trichloroethane | | 18,000 | | 200 (60) | 540,000 | | | | | | | | | | 31,200 | | |
| 1,1,2-Trichloroethane | | 18,000 | 9,400 | | 43,000 | | | | | | | | | | | | |
| Trichloroethylene (TCE) | | 45,000 | | 21,900 (61) | 27 ‡ | | | | | | | | | | 2,000 | | |
| Trichlorofluoromethane | | 11,000 (40) | | | | | | | | | | | | | 12,000 (40) | 6,400 (40) | 11,500 (40,48) |
| 2,4,5-Trichlorophenol | | | | | | 1 (7) | | | 4 (7) | 10 (7) | 11 (11) | | 240 (11) | | | | |
| 2,4,6-Trichlorophenol | | | 970 | | 0.29 ‡ | 1 (7) | | | 4 (7) | 10 (7) | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | | | | | | | | | | | | | | | | | |
| Trinitrophenol | | 230 (53) | | 150 (49,53) | | 30 (5) | | | 120 (5) | 300 (5) | | | | | 4,850 (53) | | |
| Vinyl chloride | | | | | 36 ‡ | | | | | | | | | | | | |
| Xylene(s) | | | | | | | | | | | | | | | | | |

# ENDNOTES FOR TABLE C-2 – ORGANICS

(7-day) For exposure of 7 days or less.
(10-day) For exposure of 10 days or less.
(24-hr) For exposure of 24 hours or less.
(7-yr) For "longer-term" exposure (7 years or less, EPA).
(A) Known human carcinogen; sufficient epidemiologic evidence in humans.
(B) Probable human carcinogen; sufficient evidence from animal studies; no or inadequate human data.
(C) Possible human carcinogen; limited evidence from animal studies; no human data.
(D) Not classified as to human carcinogenicity; no data or inadequate evidence.
(E) Evidence of non-carcinogenicity for humans.
(1) For hardness in mg/l as $CaCO_3$, criterion = e(0.8473[ln(hardness)] + 0.8604) $\mu$g/l.
(2) For sum of acenaphthylene, anthrancene, benz(a)anthrancene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, benzo(a)pyrene, chrysene, dibenz(a,h)anthracene, fluorene, indeno(1,2,3-c,d)pyrene, phenanthrene, and pyrene.
(3) For hardness in mg/l as $CaCO_3$, criterion = e(1.273[ln(hardness)] – 1.460) $\mu$g/l.
(4) For sum of bromoform, bromomethane, chloromethane, dibromochloromethane, and bromodichloromethane.
(5) For sum of nonchlorinated phenolic compounds.
(6) For the sum of oxychlordane and alpha and gamma isomers of chlordane, chlordene and nonachlor.
(7) For sum of chlorinated phenolic compounds.
(8) Instantaneous maximum.
(9) For sum of 1,2- and 1-3-dichlorobenzenes.
(10) From Reference 30.
(11) Proposed.
(12) Effective 17 January 1994.
(13) For hardness in mg/l as $CaCO_3$, criterion = e(0.8473[ln(hardness)] + 0.7614) $\mu$g/l.
(14) MCL varies with air temperature; 2.4 mg/l (Š 53.7°F); 2.2 mg/l (53.8 – 58.3 °F); 2.0 mg/l (58.4 – 63.8°F); 1.8 mg/l (63.9 – 70.6 °F); 1.6 mg/l (70.0 – 79.2°F); 1.4 mg/l (79.3 – 90.5 °F).
(15) Based on organoleptic considerations (taste, odor, color, laundry staining, etc.)
(16) For hardness in mg/l as CaCO3, criterion = e(1.273[ln(hardness)] – 4.705) $\mu$g/l.
(17) As $CaCO_3$; minimum concentration except where natural concentrations are less.
(18) Toxicity to algae occurs.
(19) For hardness in mg/l as $CaCO_3$, criterion = e(0.8190[ln(hardness)] + 1.561) $\mu$g/l.
(20) For "TCDD equivalents" calculated as the sum of 2,3,7,8-chlorinated dibenzodioxin and dibenzofuran concentrations multiplied by their respective USEPA Toxicity Equivalency Factors.
(21) Expressed as decachlorobiphenyl.
(22) For hardness in mg/l as $CaCO_3$, criterion = e(0.8190 [ln(hardness)] + 3.688) $\mu$g/l.
(23) Assumes 70 kg body weight, 2 liters/day water consumption, and 20% relative source contribution. An additional uncertainty factor of 10 is used for Class C carcinogens.
(24) Assumes 70 kg body weight and 2 liters/day water consumption.
(25) For sum of dichloropropanes.
(26) Draft / tentative / provisional.
(27) For sum of halomethanes.
(28) Reference 19 unless noted otherwise.
(29) For the sum of oxychlordane and alpha and gamma isomers of chlordane, chlordene and nonachlor.
(30) For hardness in mg/l as $CaCO_3$, criterion = e(0.7852[ln(hardness)] – 3.490) $\mu$g/l.
(31) For hardness in mg/l as $CaCO_3$, criterion = e(1.128[ln(hardness)] – 3.828) $\mu$g/l.
(32) For hardness in mg/l as $CaCO_3$, criterion = e(0.9422[ln(hardness)] – 1.464) $\mu$g/l.
(33) For sum of dichlorobenzenes.
(34) For total trihalomethanes (sum of bromoform, bromodichloromethane, chloroform and dibromochloromethane); based largely on technology and economics.
(35) Based on endosulfan; USEPA Water Quality Advisory (Reference 13).
(36) Determined not to pose a risk of cancer through ingestion (Title 22, CCR, Division 2).
(37) Includes Radium 226 but excludes Radon and Uranium.
(38) Pentavalent arsenic [As(V)] effects on plants.
(39) Recommended level; Upper level = 500 mg/l; Short-term level = 600 mg/l.
(40) For sum of dichloroethylenes.
(41) For sum of dichloropropenes.
(42) As $NO_3$.
(43) Effective 17 January 1994.
(44) Toxicity to a fish species exposed for 7.5 days.
(45) Adverse behavioral effects occur to one species.
(46) For hardness in mg/l as $CaCO_3$, criterion = e(1.72 [ln(hardness)] – 6.52) $\mu$g/l.
(47) Adverse effects on a fish species exposed for 168 days.
(48) A decrease in the number of algal cells occurs.
(49) Guidance level (Reference 3) assumes reletive source contribution of 10% from drinking water.
(50) For chlorinated systems.
(51) For white phosphorus.
(52) For sum of carcinogenic polynuclear aromatic hydrocarbons.
(53) For sum of nitrophenols.
(54) For hardness in mg/l as $CaCO_3$, criterion = e(0.8460[ln(hardness)] + 3.3612) $\mu$g/l.
(55) For total chlorine residual; for intermittent chlorine sources see Reference 26, Chapter IV, Table B.
(56) For consumption of water and aquatic organisms / for consumption of aquatic organisms only.
(57) MCL includes this "Action level," to be exceeded in no more than 10 percent of samples.
(58) For sum of nonchlorinated phenolic compounds.
(59) Recommended level; Upper level = 1,000; Short-term level = 1,500 mg/l.
(60) For sum of tetrachloroethanes.
(61) Calculated from corn oil gavage animal study / from drinking water animal study.

# REFERENCES


**Drinking Water Standards – Maximum Contaminant Levels (MCLs)**

1. California Department of Health Services, California Administrative Code, Title 22, Division 4, Chapter 15, "Domestic Water Quality and Monitoring".

2. U.S. Environmental Protection Agency, 40 Code of Federal Regulations, Parts 141 and 143.

3. U.S. Environmental Protection Agency, Office of Water, "Drinking Water Regulations and Health Advisories" (December 1992)

4. U.S. Environmental Protection Agency, Region 9, Drinking Water Branch, "Drinking Water Standards and Health Advisory Table" (December 1992).

5. U.S. Environmental Protection Agency, Federal Register, Volume 56, No. 110 (Friday, 7 June 1991), pages 26460-26564. Corrected in FR, No. 135 (Mon., 15 July 1991) pages 32112-32113.

6. U.S. Environmental Protection Agency, Federal Register, Volume 56, No. 126 (Monday, 1 July 1991), pages 30266-30281. Amended by Federal Register, Vol. 57, pages 22178 et seq. (27 May 1992).

7. U.S. Environmental Protection Agency, Federal Register, Volume 56, No. 138 (Thursday, 18 July 1991), pages 33050-33127.

8. U.S. Environmental Protection Agency, Federal Register, Volume 57, No. 138 (Friday, 17 July 1992), pages 31776-31849.

**California State Action Levels**

9. California Department of Health Services, Office of Drinking Water, "Summary: Maximum Contaminant Levels (MCLs) and Action Levels (ALs)" (18 October 1990).

**California Recommended Public Health Levels (RPHLs) in Drinking Water**

10. California Department of Health Services, Office of Drinking Water, "Notice of Proposed Rulemaking. Recommended Public Health Levels (RPHLs) for Contaminants in Drinking Water (R-29-91)" (4 December 1991).

**Health Advisories and Suggested No-Adverse-Response Levels (SNARLs)**

References 3 and 4.

11. U.S. Environmental Protection Agency, Office of Drinking Water "Health Advisory" documents (various dates).

12. National Academy of Sciences, "Drinking Water and Health", Vol. 1 (1977), Vol. 3 (1980), Vol 4. (1982), Vol. 5 (1983), Vol. 6 (1986), and Vol. 7 (1987).

13. U.S. Environmental Protection Agency, "Water Quality Advisory" documents (March 1986, September 1987).

**California Proposition 65 Regulatory Levels**

14. California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (OEHHA), California Code of Regulations, Title 22, Division 2, Chapter 3, Articles 7 and 8.

15. California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (OEHHA), Proposition 65 "Status Report" (January 1993).

**One-in-a-Million Increment Cancer Risk Estimates**

References 3, 4, 11, 12, and 13.

16. U.S. Environmental Protection Agency, "Quality Criteria for Water, 1986" (May 1986) plus updates (various dates).

17. U.S. Environmental Protection Agency, Federal Register, Vol. 49, No. 194 (Wednesday, 15 February 1984) (TCDD cancer risk level).

18. "California Environmental Protection Agency Criteria for Carcinogens", Office of Environmental Health Hazard Assessment (July 1992).

**Agricultural Water Quality Goals**

19. Ayers, R.S. and D. W. Westcot, "Water Quality for Agriculture", Food and Agriculture Organization of the United Nations – Irrigation and Drainage Paper No. 20, Rev. 1, Rome (1985).

**U. S. EPA National Ambient Water Quality Criteria**

References 13 and 14.

20. U.S. Environmental Protection Agency, "Water Quality Criteria, 1972" (1973).

21. U.S. Environmental Protection Agency, Federal Register, Volume 55, No. 93, (Monday, 14 May 1990).

22. U.S. Environmental Protection Agency, Federal Register, Volume 57, No. 246 (Tuesday, 22 December 1992).

23. U.S. Environmental Protection Agency, "Ambient Water Quality Criteria" documents (various dates).

**California Inland Surface Waters Plan – Numerical Water Quality Objectives**

24. California State Water Resources Control Board, "Water Quality Control Plan for Inland Surface Waters of California", Document 91-12 WQ, Chapter 11 (11 April 1991).

25. California State Water Resources Control Board, "Functional Equivalent Document: Amendments of the Water Quality Control Plan for Inland Surface Waters of California", Draft (November 1992).

**California Enclosed Bays and Estuaries Plan = Numerical Water Quality Objectives**

26. California State Water Resources Control Board, "Water Quality Control Plan for Enclosed Bays and Estuaries of California", Draft (November 1992).

27. California State Water Resources Control Board, "Functional Equivalent Document: Amendments of the Water Quality Control Plan for Enclosed Bays and Estuaries of California", Draft (November 1992).

**California Ocean Plan – Numerical Water Quality Objectives**

28. California State Water Resources Control Board, "Water Quality Control Plan: Ocean Waters of California", Chapter IV (22 March 1990)

Other References

29. McKee & Wolf, California State Water Resources Control Board, "Water Quality Criteria" (1963, 1978).

30. U.S. Environmental Protection Agency, Federal Register, Vol. 54, No. 97 (Mon., 22 May 1989), pp. 22138, 22139.

**DECLARATION OF SERVICE BY EMAIL**

I, the undersigned, declare as follows:

I am a resident of the County of Sacramento and I am over the age of 18 years, and not a party to the within action. My place of employment is 980 Ninth Street, Suite 300, Sacramento, California 95814.

On February 4, 2020, I served the:

- **SWRCB's and SDRWQCB's Comments on the Test Claim filed January 27, 2020**

  *California Regional Water Quality Control Board, San Diego Region, Order No. R9-2017-0077, Sections A.1, A.3, and A.5*, 17-TC-05
  City of San Juan Capistrano and County of San Diego, Claimants

By making it available on the Commission's website and providing notice of how to locate it to the email addresses provided on the attached mailing list.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration was executed on February 4, 2020 at Sacramento, California.

Jill L. Magee
Commission on State Mandates
980 Ninth Street, Suite 300
Sacramento, CA 95814
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# COMMISSION ON STATE MANDATES

## Mailing List

**Last Updated:** 1/28/20

**Claim Number:** 17-TC-05

**Matter:** California Regional Water Quality Control Board, San Diego Region, Order No. R9-2017-0077, Sections A.1, A.3, and A.5

**Claimants:** City of San Juan Capistrano
County of San Diego

**TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:**

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