NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR WASTE DISCHARGE REQUIREMENTS (WDRs) FOR STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)

WATER QUALITY (WQ) ORDER 2013-0001-DWQ NPDES NO. CAS000004
AS AMENDED BY ORDER WQ 2015-0133-EXEC, ORDER WQ 2016-0069-EXEC,
WQ ORDER 2017-XXXX-DWQ, ORDER WQ 2018-0001-EXEC, AND
ORDER WQ 2018-0007-EXEC

WQ Order 2013-0001-DWQ was adopted by the State Water Resources Control Board on:	February 5, 2013
WQ Order 2013-0001-DWQ became effective on:	July 1, 2013
The Executive Director of the State Water Resources Control Board issued Order WQ 2015-0133-EXEC on:	September 2, 2015
The Executive Director of the State Water Resources Control Board issued Order WQ 2016-0069-EXEC on:	June 20, 2016
WQ Order 2017-XXXX-DWQ, amending Order 2013-0001-DWQ, was adopted by the State Water Resources Control Board on:	December 19, 2017
The Executive Director of the State Water Resources Control Board issued Order WQ 2018-0001-EXEC on:	January 24, 2018
The Executive Director of the State Water Resources Control Board issued Order WQ 2018-0007-EXEC on:	March 13, 2018
The amendments to WQ Order 2013-0001-DWQ contained in WQ Order 2017-XXXX-DWQ are effective on:	January 1, 2019

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the State Water Resources Control Board on February 5, 2013, and amended by the Executive Director of the State Water Resources Control Board on September 2, 2015, June 20, 2016, and January 24, 2018, and amended by the State Water Resources Control Board on December 19, 2017.

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Jeanine Townsend
Clerk to the Board

STATE WATER RESOURCES CONTROL BOARD
WATER QUALITY ORDER NO. 2013-0001-DWQ

AS AMENDED BY
ORDER WQ 2015-0133-EXEC,
ORDER WQ 2016-0069-EXEC,
WQ ORDER 2017-XXXX-DWQ,
ORDER WQ 2018-0001-EXEC, AND
ORDER WQ 2018-0007-EXEC

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT NO. CAS000004

WASTE DISCHARGE REQUIREMENTS (WDRs)
FOR STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s) (GENERAL PERMIT)

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FINDINGS
The State Water Resources Control Board (State Water Board) finds that:

1. Storm water is a resource and an asset and should not be treated as a waste product. Managing rainwater and storm water at the source is a more effective and sustainable alternative to augmenting water supply, preventing impacts from flooding, mitigating storm water pollution, creating green space, and enhancing fish and wildlife habitat. California encourages alternative, innovative, multi-objective solutions to help use and protect this valuable resource, while at the same time controlling pollution due to urban runoff.
2. As human population increases, urban development creates new pollution sources and brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc. which can either be washed or directly dumped into the municipal separate storm sewer system (MS4). As a result, the runoff leaving the developed urban area is greater in pollutant load than the pre-development runoff from the same area. Also, when natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, walkways and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving developed urban area is significantly greater in runoff volume, velocity, peak flow rate, and duration than pre-development runoff from the same area. The increased volume, velocity, rate, and duration of runoff greatly accelerate the erosion of downstream natural channels. In addition, the greater the impervious cover the greater the significance of the degradation.
3. Pollutants of concern found in urban runoff include sediments, non-sediment solids, nutrients, pathogens, oxygen-demanding substances, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons (PAHs), trash, pesticides and herbicides.
4. Trash and litter are a pervasive problem in California. Controlling trash is a priority, because trash adversely affects our use of California's waterways. Trash impacts aquatic life in streams, rivers, and the ocean as well as terrestrial species in adjacent riparian and shore areas. Trash, particularly plastics, persists for years. It concentrates organic toxins, entangles and ensnares wildlife, and disrupts feeding when animals mistake plastic for food and ingest it. Additionally, trash creates aesthetic impacts, impairing our ability to enjoy our waterways.
5. The State Water Resources Control Board (State Board) is developing a statewide policy for trash control in California's waterways. The draft Trash Policy will identify trash as a separate pollutant and establish methods to control trash pollution in waterways, statewide. Following adoption of the draft Trash Policy, the State Water Board may re-open this Order to incorporate water body trash pollution control methods and introduce Trash Reduction Program requirements.
6. A higher percentage of impervious area in urban areas correlates to a greater pollutant loading, resulting in turbid water, nutrient enrichment, bacterial contamination, organic matter loads, toxic compounds, temperature increases, and increases in trash or debris.
7. Conventional landscaping features large lawns, non-native plants, abundant irrigation, and heavy use of fertilizers, herbicides, and pesticides. It frequently requires significant mowing, blowing, trimming, and removal of plants debris. Adopting more storm water-friendly

landscape practices reduces pollutants and also provides tangible water conservation, wildlife habitat, and energy saving benefits.

8. The State Water Board recognizes that this Order affects varied and diverse entities, including agencies that are required to carry out water conservation regulations, wastewater discharge regulations, and land use regulations that may implement, all or in part, provisions of this Order. The State Water Board seeks to minimize duplicate efforts and maximize resources to achieve the greatest water quality benefit; thus the State Water Board recognizes specified related regulations, cited in the body of this Order, as equivalent to implementing designated provisions of this Order.

9. When water quality impacts are considered during the planning stages of a project, new development and many redevelopment projects can more efficiently incorporate measures to protect water quality.

10. In California, urban storm water is listed as the primary source of impairment for ten percent of all rivers, ten percent of all lakes and reservoirs, and 17 percent of all estuaries (2010 Integrated Report). Although these numbers may seem low, urban areas cover just six percent of the land mass of California and so their influence is disproportionately large. Urbanization causes changes in the landscape, including increased loads of chemical pollutants, increased toxicity, changes to flow magnitude, frequency, and seasonality of various discharges, physical changes to stream, lake, or wetland habitats, changes in the energy dynamics of food webs, sunlight, and temperature; and biotic interactions between native and exotic species. In addition to surface water impacts, urbanization can alter the amount and quality of storm water that infiltrates and recharges groundwater aquifers.

11. Education and awareness programs help change human behavior with respect to reducing the amount of pollution generated from storm water sources within the Permittee's MS4 system. In addition to education, encouraging public participation in local storm water programs can lead to program improvement as well as enabling people to identify and report a pollution-causing activity, such as spotting an illicit discharge.

12. Field experience in conducting outfall surveys indicates that illicit discharges may be present at 2 to 5 percent of all outfalls at any given time. Given that pollutants are being introduced into the receiving water during dry weather, illicit discharges may have an amplified effect on water quality and biological diversity.[1] Therefore, implementation of an effective Illicit Discharge and Detection Elimination program in conjunction with focused wet weather monitoring, as necessary, is an essential component of an effective municipal storm water program.

13. In 1990, the U.S. Environmental Protection Agency (U.S. EPA) promulgated rules establishing Phase I of the National Pollutant Discharge Elimination System (NPDES) storm water program. The Phase I program for MS4s requires operators of "medium" and "large" MS4s, that is, those that generally serve populations of 100,000 or greater, to implement a storm water management program as a means to control polluted discharges from these MS4s.

14. A MS4 is a conveyance or system of conveyances that is: 1) owned by a state, city, town, village, or other public entity that discharges to waters of the United States; 2) designed or used to collect or convey storm water (including storm drains, pipes, ditches, etc.); 3) not a

[1] Urban Stormwater Management in the United States, National research Council, 2008

combined sewer; and 4) not part of a Publicly Owned Treatment Works or sewage treatment plant.

15. On December 8, 1999, U.S. EPA promulgated Phase II storm water regulations under authority of the Clean Water Act section 402(p)(6). The Phase II Storm Water requires State Water Board to issue NPDES storm water permits to operators of Small MS4s.

16. On April 30, 2003, the State Water Board adopted Water Quality Order No. 2003-0005-DWQ, NPDES General Permit CAS000004 WDRs for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (General Permit) to comply with Clean Water Act section 402(p)(6). (Available at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003_0005dwq.pdf).

17. Title 40 of the Code of Federal Regulations (40 C.F.R.) section 122.26(b)(16) defines Small MS4s as those not defined as "large" or "medium" MS4s under section 122.26(b)(4) or (b)(7) or designated under 40 Code of Federal Regulations section 122.26(a)(1)(v). The term Small MS4s includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. (40 C.F.R. §122.26(b)(16)(iii).) These latter subsets of Small MS4s are referred to herein as Non-traditional Small MS4s. Non-traditional Small MS4s discharge the same types of pollutants that are typically associated with urban runoff. Separate storm sewers in very discrete areas, such as individual buildings, are not defined as Small MS4s.

18. Of the Small MS4s defined by federal regulations, only "Regulated Small MS4s" (also referred to as "Permittees" herein) must obtain an NPDES permit. Small MS4s are designated as Regulated Small MS4s in this Order in accordance with the criteria described in Findings 19-25.[2]

19. Under 40 Code of Federal Regulations section 122.32(a)(1) all Small MS4s located within an "urbanized area" as determined by the latest Decennial Census by the Bureau of the Census (Urbanized Area) are automatically designated as Regulated Small MS4s.

20. Under 40 Code of Federal Regulations sections 122.32(a)(2) and 123.35(b) the State Water Board is directed to develop a process, as well as criteria, to designate Small MS4s located outside of an Urbanized Area as Regulated Small MS4s. These criteria are to evaluate whether a storm water discharge results in or has the potential to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts.

21. Under guidance provided in 40 Code of Federal Regulations secton 123.35(b)(1)(ii), for determining other significant water quality impacts, U.S. EPA recommends a balanced

[2] In addition to the designation criteria specified in this Order, the State Water Board may designate a Small MS4 as a Regulated Small MS4 in response to a petition received under 40 Code of Federal Regulations section 122.26(f). Any person may petition the State Water Board to require an NPDES permit for a discharge composed entirely of storm water that contributes to a violation of a water quality standard or is a significant contributor of pollutants to the waters of the United States. (Id.). The State Water Board must make a final determination on any petition within 180 days after receiving the petition. (40 C.F.R. §123.35(c).)

consideration of the following designation criteria on a watershed or other local basis: discharge to sensitive waters, high growth or growth potential, high population density, contiguity to an urbanized area, significant contributor of pollutants to waters of the U.S., and ineffective protection of water quality by other programs.

22. The State Water Board is required to apply the designation criteria at a minimum to all Small MS4s located outside of Urbanized Areas serving jurisdictions with a population density of at least 1,000 people per square mile and a population of at least 10,000. (40 C.F.R. §123.35(b)(2).) The State Water Board has discretion to apply the criteria to jurisdictions with smaller population or lower density. All such jurisdictions are then Regulated Small MS4s.

23. In developing the designation criteria, the State Water Board included factors indicative of the potential to result in exceedances of water quality standards and other significant water quality impacts. The following criteria are used to designate Small MS4s outside of Urbanized Areas as Regulated Small MS4s in this Order.

    a. The Small MS4 has high population *and* high population density – High population means a population of 10,000 or more. High population density means a density of 1,000 residents per square mile or greater. Also, to be considered in this definition is a high density created by a non-residential population, such as tourists or commuters.

    b. The Small MS4 discharges to Areas of Special Biological Significance (ASBS) as defined in the California Ocean Plan.

24. Designation of additional Small MS4s as Regulated Small MS4s may be made by the Regional Water Boards on a case by case basis. Case by case determinations of designation shall be based on the potential of a Small MS4's discharges to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts. Where such case by case designations have been recommended by the Regional Water Boards prior to adoption of this Order, the designated Small MS4s are listed on the relevant Attachments to the Order and the reasons for designation are laid out in the Fact Sheet. The Regional Water Boards may continue to make case by case determinations of designation during the permit term. Such designations must be approved by the Regional Water Board after public review and comment.

25. 40 Code of Federal Regulations section 123.35(b)(4) requires designation as a Regulated Small MS4 of any Small MS4 outside an Urbanized Area that contributes substantially to the pollutant loadings of a physically interconnected MS4 regulated by the NPDES storm water program. A Small MS4 is interconnected with a separately permitted MS4 if storm water that has entered the Small MS4 is allowed to flow directly into a permitted MS4. In general, if the Small MS4 discharges more than ten percent of its storm water to the permitted MS4, or its discharge makes up more than ten percent of the permitted MS4's total storm water volume, it is a significant contributor of pollutants to the permitted MS4. In specific cases, the MS4s involved or third parties may show that the ten percent threshold is inappropriate for the MS4 in question.

26. Regulated Small MS4s may seek a waiver from Phase II requirements if they meet criteria specified in 40 Code of Federal Regulations sections 122.32(c)-(e).[3]The State Water

[3] Waiver criteria also found at 40 C.F.R. 123.35(d).

Board has additionally provided for a waiver for those communities outside of urbanized areas with a population of 20,000 or less with an annual median household income (MHI) that is less than 80 percent of the statewide annual MHI. (Wat. Code, § 79505.5, subd. (a)).

27. Small MS4s face highly variable conditions both in terms of threats to water quality from their storm water discharges and resources available to manage those discharges. Therefore, one set of prescriptive requirements is not an appropriate regulatory approach for all Regulated Small MS4s. This Order distinguishes between New and Renewal Traditional Small MS4 Permittees. Additionally, this Order addresses differences between Traditional and Non-traditional Small MS4s by detailing Non- traditional Small MS4 specific provisions in Section F Non-Traditional Small MS4 Provisions. Provisions are tailored to address the diverse program structures of Non- traditional Small MS4s to allow for an appropriate regulatory approach.

28. There are variable levels of resources available to Regulated Small MS4s for public outreach and education and water quality monitoring. Recognizing this, the Order gives Permittees numerous compliance options in these two program areas. However, all Regulated Small MS4s that discharge to ASBS or impaired water bodies[4] must conduct monitoring as specified in Attachment C and Attachment G, respectively. All Regulated Small MS4s with a population of 50,000 or more must conduct monitoring specified in Sections E.13.d.1. or E.13.d.2. of the Order or as approved by the Executive Officer of the applicable Regional Board. Additionally, for the public outreach program, the Regional Water Boards may require the Regulated Small MS4s to utilize the approach of Community-Based Social Marketing.

29. Renewal Traditional Small MS4 Permittees shall comply with Section E. Certain provisions within Section E contain compliance dates that are past the effective date of this Order, in these cases, the Permittee shall implement its existing program until that date.

30. This Order modifies the existing General Permit, Order 2003-0005-DWQ by establishing the storm water management program requirements in the Order and defining the minimum acceptable elements of the municipal storm water management program. Minimum permit requirements are known at the time of permit issuance and not left to be determined later through Regional Water Board review and approval of Storm Water Management Plans (SWMPs).

31. The State Water Board recognizes the necessity of a storm water program guidance document specific to each Permittee to provide planning and guidance for each program area and to identify responsible implementing parties. Permittees must develop and implement a storm water program guidance document and must submit the document during the application process.

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[4] A waterbody that has been determined under state policy and federal law to not meet water quality standards. An impaired water is a water that has been listed on the California 303(d) list or has not yet been listed but otherwise meets the criteria for listing. A water is a portion of a surface water of the state, including ocean, estuary, lake, river, creek, or wetland. The water currently may not be meeting state water quality standards or may be determined to be threatened and have the potential to not meet standards in the future. The State of California's 303(d) list can be found at http://www.swrcb.ca.gov/quality.html.

32. The State Water Board recognizes that in some instances Renewal Permittees' SWMPs that were approved under the prior General Permit, Order 2003-0005-DWQ have incorporated BMPs designed to address locality-specific storm water issues and that in some cases these BMPs may, because of locality-specific factors, be more protective of water quality than the minimum requirements established by this Order. Renewal Permittees will additionally include in the guidance document the following: identification and brief description of each BMP and associated measurable goal included in the Permittee's previously approved SWMP under the prior General Permit, Order 2003-0005-DWQ, that constitutes a more specific local or tailored level of implementation that may be more protective of water quality than the minimum requirements of this Order; and identification of whether the Permittee proposes to maintain, reduce, or cease implementation for each more protective, locally- tailored BMP. In no instance may a BMP be reduced or ceased if it is required by the minimum standards set by this Order.

33. Minimum measures have been established in this Order to simplify assessment of compliance and allow the public to more easily assess each Permittee's compliance.

34. Each provision establishes the required task description, minimum implementation levels (i.e., escalating enforcement, reporting requirements for tracking projects, number of monitoring sites, etc.), and reporting elements to substantiate that the Permittee meets these implementation levels. Regional Water Board staff will be able to evaluate each individual Permittee's compliance through Annual Report review and the program evaluation (audit) process.

35. The provisions contained in this Order were derived from two main U.S. EPA documents: MS4 Program Evaluation Guide[5] and the MS4 Permit Improvement Guide[6] along with interviews and information gathered from a lengthy collaborative stakeholder process.

36. Consistent with Clean Water Act section 402(p)(3)(B)(iii), this Order requires controls to reduce pollutants from the MS4 to the maximum extent practicable (MEP). The MEP standard requires Permittees to apply Best Management Practices (BMPs) that are effective in reducing or eliminating the discharge of pollutants to the waters of the U.S. MEP emphasizes pollutant reduction and source control BMPs to prevent pollutants from entering storm water runoff. MEP may require treatment of the storm water runoff if it contains pollutants. The MEP standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. BMP development is a dynamic process and may require changes over time as the Permittees gain experience and/or the state of the science and art progresses. To do this, the Permittees must conduct and document evaluation and assessment of each relevant element of its program, and their program as a whole, and revise activities, control measures/BMPs, and measurable goals, as necessary to meet MEP. MEP is the cumulative result of implementing, evaluating, and creating corresponding changes to a variety of technically appropriate and economically feasible BMPs, ensuring that the most appropriate BMPs are implemented in the most effective manner.

37. The Order's Receiving Water Limitations language is consistent with State Water Board Order WQ 99-05 (*Orange County)* adopted by the State Water Board on June 17, 1999.

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[5] Municipal Separate Storm Sewer System (MS4) Program Evaluation Guidance, USEPA, EPA-833-R-07-003, January 1, 2007

[6] MS4 Permit Improvement Guide, USEPA, April 1, 2010

Receiving Water Limitations apply to all Permittees subject to this Order. The State Water Board held a workshop on November 20, 2012, to hear comments on the receiving water limitations provisions in MS4 permits. This Order has a reopener clause that will allow the State Water Board to reopen the Order if the Board directs changes to the Receiving Water Limitations language based on comments received. (State Water Board Order WQ 99-05 above is available at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/1999/wq1999_05.pdf).

38. Non-storm water discharges consist of all discharges from an MS4 that do not originate from precipitation events. This Order effectively prohibits non-storm water discharges through an MS4 into waters of the U.S. Certain categories of non-storm water discharges are conditionally exempt as specified at 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B)(1). Non-storm water discharges that are regulated by a separate NPDES permit are not subject to the discharge prohibition. Prohibited non-storm water discharges include conditionally exempt discharges that are found to be a significant source of pollutants to waters of the U.S.

39. Non-storm water discharges to ASBS are prohibited except as specified in the General Exception. Certain enumerated non-storm water discharges are allowed under the General Exception if essential for emergency response purposes, structural stability, slope stability, or if occur naturally. In addition, an NPDES permitting authority may authorize non-storm water discharges to an MS4 with a direct discharge to an ASBS to the extent the NPDES permitting authority finds that the discharge does not alter natural ocean water quality in the ASBS. This Order allows utility vault discharges to an MS4 with a direct discharge to an ASBS, provided the discharge is authorized by the General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Water, NPDES No. CAG 990002. The State Water Board is in the process of reissuing the General NPDES Permit for Utility Vaults. As part of the renewal, the State Water Board will require a study to characterize representative utility vault discharges to an MS4 with a direct discharge to an ASBS and will impose conditions on such discharges to ensure the discharges do not alter natural ocean water quality in the ASBS. Given the limited number and intermittent nature of utility vault discharges to MS4s that discharge directly to an ASBS, the State Water Board finds that discharges from utility vaults and underground structures to an MS4 with a direct discharge to an ASBS are not expected to result in a substantial alteration of natural ocean water quality in the ASBS in the interim period while the General NPDES Permit for Discharges from Utility Vaults is renewed and the study is completed. Other short-duration, intermittent non-storm water discharges related to LUPs (e.g. groundwater dewatering, potable water system flushing, hydrotest discharges) are regulated under NPDES permits issued by the Regional Water Boards. Although such discharges are not specifically enumerated in the General Exception as essential for emergency response purposes, structural stability, or slope stability, they may be required to ensure the safety and stability of the utility systems or for operations and maintenance and for extending these essential services. For this reason, and because the short-duration and intermittent nature of these discharges renders them unlikely to result in substantial alteration of natural ocean water quality in the ASBS, this Order permits such discharges to a segment of the MS4 with a direct discharge to an ASBS provided they are authorized by an NPDES permit issued by the State Water Board or relevant Regional Water Board. However, if a Regional Water Board determines a specific discharge from a utility vault or underground

structure does alter the natural ocean water quality in an ASBS, the Regional Water Board may prohibit the discharge as specified in this Order.

40. Total Maximum Daily Loads (TMDL) are numerical calculations of the maximum amount of a pollutant that a water body can assimilate and still meet water quality standards. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point sources (waste load allocations) and non-point sources (load allocations), background contribution, plus a margin of safety. Discharges from Small MS4s are point source discharges subject to TMDLs. TMDLs are a mechanism to achieve compliance with water quality standards (i.e. receiving water limitations in this Order) in impaired water bodies. Incorporation of TMDL-based requirements into the MS4 permit, consistent with applicable basin plans, allows the permittee greater flexibility in achieving the water quality standards in the receiving water by allowing additional time to meet the receiving water limitations. The TMDL-specific requirements of Attachment G are mandated by federal law and federal regulations. Clean Water Act Section 303(d) states that each state "shall" identify impaired waterbodies, "shall" prioritize such waters/watersheds for future development of TMDLs, and "shall" develop TMDLs for the appropriate pollutants in accordance with the prioritization. (33 U.S.C. § 1313(d).) The TMDLs must be approved by U.S. EPA. (Id.) The Code of Federal Regulations provides that, once U.S. EPA approves a TMDL for a waterbody, the effluent limitations in any NPDES permit "shall" be "consistent with the assumptions and requirements of any available wasteload allocations." (40 C.F.R. § 122.44(d)(1)(vii)(B).) Specific to Phase II MS4 permits, the Code of Federal Regulations states that "the permit will include… [m]ore stringent terms and conditions… based on an approved total maximum daily load…" (40 C.F.R. § 122.34(c)(1).) Federal law thus compels the State Water Board to include the TMDL-specific provisions of Attachment G in the Phase II MS4 Permit.

    This Order requires Permittees to comply with all applicable TMDL-based requirements listed in Attachment G. These requirements are consistent with the assumptions and requirements of the wasteload allocations established in the relevant TMDLs. (40 C.F.R. §122.44(d)(1)(vii)(B).) The requirements were developed by the State Water Board and the Regional Water Boards, in consultation with the permittees. The Fact Sheet incorporates a discussion establishing that the requirements are consistent with the assumptions and requirements of the wasteload allocations of the TMDLs.

    Past final TMDL wasteload allocation attainment deadlines are enforceable on the effective date of this Order on January 1, 2019. It is appropriate to set the effective date of the Order at January 1, 2019, one year following adoption, in order to allow permittees additional time to demonstrate attainment of the waste load allocations, request time schedule orders incorporating compliance schedules for the attainment of the waste load allocations, or request consideration by the Regional Water Board Executive Officer of whether the particular regulatory language of a given TMDL allows for an extension of a deadline for attainment of the wasteload allocation. Attachment G specifies BMP-based WQBELs and other permit requirements for attainment of the wasteload allocations even in cases where the final wasteload allocation deadline is past. These requirements are appropriate because the Order states that it is not the intention of the State Water Board or the Regional Water Boards to take enforcement action against a permittee where (1) a permittee has applied in good faith for a time schedule order and is implementing the requirements in Attachment G pending approval of the time schedule order or (2) the Regional Board has initiated proceedings to revise the implementation schedule or other

requirements of a TMDL and the permittee is implementing the requirements in Attachment G pending the outcome of the proceedings.

41. Degraded watershed processes lead to degraded water quality. To fully protect beneficial uses, post-construction runoff retention and hydromodification control criteria for individual projects must be derived with a knowledge of dominant watershed processes. Watershed management zones will be delineated by the State Board during this permit term. The Watershed management zones will be used to identify applicable areas and appropriate criteria for runoff retention and hydromodification control to be incorporated into the next permit. Regional Water Boards that approve watershed process-based criteria for post-construction during this permit term will be permitted to require Permittees to implement these criteria.

42. The post-construction requirements and design standards contained in this Order are consistent with State Water Board Order WQ 2000-11 (*Bellflower)*. (Available at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2000/wq2000_11.pdf).

43. State Water Board, California State Parks and the State Historic Preservation Officer may coordinate efforts to manage post-construction projects involving historic sites, structures or landscapes that cannot alter their original configuration in order to maintain their historic integrity.

44. Permittees will submit Annual Reports electronically using the State Water Board's Storm Water Multi-Application Reporting and Tracking System (SMARTS). The purpose of the Annual Report is to evaluate (1) the implementation of Permittees' storm water program; (2) the effectiveness of BMPs and Measurable Goals, (3) the Permittee's improvement opportunities to achieve MEP, and (4) any supplemental information required by a Regional Water Board in accordance with the Regional Water Board's specific requirements.

45. To apply for General Permit coverage authorizing storm water discharges to surface waters pursuant to this Order, the Permittees shall electronically file a Notice of Intent (NOI) using SMARTS and mail the appropriate permit fee to the State Water Board. The NOI represents the Permittee's commitment to comply with the BMPs specified in this Order to achieve compliance with the minimum control measures specified at 40 Code of Federal Regulations sections122.34 (b)(1) through (b)(6).

46. Under 40 Code of Federal Regulations section 122.35, a Separate Implementing Entity (SIE) can implement a storm water management program for another entity such as a municipality, agency, or special district. The SIE implements parts or all of a storm water program for a Permittee. Permittees relying on a SIE to implement their entire program must electronically file an NOI using SMARTS and mail appropriate fee to the State Water Board.

47. Each Permittee is individually responsible for adoption and enforcement of ordinances and/or policies, implementation of identified control measures/BMPs needed to prevent or reduce pollutants in storm water and operation and maintenance (O&M). Enforcement actions concerning this Order will be pursued only against the individual Permittee responsible for specific violations of this Order.

48. In accordance with 40 Code of Federal Regulations section122.28(b)(3), a Regional Water Board may issue an individual MS4 NPDES Permit to a Permittee otherwise subject to this

Order, or adopt an alternative general permit that covers storm water discharges regulated by this Order. In accordance with Code of Federal Regulations section 122.34(b)(3), a Regulated Small MS4 in the same urbanized area as a medium or large MS4 may jointly with the medium or large MS4 seek a modification of the other MS4s permit to be added as a limited co-permittee. The applicability of this Order is automatically terminated on the effective date of the individual permit or joint permit or the date of approval for coverage under the alternative general permit.

49. Certain BMPs implemented or required by Permittees for urban runoff management may create a habitat for vectors (e.g., mosquitoes and rodents) if not properly designed or maintained. Close collaboration and cooperation among the Permittees, local vector control agencies, Regional Water Board staff, and the California Department of Public Health is necessary to identify and implement appropriate vector control measures that minimize potential nuisances and public health impacts resulting from vector breeding.

50. 40 Code of Federal Regulations section 131.12 requires that state water quality standards include an anti-degradation policy consistent with the federal policy. The State Water Board established California's anti-degradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal anti-degradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Water Quality Control Plans (Basin Plans) implement, and incorporate by reference, both the State and federal anti- degradation policies. (The above State Water Board Resolution No. 68-16 is available at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/1968/rs68_016.pdf).

51. This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code § 21100, et seq.) in accordance with Water Code section13389. (*County of Los Angeles v. Cal. Water Boards*, (2006), 143 Cal.App.4th 985.)

52. Following public notice in accordance with State and federal laws and regulations, the State Water Board, in a public hearing on August 8, 2012, heard and considered all comments. The State Water Board has prepared written responses to all significant comments.

53. The State Water Board has considered the costs of complying with this Order and whether the required BMPs meet the minimum MEP Standard required by federal law. Further discussion of cost of compliance is included in the Fact Sheet.

54. This Order shall serve and become effective as an NPDES permit and the Permittees shall comply with all its requirements pursuant to the timeframes identified within the permit.

IT IS HEREBY ORDERED that operators of Small MS4s subject to this Order shall comply with the following:

A. APPLICATION REQUIREMENTS FOR ALL SMALL MS4 PERMITTEES

Any Small MS4s designated under this Order that chooses to apply for an individual permit or request to join the permit of a Phase I Permittee must notify the Regional Water Board of its intent to do so by July 1, 2013. Census Designated Places (CDPs) listed on Attachment A that

are located within an existing NPDES permit area are not required to file for separate coverage and pay separate fees.

A.1. Small MS4 Permittees (Except for Department of Defense and Department of Corrections and Rehabilitation Permittees)

a. New Permittees shall electronically file an NOI via SMARTS and mail the appropriate fee to the State Water Board by July 1, 2013. Renewal Permittees shall electronically file an NOI via SMARTS and pay the appropriate application fee to the State Water Board. Any Renewal Permittees with paid 2013 application fee invoices shall receive a prorated refund. If the Permittee is designated as a Regulated Small MS4 by a Regional Water Board after adoption of this Order, the Permittee shall file the NOI and mail the appropriate fee within six months of the date of designation.

b. General Permit coverage will be in effect upon receipt of the following:

1) NOI via SMARTS
2) Appropriate Fee (in accordance with the most recent fee schedule[7])
3) Permit boundary map delineating permit jurisdiction: At a minimum the map shall include the following:

(a) Phase II MS4 permit boundary based on 2010 Census data. For cities, the permit area boundary is the city boundary. For Counties, permit boundaries must include urbanized areas and places identified in Attachment A located within their jurisdictions. The boundaries must be proposed in the permit boundary map and may be developed in conjunction with the applicable Regional Water Board
(b) City/County Boundaries
(c) Main Arterial Streets
(d) Highways
(e) Waterways
(f) Phase I MS4 Permit Boundary (if applicable)

4) Guidance document: The document shall at least include the following:

New Permittees:
(a) Overall program planning
(b) Identification of all permit requirements and responsible implementing parties

Renewal Permittees:
(a) Overall program planning
(b) Identification of all permit requirements and responsible implementing parties
(c) Identification and brief description of each BMP and associated measurable goal included in the Permittee's most current SWMP that constitutes a more specific local or tailored level of implementation that may be more protective of water quality than the minimum requirements of this Order.
(d) Identification of whether the Permittee will maintain, reduce, or cease

[7] California Code of Regulations. Title 23. Division 3. Chapter 9 Waste Discharge Reports and Requirements. Article 1 Fees.

implementation for each more protective, locally-tailored BMP.

(e) For any more protective, locally-tailored BMP and associated measurable goal for which the Renewal Permittee will reduce or cease implementation, the Renewal Permittee shall demonstrate to the Executive Officer of the relevant Regional Water Board that the reduction or cessation is in compliance with this Order and the maximum extent practicable standard, and will not result in increased pollutant discharges. The demonstration by the Permittee will be subject to public comment before any approval by the Executive Officer of reduction or cessation of BMPs In no instance may the Renewal Permittee reduce or cease a BMP if it is required by the minimum standards set by this Order.

The guidance document may be in spreadsheet, tabular or narrative format.

A.2. Department of Defense and Department of Corrections and Rehabilitation Permittees

a. Permittee shall electronically file an NOI via SMARTS and mail the appropriate fee to the State Water Board by July 1, 2013. If the Permittee is designated as a Regulated Small MS4 by a Regional Water Board after adoption of this Order, the Permittee shall file the NOI and mail the appropriate fee within six months of the date of designation.

b. General Permit coverage will be in effect upon receipt of the following:
   1) NOI via SMARTS
   2) Appropriate fee (in accordance with the most recent fee schedule[8])
   3) Permit boundary map as developed by the Permittee

Renewal MS4s must continue implementing their current storm water management programs until submittal of a NOI via SMARTS.

A.3. Waiver Certification

Regulated Small MS4s may seek a waiver from the General Permit requirements if they meet criteria specified in 40 C.F.R. §122.32(c)-(e) or additional criteria specified in A.3.b.(3) below.

In order for a Regional Water Board to waive requirements for a Regulated Small MS4, (1) the Regulated Small MS4 must certify that its discharges do not cause or contribute to, or have the potential to cause or contribute to, a water quality impairment, and (2) the Regulated Small MS4 must meet one of the waiver options in Section b below:

a. Waiver Certification Application Requirements - A Waiver Certification will only be in effect upon completion of the following:
   1) Annual Waiver Certification submitted via SMARTS.
   2) Annual Waiver Certification renewal fee of $200 plus any applicable surcharge.
   3) Letter via SMARTS from Regional Water Board or its Executive Officer waiving requirements.

[8] California Code of Regulations. Title 23. Division 3. Chapter 9 Waste Discharge Reports and Requirements. Article 1 Fees.

Requirements are automatically waived if the Regional Water Board does not respond within six months.

b. Waiver Criteria

(1) Option 1

(a) The jurisdiction served by the system is less than 1,000 people;

(b) The system is not contributing substantially (as defined in Finding 25) to the pollutant loadings of a physically interconnected regulated MS4; and

(c) If the small MS4 discharges any pollutants identified as a cause of impairment of any water body to which it discharges, storm water controls are not needed based on WLAs that are part of a U.S.EPA approved or established TMDL that addresses the pollutant(s) of concern.

(2) Option 2

(a) The jurisdiction served by the system is less than 10,000 people;

(b) The Regional Water Board has evaluated all waters of the U.S. that receive a discharge from the system;

(c) The Regional Water Board has determined that storm water BMPs are not needed based on WLAs that are part of a U.S. EPA approved or established TMDL that addresses the pollutant(s) of concern or an equivalent analysis; and

(d) The Regional Water Board has determined that future discharges from the Regulated Small MS4 do not have the potential to result in exceedances of water quality standards.

(3) Option 3 (applicable to Small MS4s outside an Urbanized Area only)

Small Disadvantaged Community – The Regulated Small MS4 certifies that it is a community with a population of 20,000 or less with an annual median household income (MHI) that is less than 80 percent of the statewide annual MHI. (Wat. Code, § 79505.5, subd.(a)).

If the Waiver Certification Application Requirements or conditions of any waiver option are not met by the Regulated Small MS4, then the Regulated Small MS4 must submit a NOI via SMARTS and appropriate fee for coverage under this General Permit or apply for an individual NPDES permit.

The State Water Board or a Regional Water Board can, at any time, require a previously waived Regulated Small MS4 to comply with this General Permit or an individual NPDES permit if circumstances change so that the conditions of the waiver are no longer met. Changed circumstances can also allow a Regulated Small MS4 to request a waiver at any time.

B. DISCHARGE PROHIBITIONS

1. Discharges of waste from the MS4 that are prohibited by Statewide Water Quality Control Plans or applicable Regional Water Quality Control Plans (Basin Plans) are prohibited.

2. Discharges of storm water from the MS4 to waters of the U.S. in a manner causing or threatening to cause a condition of pollution or nuisance as defined in Water Code § 13050 are prohibited.

3. Discharges through the MS4 of material other than storm water to waters of the U.S. shall be effectively prohibited, except as allowed under this Provision or as otherwise authorized by a separate NPDES permit. The following non-storm water discharges are not prohibited provided any pollutant discharges are identified and appropriate control measures to minimize the impacts of such discharges, are developed and implemented under the Permittee's storm water program. This provision does not obviate the need to obtain any other appropriate permits for such discharges.

   a. water line flushing;
   b. individual residential car washing;
   c. diverted stream flows;
   d. rising ground waters;
   e. uncontaminated ground water infiltration (as defined at 40 C.F.R. §35.2005(20)) to separate storm sewers;
   f. uncontaminated pumped ground water;
   g. discharges from potable water sources;
   h. foundation drains;
   i. air conditioning condensation;
   j. springs;
   k. water from crawl space pumps;
   l. footing drains;
   m. flows from riparian habitats and wetlands;
   n. dechlorinated swimming pool discharges; and
   o. incidental runoff from landscaped areas (as defined and in accordance with Section B.4 of this Order).

   Discharges or flows from fire-fighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the U.S.

   If a Permittee or a Regional Water Board Executive Officer determines that any individual or class of non-storm water discharge(s) listed above may be a significant source of pollutants to waters of the U.S. or physically interconnected MS4, or poses a threat to water quality standards (beneficial uses), the Regional Water Board Executive Officer may require the appropriate Permittee to monitor and submit a report and to implement BMPs on the discharge.

4. Discharges in excess of an amount deemed to be incidental runoff shall be controlled. Regulated Small MS4s shall require parties responsible for such to implement Sections B.4.a-d below. Incidental runoff is defined as unintended amounts (volume) of runoff, such as unintended, minimal over-spray from sprinklers that escapes the area of intended use. Water leaving an intended use area is not considered incidental if it is part of the facility design, if it is due to excessive application, if it is due to intentional overflow or application, or if it is due to negligence.

Parties responsible for controlling runoff in excess of incidental runoff shall:

a. Detect leaks (for example, from broken sprinkler heads) and correct the leaks within 72 hours of learning of the leak;
b. Properly design and aim sprinkler heads;
c. Not irrigate during precipitation events; and
d. Manage pond containing recycled water such that no discharge occurs unless the discharge is a result of a 25-year, 24-hour storm event or greater, and the appropriate Regional Water Board is notified by email no later than 24 hours after the discharge. The notification is to include identifying information, including the Permittee's name and permit identification number.

Non-storm water runoff discharge that is not incidental is prohibited, unless otherwise specified in Section B.3 above.

Incidental runoff may be regulated by waste discharge requirements or, where necessary, waste discharge requirements that serve as a NPDES permit, including MS4 permits.

5. Discharge to Areas of Special Biological Significance (ASBS) is prohibited except in compliance with the ASBS Special Protection Provisions in Attachment C. Regulated Small MS4s that discharge to an ASBS are listed in Attachment D and are subject to the ASBS Special Protection Provisions.

C. EFFLUENT LIMITATIONS

1. Permittees shall implement controls as required by this Order to reduce the discharge of pollutants from their MS4s to waters of the U. S. to the MEP. Permittees shall additionally reduce the discharge of pollutants (1) to achieve applicable TMDL waste load allocations in accordance with Sections E.15.a and F.5.i.1. of this Order and (2) to comply with the Special Protections for discharges to ASBS in accordance with Section E.4 of this Order.
2. Storm water discharges regulated by this Order shall not contain a hazardous substance in amounts equal to or in excess of a reportable quantity listed in 40 C.F.R. Part 117 or 40 C.F.R. Part 302.

D. RECEIVING WATER LIMITATIONS

Discharges shall not cause or contribute to an exceedance of water quality standards contained in a Statewide Water Quality Control Plan, the California Toxics Rule (CTR), or in the applicable Regional Water Board Basin Plan.

The Permittee shall comply with Receiving Water Limitations through timely implementation of control measures/BMPs and other actions to reduce pollutants in the discharges and other requirements of this Order including any modifications. The storm water program shall be designed to achieve compliance with Receiving Water Limitations. If exceedance(s) of water quality objectives or water quality standards persist notwithstanding implementation of other storm water program requirements of this Order, the Permittee shall assure compliance with Receiving Water Limitations by complying with the following procedure:

1. Upon a determination by either the Permittee or the Regional Water Board that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Permittee shall promptly notify and thereafter submit a report to the Regional Water Board that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report shall include an implementation schedule. The Regional Board may require modifications to the report;
2. Submit any modifications to the report required by the Regional Water Board within 30 days of notification;
3. Implement the actions specified in the report in accordance with the approved schedule;
4. So long as the Permittee has complied with the procedure set forth above and is implementing the actions, the Permittee does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the State Water Board or the Regional Water Board to develop additional BMPs.

If a Permittee fully complies with the applicable requirements and deadlines in Attachment G for a specific pollutant and water body, including the requirement to demonstrate attainment of the applicable wasteload allocation in accordance with sections E.15.a or F.5.i.1 of this Order, the Permittee is deemed to be in compliance with this section's requirement that discharges not cause or contribute to an exceedance of water quality standards for that specific pollutant and water body.

E. PROVISIONS FOR ALL TRADITIONAL SMALL MS4 PERMITTEES

E.1. RENEWAL TRADITIONAL SMALL MS4 PERMITTEES

All Renewal Traditional Small MS4s Permittees shall comply with this Section. Where the requirements of a certain subsection provide a compliance date that is past the effective date of this Order, the Renewal Traditional Small MS4 shall implement its existing program until that date.

E.2. NEW TRADITIONAL SMALL MS4 PERMITTEES

New Traditional Small MS4s shall comply with this Section.

E.3. NON-TRADITIONAL SMALL MS4S PERMITTEES

E.3.a. All Renewal Non-Traditional Small MS4 Permittees shall comply with Section F of this Order. Where the requirements of a certain subsection provide a compliance date that is past the effective date of this Order, the Renewal Non-Traditional Small MS4 shall implement its existing program until that date.

E.3.b. New Non-Traditional Small MS4s Permittees shall comply with Section F of this Order.

E.4. SMALL MS4 ASBS PERMITTEES

Both Traditional and Non-traditional Small MS4s Permittees that discharge to ASBS as listed on Attachment D shall comply with Attachment C in addition to all other applicable provisions of this Order.

E.5. SEPARATE IMPLEMENTING ENTITY (SIE)

Permittees, both Traditional and Non-traditional Small MS4s, may rely on a SIE to satisfy one or more of the permit obligations, if the SIE can appropriately and adequately address the storm water issues of the Permittee. The SIE must agree to implement the BMPs, or components thereof, to achieve compliance with this Order. If the SIE fails to implement the BMPs, the Permittee remains responsible for compliance with this Order.

E.6. PROGRAM MANAGEMENT ELEMENT

To effectively implement a coordinated storm water program, the Permittee shall have an overarching Program Management element in its storm water management program. The Program Management element shall include the following:

E.6.a. Legal Authority

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall review and revise relevant ordinances or other regulatory mechanisms, or adopt any new ordinances or other regulatory mechanisms, to obtain adequate legal authority, to the extent allowable under state or local law, to control pollutant discharges into and from, as applicable, its MS4, and to meet the requirements of this Order.

(ii) **Implementation Level** –At a minimum, the Permittee shall have adequate legal authority to:

(a) Effectively prohibit non-storm water discharges through the MS4. Exceptions to this prohibition are NPDES-permitted discharges of non-storm water and non- storm water discharges in B.3 that are considered non-significant contributors of pollutants. Where the non-storm water discharge is to a segment of an MS4 that discharges directly to an ASBS, exceptions to the non-storm water prohibition are specified in Attachment C.

(b) Detect and eliminate illicit discharges and illegal connections to the MS4. Illicit connections include pipes, drains, open channels, or other conveyances that have the potential to allow an illicit discharge to enter the MS4. Illicit discharges include all non-storm water discharges not otherwise authorized in this Order, including discharges from organized car washes, mobile cleaning and pressure wash operations,

(c) Respond to the discharge of spills, and prohibit dumping or disposal of materials other than storm water into the MS4.

(d) Require parties responsible for runoff in excess of incidental runoff to implement Discharge Prohibition B.4.a-e.

(e) Require operators of construction sites, new or redeveloped land; and industrial and commercial facilities to minimize the discharge of pollutants to the MS4 through the installation, implementation, or maintenance of BMPs consistent with the California Storm Water Quality Association (CASQA) Best Management Practice Handbooks or equivalent.

(f) Require information deemed necessary to assess compliance with this Order. The Permittee shall only require information in compliance with the Homeland Security Act or any other federal law that concerns security in the United States. The Permittee shall also have the authority to review designs and proposals for new development and redevelopment to determine whether adequate BMPs will be

installed, implemented, and maintained during construction and after final stabilization (post-construction).

(g) Enter private property for the purpose of inspecting, at reasonable times, any facilities, equipment, practices, or operations for active or potential storm water discharges, or non-compliance with local ordinances/standards or requirements in this Order, as consistent with any applicable state and federal laws.

(h) Require that dischargers promptly cease and desist discharging and/or cleanup and abate a discharge, including the ability to:

1) Effectively require the discharger to abate and clean up their discharge, spill, or pollutant release within 72 hours of notification; high risk spill should be cleaned up as soon as possible.
2) Require abatement within 30 days of notification, for uncontrolled sources of pollutants that could pose an environmental threat;
3) Perform the clean-up and abatement work and bill the responsible party, if necessary;
4) Provide the option to order the cessation of activities until such problems are adequately addressed if a situation persists where pollutant-causing sources or activities are not abated;
5) Require a new timeframe and notify the appropriate Regional Water Board when all parties agree that clean-up activities cannot be completed within the original timeframe and notify the appropriate Regional Water Board in writing within five business days of the determination that the timeframe requires revision.

(i) When warranted, have the ability to:

1) Levy citations or administrative fines against responsible parties either immediately at the site, or within a few days.
2) Require recovery and remediation costs from responsible parties.

(j) Impose more substantial civil or criminal sanctions (including referral to a city or district attorney) and escalate corrective response, consistent with its Enforcement Response Plan developed pursuant to Section E.6.c., for persistent non-compliance, repeat or escalating violations, or incidents of major environmental harm.

E.6.b. Certification

(i) **Task Description –** Within the second year of the effective date of the permit, the Permittee shall certify by its Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative as described in 40 Code of Federal Regulations section 122.22(b) that the Permittee has and will maintain full legal authority to implement and enforce each of the requirements contained in this Order.

(ii) **Implementation Level** – The Permittee's certification statement shall include the following:

(a) Identification of all departments within the Permittee's jurisdiction that conduct storm water-related activities and their roles and responsibilities under this Order.

(b) Citation of storm water runoff related ordinances, identification of the topics each ordinance addresses;

(c) Identification of the local administrative and legal procedures and ordinances available to mandate compliance with storm water-related ordinances and therefore with the conditions of this Order.

(d) A description of how storm water related-ordinances are reviewed and implemented.

(e) A statement that the municipality will implement enforcement actions consistent with its Enforcement Response Plan developed pursuant to Section E.6.c.

(iii) **Reporting** – All Permittees shall submit in the second year online Annual Report, a statement signed by an authorized signatory certifying the Permittee has adequate legal authority to comply with all Order requirements.

E.6.c. Enforcement Measures and Tracking

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and implement an Enforcement Response Plan. The Enforcement Response Plan shall contain enforcement procedures and actions and identify the Permittee's responses to violations and describe how the Permittee will address repeat and continuing violations by implementing progressively stricter responses as needed to achieve compliance.

(ii) **Implementation Level -** The Enforcement Response Plan shall describe how the Permittee will use each of the following types of enforcement responses based on the type of violation:

(a) Verbal Warnings – Verbal warnings are primarily consultative in nature. At a minimum, verbal warnings shall specify the nature of the violation and required corrective action.

(b) Written Notices – Written notices shall include nature of the violation and the required corrective action, with deadlines for taking such action.

(c) Escalated Enforcement Measures – The Permittee shall establish legal authority to employ any combination of the enforcement actions below (or their functional equivalent), and to escalate enforcement responses where necessary to correct persistent non-compliance, repeat or escalating violations, or incidents of major environmental harm:

1) Citations (with Fines) – The Enforcement Response Plan shall describe when the Permittee will assess monetary fines, which may include civil and administrative penalties.
2) Stop Work Orders – The Enforcement Response Plan shall describe when the Permittee will issue stop work orders that require construction activities to be halted, except for those activities directed at cleaning up, abating discharge, and installing appropriate BMPs.
3) Withholding of Plan Approvals or Other Authorizations – Where a facility is in non-compliance, the Enforcement Response Plan shall describe how the Permittee's own approval or authorization processes that affect the facility's ability to discharge to the MS4 can be used to abate the violation.
4) Additional Measures – The Enforcement Response Plan may also describe other escalated measures the Permittee has under its local legal authorities. For example, the Permittee may need to improve erosion control measures and collect the funds to pay for work and materials from the responsible party by

either collecting against the project's bond or directly billing the responsible party.

(d) NPDES Permit Referrals–For those construction projects or industrial facilities subject to the State's Construction General Permit (CGP) or Industrial General Permit (IGP), the Permittee shall:

1) Refer non-filers (i.e., those facilities that cannot demonstrate that they obtained permit coverage) to the appropriate Regional Water Board within 30 days of making that determination, or file a complaint on the State Water Board's website: http://www.dtsc.ca.gov/database/CalEPA_Complaint/index.cfm. In making such referrals, at a minimum include the following documentation:

   a) Construction project or industrial facility location.

   b) Name of owner or operator.

   c) Estimated construction project size or type of industrial activity (including the Standard Industrial or the North American Industry Classification, if known).

   d) Records of communication with the owner or operator regarding filing requirements.

2) Refer ongoing violations to the appropriate Regional Water Board provided that the Permittee has made a good faith effort of progressive enforcement to achieve compliance with its own ordinances. At a minimum, the Permittee's good faith effort shall include documentation of two follow-up inspections and two warning letters or notices of violation. In making such referrals, the Permittee shall include, at a minimum, the following information:

   a) Construction project or industrial facility location;

   b) Name of owner or operator;

   c) Estimated construction project size or type of industrial activity (including Standard Industrial Classification or North American Industry Classification System if known);

   d) Records of communication with the owner or operator regarding the violation, including at least two follow-up inspections, two warning letters or notices of violation, and any response from the owner or operator;

   e) Enforcement Tracking –Track instances of non-compliance via hard-copy files or electronically. The enforcement tracking documentation shall include, at a minimum, the following:

      (1) Name of owner/operator.

      (2) Location of construction project or industrial facility.

      (3) Description of violation.

      (4) Required schedule for returning to compliance.

      (5) Description of enforcement response used, including escalated responses if repeat violations occur or violations are not resolved within the time specified in the enforcement action.

      (6) Accompanying documentation of enforcement response (e.g., notices of noncompliance, notices of violations, etc.)

(7) Any referrals to different departments or agencies; and

f) Recidivism Reduction – The Permittee shall identify chronic violators of any provision of this Order or of any related local ordinance or regulation and reduce the rate of noncompliance recidivism. The Permittee shall develop incentives, disincentives, or increase inspection frequency at the operator's sites to prevent chronic violations.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.7. EDUCATION AND OUTREACH PROGRAM

Traditional Small MS4 Permittees may be required to implement Community-Based Social Marketing (CBSM) requirements as detailed in Attachment E upon determination by a Regional Board Executive Officer. The Regional Board Executive Officer shall notify Permittees within three months of the permit adoption date of their determination to require CBSM.[9] The notification shall include a statement of reasons why the Executive Officer finds that implementation of CBSM is appropriate. If the Permittee disagrees with the Executive Officer determination, the Permittee may bring the dispute to the State Water Board Executive Director or his designee as specified under the Dispute Resolution provision of this Order.

E.7.a. Public Education and Outreach

Within the first year of the effective date of the permit, all Permittees shall comply with the requirements in this Section by selecting one or more of the following Public Education and Outreach options:

1) Contributing to a countywide storm water program, as determined appropriate by the Permittee members, so that the countywide storm water program conducts outreach and education on behalf of its members; or
2) Contributing to a regional outreach and education collaborative effort (a regional outreach and education collaborative effort occurs when all or a majority of the Permittees collaborate to conduct regional outreach and education. Regional outreach and education collaboration includes Permittees defining a uniform and consistent message, deciding how best to communicate the message, and how to facilitate behavioral changes, then collaboratively apply what is learned through local jurisdiction groups, pooling resources and skills.); or
3) Fulfilling outreach and education requirements within their jurisdictional boundaries on their own; or

[9] Getting in Step, A Guide to, Conducting Watershed Outreach Campaigns, 3rd Edition, November 2010, EPA 841-B-10-002, USEPA, Office of Water.

4) A combination of the previous options, so that all requirements are fulfilled.

Reporting – By the first year Annual Report, the Permittee shall submit information indicating which Public Education and Outreach option(s) it will use to comply with this Section. For each option involving a contribution to a countywide storm water program or regional outreach and education collaborative effort, the Permittee shall complete and have available in the first year Annual Report documentation, such as a written agreement, letter or similar document, which confirms the collaboration with other MS4s.

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop and implement a comprehensive storm water public education and outreach program. The public education and outreach program shall be designed to reduce pollutant discharges in storm water runoff and non-storm water discharges to the MS4 through increased storm water knowledge and awareness in target communities. The Public Education and Outreach Program shall be designed to measurably increase the knowledge and awareness of targeted audience regarding the municipal storm drain system, impacts of urban runoff and non-storm water discharges on receiving waters, and potential BMP solutions for the target audiences, thereby reducing pollutant releases to the MS4 and the environment.

(ii) **Implementation Level** –The Permittee shall, at a minimum:

(a) Develop and implement a public education strategy that establishes education tasks based on water quality problems, target audiences, and anticipated task effectiveness. The strategy must include identification of who is responsible for implementing specific tasks and a schedule for task implementation. The strategy must demonstrate how specific high priority storm water quality issues in the community or local pollutants of concern are addressed.

(b) Implement surveys at least twice during the permit term to gauge the level of awareness in target audiences and effectiveness of education tasks.

(c) Develop and convey a specific storm water message that focuses on the following:

1) Local pollutants of concern
2) Target audience
3) Regional water quality issues

(d) Develop and disseminate appropriate educational materials to target audiences and translate into applicable languages when appropriate (e.g. the materials can utilize various media such as printed materials, billboard and mass transit advertisements, signage at select locations, stenciling at storm drain inlets, radio advertisements, television advertisements, and websites);

(e) Utilize public input (e.g., the opportunity for public comment, or public meetings) in the development of the program;

(f) Distribute the educational materials, using whichever methods and procedures determined appropriate during development of the public education strategy;

(g) Convey messages to explain the benefits of water-efficient and storm water-friendly landscaping[10], using existing information if available;

[10] For example, Surfrider's Ocean Friendly Garden Program (http://www.surfrider.org/programs/ocean-friendly-gardens) and the Water Efficient Landscape Ordinance (WELO)

(h) Develop and convey messages specific to reducing illicit discharges with information about how the public can report incidents to the appropriate authorities. The Permittee must promote, publicize, and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s through a central contact point, including phone numbers for complaints and spill reporting, and publicize to both internal Permittee staff and the public. If 911 is selected, the Permittee must also create, maintain, and publicize a staffed, nonemergency phone number with voicemail, which is checked daily;

(i) Develop and convey messages specific to proper application of pesticides, herbicides, and fertilizers;

(j) Within the Permittee's jurisdiction, provide independent, parochial, and public schools with materials to effectively educate school –age children about storm water runoff and how they can help protect water quality habitat in their local watershed (s). The Permittee is encouraged to use environmental and place-based, experiential learning materials that are integrated into school curricula and school facility management[11]. In the case that an environmental and place-based, experiential learning local program does not exist, the Permittee may use California's Education and Environment Initiative Curriculum[12] or equivalent.

(k) Develop (or coordinate with existing, effective programs) and convey messages specific to reducing discharges from organized car washes, mobile cleaning and pressure washing operations, and landscape irrigation.

(l) Conduct storm water-friendly education for organized car wash participants and provide information pertaining to car wash discharge reduction. The Permittee may use the Sacramento Stormwater Quality Partnership's River Friendly Carwash Program[13], or equivalent, for guidance.

(m) Develop and convey messages specific to mobile cleaning and pressure wash businesses.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.7.b. Staff and Site Operator Training and Education

E.7.b.1. Illicit Discharge Detection and Elimination Training

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and implement a training program for all Permittee staff who, as part of their normal job responsibilities, may be notified of, come into contact with,

[11] For example, Sacramento Splash Organization (www.sacsplash.org/), Effie Yeaw Nature Center (www.sacnaturecenter.net) or Yolo Basin Organization (yolobasin.org)

[12] http://www.californiaeei.org/

[13] http://www.beriverfriendly.net/riverfriendlycarwashing/

or otherwise observe an illicit discharge or illegal connection to the storm drain system.

(ii) **Implementation Level** – The training program shall include at a minimum:
(a) Identification of an illicit discharge or illegal connection.
(b) Proper procedures for reporting and responding to the illicit discharge or illegal connection.
(c) Follow-up training shall be provided as needed to address changes in procedures, techniques, or staffing.
(d) An annual assessment of their trained staff's knowledge of illicit discharge response and refresher training as needed.
(e) Training for new staff who, as part of their normal job responsibilities may be notified of, come into contact with, or otherwise observe an illicit discharge or illegal connection shall be trained no later than six months after the start of employment.
(f) Contact information, including the procedure for reporting an illicit discharge, shall be included in each of the Permittee's fleet vehicles that are used by field staff.
(g) Focused education on identified illicit discharges and associated illicit discharge locations.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a. for compliance directions.

E.7.b.2. Construction Outreach and Education

(a) Permittee Staff Training

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall ensure that all staff implementing the construction site storm water runoff control program are adequately trained.

(ii) **Implementation Level** – The Permittee may conduct in-house training or contract with consultants. Training shall be provided to the following staff positions of the MS4:
(a) Plan Reviewers and Permitting Staff - The Permittee shall ensure plan reviewers and permitting staff are qualified individuals, knowledgeable in the technical review of local erosion and sediment control plans, (including proper control measure selection, installation, implementation, and maintenance, as well as administrative requirements such as inspection reporting/tracking and the use of the Permittee's enforcement responses), and are certified pursuant to a State Water Board sponsored program as a Qualified Storm Water Pollution Prevention Plan (SWPPP) Developer (QSD), or a designated person on staff possesses the QSD credential.
(b) Erosion Sediment Control/Storm Water Inspectors - The Permittee shall ensure inspectors are qualified individuals, knowledgeable in inspection procedures, and are certified pursuant to a State Water Board sponsored program as either (1) a Qualified SWPPP Developer (QSD); (2) a Qualified SWPPP Practitioner (QSP); or

(3) a designated person on staff possesses each credential (QSD to supervise plan review, QSP to supervise inspection operations).

(c) Third-Party Plan Reviewers, Permitting Staff, and Inspectors - If the Permittee utilizes outside parties to review plans and/or conduct inspections, the Permittee shall ensure these staff are trained.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

(b) Construction Site Operator Education

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and distribute educational materials to construction site operators.

(ii) **Implementation Level** – The Permittee shall do the following:

(a) Each year provide information on training opportunities for construction operators on BMP selection, installation, implementation, and maintenance as well as overall program compliance.

(b) Develop or utilize existing outreach tools (i.e. brochures, posters, etc.) aimed at educating construction operators on appropriate selection, installation, implementation, and maintenance of storm water BMPs, as well as overall program compliance.

(c) Distribute appropriate outreach materials to all construction operators who will be disturbing land within the MS4 boundary. The Permittee's contact information and website shall be included in these materials.

(d) Update the existing storm water website, as necessary, to include information on appropriate selection, installation, implementation, and maintenance of BMPs.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.7.b.3. Pollution Prevention and Good Housekeeping Staff Training

The Permittee shall train employees on how to incorporate pollution prevention/good housekeeping techniques into Permittee operations.

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop a biennial employee training program for appropriate employees involved in implementing pollution prevention and good housekeeping practices as specified in Section E.11. Pollution Prevention/Good Housekeeping for Permittee Operations of this Order. The Permittee shall determine the need for interim

training during alternate years when training is not conducted, through an evaluation of employee Pollution Prevention/Good Housekeeping knowledge. All new hires whose jobs include implementation of pollution prevention and good housekeeping practices must receive this training within the first year of their hire date.

(ii) **Implementation Level** – The training program shall include the following:

(a) Biennial training for all employees implementing this program element. This biennial training shall include a general storm water education component, any new technologies, operations, or responsibilities that arise during the year, and the permit requirements that apply to the staff being trained. Employees shall receive clear guidance on appropriate storm water BMPs to use at municipal facilities and during typical O&M activities.

(b) A biennial assessment of trained staff's knowledge of pollution prevention and good housekeeping and shall revise the training as needed.

(c) A requirement that any contractors hired by the Permittee to perform O&M activities shall be contractually required to comply with all of the storm water BMPs, good housekeeping practices, and standard operating procedures described above.

(d) The Permittee shall provide oversight of contractor activities to ensure that contractors are using appropriate BMPs, good housekeeping practices and following standard operating procedures.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.8. PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall involve the public in the development and implementation of activities related to the program. The public participation and involvement program shall encourage volunteerism, public comment and input on policy, and activism in the community. The Permittee shall also be involved in their Integrated Regional Water Management Plan (IRWMP) or other watershed-level planning effort, if applicable.

(ii) **Implementation Level** – At a minimum, the Permittee shall:

(a) Develop a public involvement and participation strategy that establishes who is responsible for specific tasks and goals.

(b) Consider development of a citizen advisory group (either a stand-alone group or utilize an existing group or process). The advisory group may consist of a balanced representation of all affected parties, including residents, business owners, and environmental organizations in the MS4 service area and/or affected watershed. The Permittee may invite the citizen advisory group to participate in the development and implementation of all parts of the community's storm water program.

(c) Create opportunities for citizens to participate in the implementation of BMPs through sponsoring activities (e.g., stream/beach/lake clean-ups, storm drain stenciling, volunteer monitoring and educational activities).

(d) Ensure the public can easily find information about the Permittee's storm water program.

(e) Actively engage in the Permittee's IRWMP or other watershed-level planning effort.

(iii) Reporting – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long- term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.9. ILLICIT DISCHARGE DETECTION AND ELIMINATION

The Permittee shall develop an Illicit Discharge Detection and Elimination program to detect, investigate, and eliminate illicit discharges, including illegal dumping, into its system, to the extent allowable under law.[14] The Permittee may utilize the CWP's guide on Illicit Discharge Detection and Elimination as guidance.

E.9.a. Outfall Mapping

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall create and maintain an up-to-date and accurate outfall map[15]. The map may be in hard copy and/or electronic form or within a geographic information system (GIS) the development of the outfall map shall include a visual outfall inventory involving a site visit to each outfall. Renewal Permittees that have an existing up-to-date outfall map that includes the minimum requirements specified in Section E.9.a.(ii)(a-e) are not required to re-create the outfall map. This does not exempt Renewal Permittees with an existing outfall map from conducting the field sampling specified in Section E.9.c.

(ii) **Implementation Level** – The outfall map shall at a minimum show:
(a) The location of all outfalls[16] that are operated by the Permittee within the urbanized area, drainage areas, and land use(s) contributing to those outfalls that are

[14] The Permittee shall use the Center for Watershed Protection's (available at www.cwp.org) guide on Illicit Discharge Detection and Elimination (IDDE): A Guidance Manual for Program Development and Technical Assistance or equivalent when developing an IDDE program. IDDE program Guidance can also be found at: http://cfpub.epa.gov/npdes/stormwater/idde.cfm.

[15] The Permittee may utilize existing forms such as the CWP Outfall Reconnaissance Inventory/Sample Collection Field Sheet (http://cfpub.epa.gov/npdes/stormwater/idde.cfm) while conducting the mapping inventory and Field Sampling as specified below, in Section E.9.c.

[16] Submerged outfalls or other outfalls that may pose a threat to public safety and/or that are inaccessible are not required to be inventoried.

operated by the Permittee, and that discharge within the Permittee's jurisdiction to a receiving water. Each mapped outfall shall be located using coordinates obtained from a global positioning system (GPS) and given an individual alphanumeric identifier, which shall be noted on the map. Photographs or an electronic database shall be utilized to provide baseline information and track operation and maintenance needs over time.

(b) The location (and name, where known to the Permittee) of all water bodies receiving direct discharges from those outfall pipes.

(c) Priority areas, including, but not limited to the following:

1) Areas with older infrastructure that are more likely to have illegal connections and a history of sewer overflows or cross-connections
2) Industrial, commercial, or mixed use areas;
3) Areas with a history of past illicit discharges;
4) Areas with a history of illegal dumping;
5) Areas with onsite sewage disposal systems;
6) Areas upstream of sensitive water bodies;
7) Areas that drain to outfalls greater than 36 inches that directly discharge to the ocean; and
8) Other areas that are likely to have illicit discharges.

The priority area list shall be updated annually.

(d) Field sampling stations

(e) The permit boundary

Submerged outfalls or other outfalls that may pose a threat to public safety and/or that are inaccessible are not required to be inventoried.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.9.b. Illicit Discharge Source/Facility Inventory

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall maintain an inventory of all industrial/commercial facilities/sources within the Permittee's jurisdiction (regardless of ownership) that could discharge pollutants in storm water to the MS4. The Permittee shall utilize the inventory to identify facilities for inspections of potential illicit discharges.

(ii) **Implementation Level** - The inventory shall include the following:

(a) Minimum information for each industrial facility/source:

- Facility name;
- Address;
- Nature of business or activity;
- Physical location (decimal latitude-longitude) of storm drain receiving discharge;

- Name of receiving water and if the facility/source is tributary to a Clean Water Act Section 303(d) listed water body segment or water body segment subject to a TMDL;
- Incorporation of facility information into GIS is optional.

(b) At a minimum, the following industrial and commercial facilities/sources shall be included in the inventory.

- Vehicle salvage yards
- Metal and other recycled materials collection facilities
- Waste transfer facilities
- Vehicle mechanical repair, maintenance or cleaning
- Building trade central facilities or yards
- Corporation yards
- Landscape nurseries and greenhouses
- Building material retailers and storage
- Plastic manufacturers
- Other facilities designated by the Permittees or Regional Water Boards to have reasonable potential to contribute to pollution of storm water runoff

(c) The Permittee shall determine if the facilities that are required to be covered under the Statewide Industrial General Permit have done so. Upon discovering any facilities requiring permit coverage but are not yet permitted, the Permittee shall notify the appropriate Regional Water Board, and include copies of the notification in the online Annual Report.

(d) The Permittee shall update the inventory annually. The update shall be accomplished through collection of new information obtained during inspections and contacts with commercial and industrial facility operators and owners, or through other readily available intra-agency informational databases (e.g., business licenses, pretreatment permits, sanitary sewer hook-up permits, and SMARTS database.

(e) The Permittee shall develop and implement procedures to proactively identify illicit discharges originating from priority areas identified in Section E.9.a.(ii).(c). The Permittee shall implement the procedures to assess priority areas for the presence of illicit discharges at least once over the length of the permit term. The procedures shall include field observations, field screening, inspections, and any other appropriate and effective survey methods. Alternatively, Permittees may establish a self-certification program where Permittees require reports from authorized parties demonstrating the prevention and elimination of illicit discharges at their facilities in priority areas at least once over the length of the permit term.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.9.c. Field Sampling to Detect Illicit Discharges

(i) **Task Description** – Within the second year of the effective date of the permit (e.g. while conducting the outfall inventory under Section E.9.a.), the Permittee shall sample any outfalls that are flowing or ponding more than 72 hours after the last rain event. The Permittee shall also conduct dry weather sampling (more than 72 hours since the last rain event) of outfalls annually identified as priority areas.

(ii) **Implementation Level** – The Permittee shall:

(a) Conduct monitoring[17] for the following indicator parameters identified in Table 1 to help determine the source of the discharge. Alternatively, the Permittee may select parameters based on local knowledge of pollutants of concern in lieu of sampling for the parameters listed in Table 1. Modifications and associated justifications shall be identified within SMARTS prior to conducting field sampling as specified in Section E.9.c.(i).

[17] A description of indicator parameter sampling equipment is described in Chapter 12: Indicator Monitoring in the CWP IDDE: Guidance Manual found at: http://www.epa.gov/npdes/pubs/idde_manualwithappendices.pdf. Sampling may be conducted using field test kits.

Table 1. Indicator Parameters

Note: > = greater than
> 80% — Can almost always (>80% of samples) distinguish this discharge from clean flow types (e.g., tap water or natural water). For tap water, can distinguish from natural water.
> 50% — Can sometimes (>50% of samples) distinguish this discharge from clean flow types depending on regional characteristics, or can be helpful in combination with another parameter.
Poor — Poor indicator. Cannot reliably detect illicit discharges, or cannot detect tap water
Data sources: Pitt (

* Fluoride is a poor indicator when used as a single parameter, but when combined with additional parameters (such as detergents, ammonia and potassium), it can almost always distinguish between sewage and wash water.

Parameter	Discharge Types It Can Detect				Laboratory/Analytical Challenges
	Sewage	Washwater	Tap Water	Industrial or Commercial Liquid Wastes	
Ammonia	> 80%	> 50%	Poor	> 50%	Can change into other nitrogen forms as the flow travels to the outfall
Color	> 50%	> 50%	Poor	> 50%	
Conductivity	> 50%	> 50%	Poor	> 50%	Ineffective in saline waters
Detergents – Surfactants	> 80%	> 80%	Poor	> 50%	Reagent is a hazardous waste
Fluoride*	Poor	Poor	>80%	> 50%	Reagent is a hazardous waste Exception for communities that do not fluoridate their tap water
Hardness	> 50%	> 50%	>50%	> 50%	
pH	Poor	> 50%	Poor	> 50%	
Potassium	> 50%	Poor	Poor	> 80%	May need to use two separate analytical techniques, depending on the concentration
Turbidity	> 50%	>50%	Poor	> 50%	

(b) Verify that indicator parameters, as specified in Table 2. Action Level Concentrations for Indicator Parameters are not exceeded. Alternatively, the Permittee may tailor Table 2 to align with parameters based on local knowledge of pollutants of concern. Modifications and associated justifications shall be

identified within SMARTS prior to conducting field sampling as specified in Section E.9.c.(i).

Table 2. Action Level Concentrations for Indicator Parameters

Indicator Parameter	Action Level Concentration
Ammonia	≥ 50 milligram per liter
Color	≥ 500 units
Conductivity	≥ 2,000 microsiemens per centimeter
Hardness	≤ 10 milligram per liter as $CaCO_3$ or ≥ 2,000 milligram per liter as $CaCO_3$
pH	≤ 5 or ≥ 9
Potassium	≥ 20 milligram per liter
Turbidity	≥ 1,000 Nephelometric Turbidity Units

(c) Conduct follow up investigations per Section E.9.d. if the action level concentrations are exceeded.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.9.d. Illicit Discharge Detection and Elimination Source Investigations and Corrective Actions

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop written procedures for conducting investigations into the source of all non-storm water discharges suspected to be illicit discharges, including approaches to requiring such discharges to be eliminated, and procedures to implement corrective actions (e.g., BMPs). These procedures shall be included as part of the Illicit Discharge Detection and Elimination program. The Permittee may leverage existing inspection procedures and personnel to conduct illicit discharge detection and elimination source investigations and corrective actions.

(ii) **Implementation Level -** At a minimum, the Permittee shall conduct an investigation(s) to identify and locate the source of any suspected illicit discharge within 72 hours of becoming aware of the suspected illicit discharge. For investigations that require more than 72 hours, the Permittee shall identify the actions being taken to identify and locate the source of the suspected illicit discharge.

(a) Non-storm water discharges suspected of being sanitary sewage and/or significantly contaminated shall be investigated within 24 hours.

(b) The Permittee shall prioritize investigations of suspected sanitary sewage and/or significantly contaminated discharges over investigations of non-storm water discharges suspected of being cooling water, wash water, or natural flows.

(c) Report immediately the occurrence of any flows believed to be an immediate threat to human health or the environment to local Health Department.

(d) Determine and document through its investigations the source of all non-storm water discharges. If the source of the non-storm water discharge is found to be a discharge authorized under this General Permit, or authorized under another NPDES permit, no further action is required.

(e) Corrective Action to Eliminate Illicit Discharge – Once the source of the illicit discharge has been determined, the Permittee shall immediately notify the responsible party of the problem, and require the responsible party to conduct all necessary corrective actions to eliminate the non- storm water discharge within 72 hours of notification. Upon being notified that the discharge has been eliminated, conduct a follow-up investigation and field screening to verify that the discharge has been eliminated using BMPs or some other corrective action. The Permittee shall document its follow-up investigation. The Permittee may seek recovery and remediation costs from responsible parties or require compensation for the cost of field screening and investigations. Resulting enforcement actions shall follow the program's Enforcement Response Plan as specified in E.6.c.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.9.e. Spill Response Plan

(i) **Task Description** – Within the first year of the effective date of the permit, the Permittee shall develop and implement a spill response plan.

(ii) **Implementation Level** - At a minimum, the spill response plan will incorporate the information from Section E.9.c. and outline the following:

(a) Agency roles and responsibilities (e.g. County Department of Environmental Health, local police department, local fire department, etc.)

(b) The procedures for responding to complaints

(c) How investigations are to be conducted

(d) How clean up is initiated or conducted

(e) How reporting is completed and what information is required

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.10. CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

The Permittee shall develop, implement, and enforce a program to prevent construction site discharges of pollutants and impacts on beneficial uses of receiving waters. The program shall include the development of an enforceable construction site storm water runoff control ordinance for all projects that disturb less than one acre of soil. The construction site storm water runoff control ordinance shall include, at a minimum, requirements for erosion and sediment controls, soil stabilization, dewatering, source controls, pollution prevention measures and prohibited discharges.

Projects that disturb one acre or more of soil or disturb less than one acre but are part of a larger common plan or development or sale are subject to the CGP in addition to the construction site storm water runoff control ordinance.

E.10.a. Construction Site Inventory

(i) **Task Description -** Within the first year of the effective date of the permit, the Permittee shall maintain an inventory of all projects subject to the local construction site storm water runoff control ordinance within its jurisdiction.

(ii) **Implementation Level** –The Permittee shall maintain an inventory of all construction projects and continuously update as new projects are permitted and projects are completed. The inventory shall address all projects subject to the local construction site storm water runoff control ordinance. For projects subject to the CGP the Permittee may obtain the inventory from the SMARTS database and shall supplement as needed by the Permittee.

The inventory shall contain, at a minimum:
(a) Relevant contact information for each project (e.g., name, address, phone, email, etc. for the owner and contractor);
(b) The basic site information including location, status, size of the project and area of disturbance;
(c) The location of the project with respect to all waterbodies, waterbodies listed as impaired by sediment-related pollutants, and waterbodies listed as impaired for sediment or turbidity under the CWA Section 303(d) and approved by U.S. EPA;
(d) Project threat to water quality;
(e) Current construction phase;
(f) The required inspection frequency per the local construction site storm water runoff control ordinance;
(g) The project start and anticipated completion dates; and
(h) The date the Permittee approved the erosion and sediment control plan in accordance with this Section.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.10.b. Construction Plan Review and Approval Procedures

(i) **Task Description** – Within the first year of the effective date of the permit, the Permittee shall develop procedures to review and approve relevant construction plan documents.

(ii) **Implementation Level** – The review procedures shall meet the following minimum requirements:

(a) Prior to issuing a grading or building permit, the Permittee shall require each operator of a construction activity within its jurisdiction to prepare and submit an erosion and sediment control plan for the Permittee's review and written approval. The Permittee shall not approve any erosion and sediment control plan unless it contains appropriate site-specific construction site BMPs that meet the minimum requirements of the Permittee's construction site storm water runoff control ordinance. If the erosion and sediment control plan is revised, the Permittee shall review and approve those revisions.

(b) Require that the erosion and sediment control plan include the rationale used for selecting BMPs including supporting soil loss calculations, if necessary.

(c) Require that the erosion and sediment control plan list applicable permits directly associated with the grading activity, including, but not limited to the State Water Board's CGP, State Water Board 401 Water Quality Certification, U.S. Army Corps 404 permit, and California Department of Fish and Game 1600 Agreement. Include as a condition of the grading permit that the operator submit evidence to the MS4 that all permits directly associated with the grading activity have been obtained prior to commencing the soil disturbing activities authorized by the grading permit.

(d) Conduct and document review of each erosion and sediment control plan using a checklist or similar process.

(e) The SWPPP developed pursuant to the CGP may substitute for the erosion and sediment control plan for projects where a SWPPP is developed. The Permittee is responsible for reviewing applicable portions of the SWPPP for compliance with the Permittee's construction site storm water runoff control ordinance and this Order.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.10.c. Construction Site Inspection and Enforcement

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall use legal authority to implement procedures for inspecting public and private construction projects and conduct enforcement if necessary. The Permittee may leverage existing inspection procedures and personnel to conduct construction site inspections and enforcement.

(ii) **Implementation Level –** The inspection procedures shall be implemented to verify compliance with the Permittee's construction site storm water control ordinance. At a minimum, inspections must be conducted at priority construction sites (defined below) prior to land disturbance (during the rainy season), during active construction and following active construction. Construction site inspections shall include assessment of compliance with the Permittee's construction site storm water runoff control ordinance, and other applicable ordinances. A Permittee may propose, for Regional Water Board Executive Officer approval, an alternative approach for construction site oversight, provided the Permittee demonstrates the approach will be equally effective at reducing the discharge of pollutants from construction sites to the maximum extent practicable.

Prior to allowing an operator to commence land disturbance during the rainy season, the Permittee must perform an inspection, to ensure all necessary sediment controls are in place. During active construction, the Permittee shall conduct inspections, based on prioritization of construction sites. Active construction inspections shall include at a minimum: inspection of maintenance of BMPs, effectiveness of BMPs installed and verification that pollutants of concern are not discharged into receiving water bodies.

Prioritization criteria shall be based on project threat to water quality. Project threat to water quality includes soil erosion potential, site slope, projects size and type, sensitivity of receiving water bodies, proximity to receiving water bodies, non-storm water discharges, projects more than one acre that are not subject to the CGP (sites that have obtained an Erosivity Waiver) and past record of non-compliance by the operator of the construction site. Inspection frequencies shall be conducted based on the prioritization criteria described above.

At the conclusion of the project, the Permittee must inspect to ensure that all disturbed areas have been stabilized and that all temporary erosion and sediment control measures that are no longer needed have been removed as required by the local construction site storm water control ordinance.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11. POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR PERMITTEE OPERATIONS PROGRAM

The Permittee shall develop and implement a program to prevent or reduce the amount of pollutant runoff from Permittee operations. The Permittee shall implement appropriate BMPs for preventing or reducing the amount of storm water pollution generated by Permittee operations.

E.11.a. Inventory of Permittee-Owned and Operated Facilities

(i) **Task Description** - Within the second year of the effective date of the permit, the Permittee shall develop and maintain an inventory of Permittee-owned or operated facilities within their jurisdiction that are a threat to water quality, if applicable.

(ii) **Implementation Level** - The inventory shall include all Permittee-owned or operated facilities within their jurisdiction that are potential significant sources of pollution in storm water, including the following if applicable:

- Airports
- Animal control facilities
- Chemical storage facilities
- Composting facilities
- Equipment storage and maintenance facilities (including landscape-related operations)
- Fuel farms
- Hazardous waste disposal facilities
- Hazardous waste handling and transfer facilities
- Incinerators
- Landfills
- Materials storage yards
- Pesticide storage facilities
- Public buildings, including schools, libraries, police stations, fire stations, Permittee (municipal) buildings, restrooms, and similar buildings (i.e., buildings with a similar potential to be sources of storm water pollution as the examples provided)
- Public parking lots
- Public golf courses
- Public swimming pools
- Public parks
- Public works yards
- Public marinas
- Recycling facilities
- Salt or de-icing storage facilities
- Solid waste handling and transfer facilities
- Transportation hubs (e.g. bus transfer stations)
- Vehicle storage and maintenance areas
- Vehicle fueling facilities
- Other (as directed by appropriate Regional Water Board)

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11.b. Map of Permittee-Owned or Operated Facilities

(i) **Task Description –** Within the second year of the effective date of the permit, submit a map of the area within the permit boundary and identify where the inventoried Permittee-owned or operated facilities are located.

(ii) **Implementation Level** - The map identifying the location of the inventoried Permittee-owned or operated facilities shall identify the storm water drainage system (e.g., storm water outfalls or other mechanisms in which storm water leaves the site) corresponding to each of the facilities as well as the receiving waters to which these facilities discharge. The map shall also show the facility and the manager of each facility, including contact information.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11.c. Facility Assessment

(i) **Task Description** – Within the third year of the effective date of the permit, for all the inventoried Permittee-owned or operated facilities, the Permittee shall conduct a comprehensive inspection and assessment of pollutant discharge potential and identification of pollutant hotspots using the Center for Watershed Protection's (CWP) guide on Urban Subwatershed and Site Reconnaissance, or equivalent.[18]

(ii) **Implementation Levels** - Conduct an annual review and assessment of all municipally owned or operated facilities to determine their potential to impact surface waters. The assessment shall include the following:

(a) Identification of pollutant hotspots:

Based on the annual assessment, the Permittee shall identify those facilities that have a high potential to generate storm water and non- storm water pollutants as pollutant hotspots and assign them a high priority. Among the factors to be considered are the type and volume of pollutants stored at the site, the presence of improperly stored materials, activities that should not be performed outside (e.g., changing automotive fluids, vehicle washing), proximity to water bodies, poor housekeeping practices, and the discharge of pollutant(s) of concern to receiving water(s). Pollutant hotspots shall include, at a minimum, the Permittee's maintenance yards, hazardous waste facilities, fuel storage and/or dispensing locations, airports marinas, and any other facilities at which chemicals or other materials have a high potential to be discharged in storm water.

[18] The Permittee shall use the Center for Watershed Protection's Restoration Manual Series Guide on Urban Subwatershed and Site Reconnaissance: A User's Manual (available as a free download at www.cwp.org) or equivalent when identifying priority areas. Hotspots are specific operations in a subwatershed that may generate high storm water pollution.

(b) Documentation of the comprehensive assessment procedures and results:

The Permittee shall document the procedures it uses for conducting the comprehensive assessment along with a copy of any site evaluation checklists used to conduct the comprehensive assessment.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11.d. Storm Water Pollution Prevention Plans

(i) **Task Description** – Within the fourth year of the effective date of the permit, the Permittee shall develop and implement SWPPPs for pollutant hotspots. If a Permittee has an existing document such as Hazardous Materials Business Plan, Spill Prevention Plan, or other equivalent document the Permittee is not required to develop a SWPPP.

(ii) **Implementation Level** – The Permittee shall implement the following:

(a) The Permittee shall develop and implement a site-specific SWPPP that identifies existing storm water BMPs and a set of storm water BMPs to be installed, implemented, and maintained to minimize the discharge of pollutants to protect water quality. The Permittee may utilize the CWP guide on Urban Subwatershed and Site Reconnaissance, or equivalent, as guidance.

(b) The SWPPP(s) shall be kept on-site at each of the Permittee-owned or operated facilities' offices for which it was completed. The SWPPP shall be updated as necessary.

(c) At a minimum the SWPPP will address the following:

1) Facility specific information (location, owner, address, etc.)
2) Purpose of the document
3) Key staff/contacts at the facility
4) Site map with drainage identified
5) Identification of significant materials that are handled and stored at the facility that may be exposed to storm water
6) Description of potential pollutant sources
7) Facility BMPs
8) Spill control and cleanup – response to spills
9) Inspection schedule
10) Inspection procedures and checklist for inspections conducted to ensure proper selection, implementation, and maintenance of all BMPs

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11.e. Inspections, Visual Monitoring and Remedial Action

(i) **Task Description** – Within the fifth year of the effective date of the Permit, the Permittee shall conduct regular inspections of Permittee-owned and operated facilities.

(ii) **Implementation Level** – Inspections shall be conducted as follows:

(a) Quarterly visual hotspot inspections – Perform quarterly visual inspections, in accordance with the inspection procedures and inspection checklist developed for each Permittee-owned or operated hotspot, to ensure materials and equipment are clean and orderly; to minimize the potential for pollutant discharge; and to ensure effective selection, implementation, and maintenance of BMPs. The Permittee shall look for evidence of spills and immediately clean them up to prevent contact with precipitation or runoff. The quarterly inspections shall be tracked in a log for every facility, and records kept with the SWPPP (records may be kept electronically). The inspection report shall also include any identified deficiencies and the corrective actions taken to correct the deficiencies.

(b) Annual Hotspot comprehensive inspections – At least once per year, the Permittee shall conduct a comprehensive inspection of each hotspot facility, including all storm water BMPs, in accordance with the facility-specific inspection procedures and inspection checklist. The Permittee shall pay specific attention, without limiting its attention, to: waste storage areas, dumpsters, vehicle and equipment maintenance/fueling areas, material handling areas, and similar potential pollutant-generating areas. The annual inspection results shall be documented and records kept with the SWPPP. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct deficiencies.

(c) Quarterly Hotspot visual observation of storm water and non-storm water discharges – At least once per quarter visually observe discharge locations from hotspot facilities. Where discharges are observed identify any observed problems (e.g., color, foam, sheen, turbidity) associated with pollutant sources or BMPs shall be remedied as soon as practicable or before the next storm event, whichever is sooner. Visual observations shall be documented, and records kept with the SWPPP. This inspection shall be done in accordance with the developed standard operating procedures. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct the deficiencies.

(d) Non-Hotspot Inspection – At a minimum, inspect each inventoried municipal facility that is not a hotspot, once per permit term.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11.f. Storm Drain System Assessment and Prioritization

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop and implement procedures to assess and prioritize MS4 storm drain system maintenance, including but not limited to, catch basins, pipe and pump infrastructure, above-ground conveyances, including receiving water bodies within the Permittee's urbanized area and detention basins.

If flood conveyance maintenance is undertaken by another entity, the Permittee shall coordinate with the flood conveyance management entity by year three to assess and prioritize maintenance of the MS4 storm drain system.

(ii) **Implementation Level** – The Permittee shall:
Assess/prioritize storm drain system facilities for cleanout – Assign a priority to MS4 storm drain facilities within the Permittee's urbanized areas based on accumulation of sediment, trash and/or debris. In particular, assign high priority to catch basin meeting any of the following criteria:

1) Catch basins known to accumulate a significant amount of sediment, trash, and/or debris;
2) Catch basins collecting large volumes of runoff;
3) Catch basin collecting runoff from area that do not receive regular sweet sweeping;
4) Catch basins collecting runoff from drainage areas with exposed or disturbed soil; or
5) Catch basins that receive citizen complaints/reports.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11.g. Maintenance of Storm Drain System

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall begin maintenance of all high priority storm drain systems on an ongoing schedule.

(ii) **Implementation Level** – The Permittee shall begin maintenance of storm drain systems according to the procedures and priorities developed according to this Section. At a minimum the Permittee shall:

(a) Inspect storm drain systems – Based on the priorities assigned above in Section E.11.f.(ii)(a), develop and implement a strategy to inspect storm drain systems within the Permittee's jurisdiction. At a minimum, inspect all high priority catch basins and systems annually.

(b) Clean storm drains – Develop and implement a schedule to clean high priority catch basins and other systems. Cleaning frequencies shall be based on priority areas, with higher priority areas receiving more frequent maintenance.

(c) Labeling catch basins – Ensure that each catch basin in high foot traffic areas includes a legible storm water awareness message (e.g., a label, stencil, marker, or pre-cast message such as “drains to the creek” or “only rain in the drain”). Catch basins with illegible or missing labels shall be recorded and re- labeled within one month of inspection.

(d) Maintain surface drainage structures – High priority facilities, such as those with recurrent illegal dumping, shall be reviewed and maintained annually as needed. Non-priority facilities shall be reviewed as needed. Removal of trash and debris from high priority areas shall occur annually prior to the rainy season.

(e) Dispose of waste materials – Develop and implement a procedure to dewater and dispose of materials extracted from catch basins. This procedure shall ensure that water removed during the catch basin cleaning process and waste material will not reenter the MS4.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11.h. Permittee Operations and Maintenance Activities (O&M)

(i) **Task Description –** Within the third year of the effective date of the permit, the Permittee shall assess their O&M activities for potential to discharge pollutants in storm water and inspect all O&M BMPs on a quarterly basis.

(ii) **Implementation Level** - The Permittee shall:

(a) Develop and implement a program to assess O&M activities and subsequently develop applicable BMPs. The following Permittee O&M activities shall be included in the assessment for their potential to discharge pollutants in storm water:

1) Road and parking lot maintenance, including sidewalk repair, curb and gutter repair, pothole repair, pavement marking, sealing, and re-paving
2) Bridge maintenance, including re-chipping, grinding, saw cutting, and painting
3) Cold weather operations, including plowing, sanding, and application of deicing compounds and maintenance of snow disposal areas
4) Right-of-way maintenance, including mowing, herbicide and pesticide application, and planting vegetation
5) Storm water relevant Permittee-sponsored or sanctioned events such as large outdoor festivals, parades, or street fairs (e.g., Earth Day, Coastal Cleanup Day, Creek Week)
6) Green waste deposited in the street
7) Graffiti removal
8) Hydrant flushing

(b) Identify all materials that could be discharged from each of these O&M activities, and which materials contain pollutants. Typical pollutants associated with these activities include metals, chlorides, hydrocarbons (e.g. benzene, toluene,

ethylbenzene, and xylene), sediment, green waste, herbicide, pesticide, dried paint, and trash.

(c) Develop and implement a set of BMPs that, when applied during Permittee O&M activities, will reduce pollutants in storm water and non-storm water discharges. The Permittee shall use the CASQA Municipal Handbook or equivalent.

(d) Evaluate BMPs – All BMPs implemented during O&M activities shall be evaluated quarterly.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11.i. Incorporation of Water Quality and Habitat Enhancement Features in New Flood Management Facilities

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and implement a process for incorporating water quality and habitat enhancement features into new and rehabilitated flood management facilities.

(ii) **Implementation Level** – The Permittee shall develop and implement a process to incorporate water quality and habitat enhancement features in the design of all new and rehabilitated flood management projects that are associated with the MS4 or that discharge to the MS4.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11.j. Landscape Design and Maintenance

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall implement a landscape design and maintenance program to reduce the amount of water, pesticides, herbicides and fertilizers used during Permittee operations and activities[19].

(ii) **Implementation Tasks** – At a minimum, the Permittee shall:

(a) Evaluate pesticides, herbicides and fertilizers used and application activities performed and identify pollution prevention and source control opportunities.

(b) Implement practices that reduce the discharge of pesticides, herbicides and fertilizers. At a minimum the Permittee shall:

[19] Water Efficient Landscape Ordinance can be found at: http://www.water.ca.gov/wateruseefficiency/docs/MWELO09-10-09.pdf

1) Implement educational activities for municipal applicators and distributors.
2) Implement landscape management measures that rely on non-chemical solutions, including:
   a) Create drought-resistant soils by amending soils with compost;
   b) Create soil microbial community through the use of compost, compost tea, or inoculation;
   c) Use native and/or climate appropriate plants to reduce the amount of water, pesticides, herbicides and fertilizers used;
   d) Practice grasscycling on decorative turf landscapes to reduce water use and the need for fertilizers;
   e) Keeping grass clippings and leaves away from waterways and out of the street using mulching, composting, or landfilling;
   f) Preventing application of pesticides, herbicides and fertilizers during irrigation or within 48 hours of predicted rainfall with greater than 50% probability as predicted by National Oceanic and Atmospheric Administration (NOAA)[20];
   g) Limiting or replacing herbicide and pesticide use (e.g., conducting manual weed and insect removal);
   h) Prohibiting application of pesticides, herbicides and fertilizers as required by the regulations DPR 11-004 Prevention of Surface Water Contamination by Pesticides enacted by the Department of Pesticide Regulation;
   i) Reducing mowing of grass to allow for greater pollutant removal, but not jeopardizing public safety.
3) Collect and properly dispose of unused pesticides, herbicides, and fertilizers.
4) Minimize irrigation run-off by using an evapotranspiration-based irrigation schedule and rain sensors.

(c) Record the types and amounts of pesticides, herbicides and fertilizers used in the permit area.

(iii) **Reporting** - The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.12. POST CONSTRUCTION STORM WATER MANAGEMENT PROGRAM

E.12.a. Post-Construction Measures

Permittees shall regulate development to comply with the following Sections:

- E.12.b Site Design Measures
- E.12.c. Regulated Projects
- E.12.d. Source Control Measures

[20] https://www.weather.gov/forecast

- E.12.e. Low Impact Development (LID) Design Standards
- E.12.f. Hydromodification Measures
- E.12.g. Enforceable Mechanisms
- E.12.h. Operation and Maintenance of Storm Water Control Measures
- E.12.i. Post-Construction Best Management Practice Condition Assessment
- E.12.j. Planning and Development Review Process
- E.12.k. Post-Construction Storm Water Management Requirements Based on Assessment and Maintenance of Watershed Processes
- E.12.l. Alternative Post-Construction Storm Water Management Program

E.12.b. Site Design Measures

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall require implementation of site design measures for all projects that create and/or replace (including projects with no net increase in impervious footprint) between 2,500 square feet and 5,000 square feet of impervious surface, including detached single family homes that create and/or replace 2,500 square feet or more of impervious surface and are not part of a larger plan of development. Site design measures as specified in this section are not applicable to linear underground/overhead projects (LUPs).

(ii) **Implementation Level** - Projects shall implement one or more of the following site design measures to reduce project site runoff:

(a) Stream Setbacks and Buffers — a vegetated area including trees, shrubs, and herbaceous vegetation, that exists or is established to protect a stream system, lake reservoir, or coastal estuarine area;

(b) Soil Quality Improvement and Maintenance — improvement and maintenance soil through soil amendments and creation of microbial community;

(c) Tree Planting and Preservation — planting and preservation of healthy, established trees that include both evergreens and deciduous, as applicable;

(d) Rooftop and Impervious Area Disconnection — rerouting of rooftop drainage pipes to drain rainwater to rain barrels, cisterns, or permeable areas instead of the storm sewer;

(e) Porous Pavement — pavement that allows runoff to pass through it, thereby reducing the runoff from a site and surrounding areas and filtering pollutants;

(f) Green Roofs — a vegetative layer grown on a roof (rooftop garden);

(g) Vegetated Swales — a vegetated, open-channel management practice designed specifically to treat and attenuate storm water runoff;

(h) Rain Barrels and Cisterns — system that collects and stores storm water runoff from a roof or other impervious surface.

Project proponents shall use the State Water Board SMARTS Post-Construction Calculator[21], or equivalent to quantify the runoff reduction resulting from implementation of site design measures.

(iii) **Reporting** - The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.12.c. Regulated Projects

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall implement standards to effectively reduce runoff and pollutants associated with runoff from Regulated Projects as defined below.

(ii) **Implementation Level** - The Permittee shall regulate all projects that create and/or replace 5,000 square feet or more of impervious surface (Regulated Projects). The Permittee shall require these Regulated Projects to implement measures for site design, source control, runoff reduction, storm water treatment and baseline hydromodification management as defined in this Order.

Regulated Projects do not include:

- Detached single family home projects that are not part of a larger plan of development;
- Interior remodels;
- Routine maintenance or repair such as: exterior wall surface replacement, pavement resurfacing within the existing footprint.
- LUPs - Unless the LUP has a discrete location that has 5,000 square feet or more of newly constructed contiguous impervious surface. When the LUP has a discrete location that has 5,000 sq-ft or more of new contiguous impervious surface, only that specific discrete location is subject to Section E.12.c.

Regulated Projects include development projects. Development includes new and redevelopment projects on public or private land that fall under the planning and permitting authority of a Permittee. Redevelopment is any land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred. Redevelopment does not include trenching, excavation and resurfacing associated with LUPs; pavement grinding and resurfacing of existing roadways; construction of new sidewalks, pedestrian ramps, or bike lanes on existing roadways; or routine replacement of damaged pavement such as pothole repair or replacement of short, non-contiguous sections of roadway. The following (a-c) describe specific Regulated Project requirements for redevelopment, road projects and LUPs:

[21] The State Water Board SMARTS Post-Construction Calculator can be found at: https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp

(a) Where a redevelopment project results in an increase of more than 50 percent of the impervious surface of a previously existing development, runoff from the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included to the extent feasible.

(b) Where a redevelopment project results in an increase of less than 50 percent of the impervious surface of a previously existing development, only runoff from the new and/or replaced impervious surface of the project must be included.

(c) Road Projects and LUPs - Any of the following types of road projects and LUPs that create 5,000 square feet or more of newly constructed contiguous impervious surface and that are public road projects and/or fall under the building and planning authority of a Permittee shall comply with Section E.12.e. Low Impact Development Standards except that treatment of runoff of the 85th percentile that cannot be infiltrated onsite shall follow U.S. EPA guidance regarding green infrastructure to the extent feasible. Types of projects include:

1) Construction of new streets or roads, including sidewalks and bicycle lanes built as part of the new streets or roads.
2) Widening of existing streets or roads with additional traffic lanes.
   a) Where the addition of traffic lanes results in an alteration of more than 50 percent of the impervious surface of an existing street or road, runoff from the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included in the treatment system design.
   b) Where the addition of traffic lanes results in an alteration of less than 50 percent (but 5,000 square feet or more) of the impervious surface of an existing street or road, only the runoff from new and/or replaced impervious surface of the project must be included in the treatment system design.
3) Construction of linear underground/overhead projects (LUPs)
4) Specific exclusions are:
   a) Sidewalks built as part of new streets or roads and built to direct storm water runoff to adjacent vegetated areas.
   b) Bicycle lanes that are built as part of new streets or roads that direct storm water runoff to adjacent vegetated areas.
   c) Impervious trails built to direct storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas, preferably away from creeks or towards the outboard side of levees.
   d) Sidewalks, bicycle lanes, or trails constructed with permeable surfaces.
   e) Trenching, excavation and resurfacing associated with LUPs; pavement grinding and resurfacing of existing roadways and parking lots; construction of new sidewalks, pedestrian ramps, or bike lanes on existing roadways; or routine replacement of damaged pavement such as pothole repair or replacement of short, non-contiguous sections of roadway.

Effective Date for Applicability of Low Impact Development Runoff Standards to Regulated Projects: By the second year of the effective date of the permit, the Permittee shall require these Post-Construction Standards be applied on applicable new and redevelopment Regulated Projects, both private development requiring municipal permits and public projects, to the extent allowable by applicable law. These include discretionary permit projects that have not been deemed complete for

processing and discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals. Discretionary projects that have been deemed complete prior to the second year of the effective date of this Order are not subject to the Post- Construction Standards herein. For the Permittee's Regulated Projects, the effective date shall be the date their governing body or designee approves initiation of the project design.

Permittee's Development Projects - The Permittee shall develop and implement an equivalent approach, to the approach used for private development projects, to apply the most current version of the low impact development runoff standards to applicable public development projects, to the extent allowable by applicable law.

E.12.d. Source Control Measures

(i) **Task Description** – Regulated Projects with pollutant-generating activities and sources shall be required to implement standard permanent and/or operation source control measures as applicable.

(ii) **Implementation Level** - Measures for the following pollutant generating activities and sources shall be designed consistent with recommendations from the CASQA Stormwater BMP Handbook for New Development and Redevelopment or equivalent manual, and include:

(a) Accidental spills or leaks
(b) Interior floor drains
(c) Parking/storage areas and maintenance
(d) Indoor and structural pest control
(e) Landscape/outdoor pesticide use
(f) Pools, spas, ponds, decorative fountains, and other water features
(g) Restaurants, grocery stores, and other food service operations
(h) Refuse areas
(i) Industrial processes
(j) Outdoor storage of equipment or materials
(k) Vehicle and equipment cleaning
(l) Vehicle and equipment repair and maintenance
(m) Fuel dispensing areas
(n) Loading docks
(o) Fire sprinkler test water
(p) Drain or wash water from boiler drain lines, condensate drain lines, rooftop equipment, drainage sumps, and other sources
(q) Unauthorized non-storm water discharges
(r) Building and grounds maintenance

E.12.e. Low Impact Development (LID) Design Standards

(i) **Task Description –** The Permittee shall require all Regulated Projects to implement low impact development (LID) standards designed to reduce runoff, treat storm water, and provide baseline hydromodification management to the extent feasible, to meet

the Numeric Sizing Criteria for Storm Water Retention and Treatment under Section E.12.e(ii)(c).

(ii) **Implementation Level –** The Permittee shall adopt and implement requirements and standards to ensure design and construction of development projects achieve the following LID Design Standards.

(a) **Site Assessment**

At the earliest planning stages, the Permittee shall require Regulated Projects to assess and evaluate how site conditions, such as soils, vegetation, and flow paths, will influence the placement of buildings and paved surfaces. The evaluation will be used to meet the goals of capturing and treating runoff and assuring these goals are incorporated into the project design. The Permittee may adopt or reference an existing LID site assessment methodology.[22] Permittees shall require Regulated Projects to consider optimizing the site layout through the following methods:

1) Define the development envelope and protected areas, identifying areas that are most suitable for development and areas to be left undisturbed.
2) Concentrate development on portions of the site with less permeable soils and preserve areas that can promote infiltration.
3) Limit overall impervious coverage of the site with paving and roofs.
4) Set back development from creeks, wetlands, and riparian habitats.
5) Preserve significant trees.
6) Conform the site layout along natural landforms.
7) Avoid excessive grading and disturbance of vegetation and soils.
8) Replicate the site's natural drainage patterns.
9) Detain and retain runoff throughout the site.

(b) **Drainage Management Areas**

The Permittee shall require each Regulated Project to provide a map or diagram dividing the developed portions of the project site into discrete Drainage Management Areas (DMAs), and to manage runoff from each DMA using Site Design Measures, Source Controls and/or Storm Water Treatment and Baseline Hydromodification Measures.

(c) **Numeric Sizing Criteria for Storm Water Retention and Treatment**

The Permittees shall require facilities designed to evapotranspire, infiltrate, harvest/use, and biotreat storm water to meet at least one of the following hydraulic sizing design criteria:

1) Volumetric Criteria:

a) The maximized capture storm water volume for the tributary area, on the basis of historical rainfall records, determined using the formula and volume capture coefficients in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998) pages 175-178 (that is, approximately the 85th percentile 24-hour storm runoff event); or

[22] Low Impact Development Manual for Southern California (Low Impact Development Center – See CASQA's LID website at: https://www.casqa.org/resources/lid/socal-lid-manual.

b) The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology in Section 5 of the CASQA's Stormwater Best Management Practice Handbook, New Development and Redevelopment (2003), using local rainfall data.

2) Flow-based Criteria:

a) The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or

b) The flow of runoff produced from a rain event equal to at least 2 times the 85th percentile hourly rainfall intensity as determined from local rainfall records.

(d) **Site Design Measures**

The Permittee shall implement Site Design Measures (as defined in Section E.12.b. Site Design Measures and Section E.12.e(ii)(a) Site Assessment), site layout and design measures, based on the objective of achieving infiltration, evapotranspiration and/or harvesting/reuse of the 85th percentile 24-hour storm runoff event. Site design measures shall be used to reduce the amount of runoff, to the extent technically feasible, for which retention and runoff is required. Any remaining runoff from impervious DMAs may then be directed to one or more bioretention facilities as specified in Section E.12.e.(ii)(f), below.

(e) **Source Controls**

The Permittee shall implement Source Controls as defined in Section E.12.d. Source Control Measures.

(f) **Storm Water Treatment Measures and Baseline Hydromodification Management Measures**

After implementation of Site Design Measures, remaining runoff from impervious DMAs must be directed to one or more facilities designed to infiltrate, evapotranspire, and/or bioretain the amount of runoff specified in Section E.12.e(ii)(c) Numeric Sizing Criteria for Storm Water Retention and Treatment. The facilities must be demonstrated to be at least as effective as a bioretention system with the following design parameters:

1) Maximum surface loading rate of 5 inches per hour, based on the flow rates calculated. A sizing factor of 4% of tributary impervious area may be used.

2) Minimum surface reservoir volume equal to surface area times a depth of 6 inches.

3) Minimum planting medium depth of 18 inches. The planting medium must sustain a minimum infiltration rate of 5 inches per hour throughout the life of the project and must maximize runoff retention and pollutant removal. A mixture of sand (60%-70%) meeting the specifications of American Society for Testing and Materials (ASTM) C33 and compost (30%-40%) may be used.

4) Subsurface drainage/storage (gravel) layer with an area equal to the surface area and having a minimum depth of 12 inches.

5) Underdrain with discharge elevation at top of gravel layer.

6) No compaction of soils beneath the facility, or ripping/loosening of soils if compacted.

7) No liners or other barriers interfering with infiltration.
8) Appropriate plant palette for the specified soil mix and maximum available water use.

(g) **Alternative Designs —** Facilities, or a combination of facilities, of a different design than in Section E.12.e.(ii)(f) may be permitted if all of the following measures of equivalent effectiveness are demonstrated:

1) Equal or greater amount of runoff infiltrated or evapotranspired;
2) Equal or lower pollutant concentrations in runoff that is discharged after biotreatment;
3) Equal or greater protection against shock loadings and spills;
4) Equal or greater accessibility and ease of inspection and maintenance.

(h) **Allowed Variations for Special Site Conditions** - The bioretention system design parameters in Section E.12.e.(ii)(f) may be adjusted for the following special site conditions:

1) Facilities located within 10 feet of structures or other potential geotechnical hazards established by the geotechnical expert for the project may incorporate an impervious cutoff wall between the bioretention facility and the structure or other geotechnical hazard.
2) Facilities with documented high concentrations of pollutants in underlying soil or groundwater, facilities located where infiltration could contribute to a geotechnical hazard, and facilities located on elevated plazas or other structures may incorporate an impervious liner and may locate the underdrain discharge at the bottom of the subsurface drainage/storage layer (this configuration is commonly known as a “flow-through planter”).
3) Facilities located in areas of high groundwater, highly infiltrative soils or where connection of underdrain to a surface drain or to a subsurface storm drain are infeasible, may omit the underdrain.
4) Facilities serving high-risk areas such as fueling stations, truck stops, auto repairs, and heavy industrial sites may be required to provide additional treatment to address pollutants of concern unless these high- risk areas are isolated from storm water runoff or bioretention areas with little chance of spill migration.

(i) **Exceptions to Requirements for Bioretention Facilities -** Contingent on a demonstration that use of bioretention or a facility of equivalent effectiveness is infeasible, other types of biotreatment or media filters (such as tree-box- type biofilters or in-vault media filters) may be used for the following categories of Regulated Projects:

1) Projects creating or replacing an acre or less of impervious area, and located in a designated pedestrian-oriented commercial district (i.e., smart growth projects), and having at least 85% of the entire project site covered by permanent structures;
2) Facilities receiving runoff solely from existing (pre-project) impervious areas; and

3) Historic sites, structures or landscapes that cannot alter their original configuration in order to maintain their historic integrity.

By the second year of the effective date of the permit, each Permittee shall adopt or reference appropriate performance criteria for such biotreatment and media filters.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.12.f. Hydromodification Management

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and implement Hydromodification Management procedures. Hydromodification management projects are Regulated Projects that create and/or replace one acre or more of impervious surface. A project that does not increase impervious surface area over the pre-project condition is not a hydromodification management project.

(ii) **Implementation Level** - The Permittee shall implement the following Hydromodification Standard:

(a) Post-project runoff shall not exceed estimated pre-project flow rate for the 2-year, 24-hour storm in the following geomorphic provinces (Figure 1):

- Coast Ranges
- Klamath Mountains
- Cascade Range
- Modoc Plateau
- Basin and Range
- Sierra Nevada
- Great Valley

(b) Post-project runoff shall not exceed estimated pre-project flow rate for the 10-year, 24-hour storm in the following geomorphic provinces (Figure 1):

- Transverse Ranges
- Peninsular Ranges
- Mojave Desert
- Colorado Desert

Figure 1 — California Geomorphic Provinces

Alternatively, the Permittee may use a geomorphically based hydromodification standard or set of standards and analysis procedures designed to ensure that Regulated Projects do not cause a decrease in lateral (bank) and vertical (channel bed) stability in receiving stream channels. The alternative hydromodification standard or set of standards and analysis procedures must be reviewed and approved by the Regional Board Executive Officer.

(iii) **Reporting** –The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long- term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.12.g. Enforceable Mechanisms

(i) **Task Description** - Within the third year of the effective date of the permit, the Permittee shall develop and/or modify enforceable mechanisms that will effectively implement the requirements in Section E.12.b through f (if necessary).

(ii) **Implementation Level** - The Permittee shall develop and/or modify enforceable mechanisms that will effectively implement the requirements in Section E.12.b through E.12.f and may include municipal codes, regulations, standards, and specifications. The Permittee shall:

(a) Conduct an analysis of all applicable codes, regulations, standards, and/or specifications to identify modifications and/or additions necessary to fill gaps and remove impediments to effective implementation of project-scale development requirements.

(b) Approve new and/or modified enforceable mechanisms that effectively resolve regulatory conflicts and implement the requirements in Sections E.12.b through E.12.f (if necessary)

(c) Apply new and/or modified enforceable mechanisms to all applicable new and redevelopment projects. Develop and make available specific guidance for LID BMP design

(d) Complete a Tracking Report indicating the Permittee’s accomplishments in education and outreach supporting implementation of LID requirements for new and redevelopment projects.

E.12.h. Operation and Maintenance of Post-Construction Storm Water Management Measures

(i) **Task Description** –Within the second year of the effective date of the permit, the Permittee shall implement an O&M Verification Program for storm water treatment and baseline hydromodification management structural control measures defined in Section E.12.e(ii)(f). Storm Water Treatment Measures and Baseline Hydromodification Management Measures on all Regulated Projects.

(ii) **Implementation Level** – At a minimum, the O&M Verification Program shall include the following elements:

(a) All Regulated Projects shall at a minimum, require at least one of the following from all project proponents and their successors in control of the Project or successors in fee title:

1) The project proponent’s signed statement accepting responsibility for the O&M of structural control measure(s) until such responsibility is legally transferred to another entity;

2) Written conditions in the sales or lease agreements or deed for the project that requires the buyer or lessee to assume responsibility for the O&M of the installed treatment system(s) and hydromodification control(s) (if any) until such responsibility is legally transferred to another entity;
3) Written text in project deeds, or conditions, covenants and restrictions for multi-unit residential projects that require the homeowners association or, if there is no association, each individual owner to assume responsibility for the O&M of the installed treatment system(s) and hydromodification control(s) (if any) until such responsibility is legally transferred to another entity; or
4) Any other legally enforceable agreement or mechanism, such as recordation in the property deed, that assigns the O&M responsibility for the installed treatment system(s) and hydromodification control(s) (if any) to the project owner(s) or the Permittee.

(b) Coordination with the appropriate mosquito[23] and vector control agency with jurisdiction to establish a protocol for notification of installed treatment systems and hydromodification management controls. On an annual basis, before the wet season, prepare a list of newly installed (installed within the reporting period) storm water treatment systems and hydromodification management controls to the local mosquito and vector control agency and the appropriate Regional Water Board. The Permittee may submit the list of Regulated Projects as described in Section E.12.h.(ii)(e). This list shall include the facility locations and a description of the storm water treatment measures and hydromodification management controls installed.

(c) Conditions of approval or other legally enforceable agreements or mechanisms for all Regulated Projects that require the granting of site access to all representatives of the Permittee for the sole purpose of performing O&M inspections of the installed treatment system(s) and hydromodification control(s) (if any).

(d) A written implementation plan that describes O&M (including inspection) of all Regional Projects and regional controls that are Permittee-owned and/or operated.

(e) A database or equivalent tabular format of all Regulated Projects (public and private) that have installed treatment systems. This database or equivalent tabular format shall include the following information for each Regulated Project:
1) Name and address of the Regulated Project;
2) Specific description of the location (or a map showing the location) of the installed treatment system(s) and hydromodification control(s) (if any);
3) Date(s) that the treatment system(s) and hydromodification controls (if any) is/are installed;
4) Description of the type and size of the treatment system(s) and hydromodification control(s) (if any) installed;
5) Responsible operator(s) of each treatment system and hydromodification control (if any);

[23] California Department of Public Health. (2012). Best Management Practices for Mosquito Control in California. Retrieved on July 20, 2012 from http://www.westnile.ca.gov/resources.php

6) Dates and findings of inspections (routine and follow-up) of the treatment system(s) and hydromodification control(s) (if any) by the Permittee; and

7) Any problems and corrective or enforcement actions taken.

8) Maintenance Approvals: The Permittee shall ensure that systems and hydromodification controls installed at Regulated Projects are properly operated and maintained for the life of the projects. In cases where the responsible party for a treatment system or hydromodification control has worked diligently and in good faith with the appropriate state and federal agencies and the Permittee to obtain approvals necessary to complete maintenance activities for the treatment system or hydromodification management control, but these approvals are not granted, the Permittee shall be deemed to be in compliance with this Provision.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long- term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.12.i. Post-Construction Best Management Practice Condition Assessment

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall inventory and assess the maintenance condition of structural post-construction BMPs (including BMPs used for flood control) within the Permittee's jurisdiction.

(ii) **Implementation Level** – The Permittee shall develop and implement a plan to inventory, map, and determine the relative maintenance condition of structural post-construction BMPs. Maintenance condition shall be determined through a self-certification program where Permittees require annual reports from authorized parties demonstrating proper maintenance and operations. The plan shall include:

(a) An inventory and map of existing structural post-construction BMPs, in GIS if available.

(b) Assessments of the self-certification program annual reports. Assessment shall include a ranking of structural BMPs and verification that BMPs are operating to remove pollutants as designed. Regional BMPs should receive higher priority than lot-scale BMPs, and BMPs designed to remove pollutants for which receiving water is impaired should receive priority attention over other BMPs.

(c) Appropriate escalating enforcement based on the Permittee Enforcement Response Plan to ensure proper maintenance of BMPs and submittal of self-certification annual reports.

(d) Self-Certification Annual Reports. At a minimum, the self-certification annual reports shall include:

1) Field observations to determine the effectiveness of the structural post construction BMPs in removing pollutants of concern from storm water runoff and/or reducing hydromodification impacts as designed.

2) Long-term plan for conducting regular maintenance of BMPs, including the frequency of such maintenance.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long- term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.12.j. Planning and Development Review Process

(i) **Task Description** – The Permittee shall review their planning and permitting process to assess any gaps or impediments impacting effective implementation of these post-construction requirements specified in Section E.12, and where these are found to exist, seek solutions to promote implementation of these requirements within the context of public safety and community goals for land use. The Permittee shall prioritize review of the landscape code (code detailing landscaping requirements and considerations which should be implemented to protect environmental quality) to correct gaps and impediments impacting effective implementation of post-construction requirements.

(ii) **Implementation Level** – During years 1–3, the Permittee shall conduct the review using an existing guide or template already developed for MS4s (such as the Municipal Regulatory Update Assistance Program (MRUAP)[24] conducted by AHBL, Inc. for the Low Impact Development Initiative (LIDI) on the Central Coast). By the fourth year of the effective date of the permit, any changes to the planning and permitting process will be completed to effectively administer these provisions. Priority shall be placed on review of the landscape code, with the following implementation level.

(a) Within the first year of the effective date of this permit, the Permittee shall conduct an analysis of the landscape code to correct gaps and impediments impacting effective implementation of post-construction requirements.

(b) Within the second year of the effective date of the permit, the Permittee shall complete any changes to the landscape code to effectively administer post-construction requirements.

(iii) **Reporting** – By the second year Annual Report and annually thereafter, complete and have available a summary of the review process, and any proposed or completed changes to the Permittee's program.

E.12.k. Post-Construction Storm Water Management Requirements Based on Assessment and Maintenance of Watershed Processes

Small MS4s subject to Section E of this Order, in place of complying with the requirements set forth in Section E.12, except for Sections E.12.j. Planning and Development Review Process and E.12.e(ii)(e) Source Control Requirements, shall comply with post-construction storm water management requirements based on a

[24] http://www.casqa.org/LIDDemo/LIDTraining/tabid/246/Default.aspx

watershed-process approach developed by Regional Water Board that include the following:

- Completion of a comprehensive assessment of dominant watershed processes affected by urban storm water
- LID site design and runoff reduction measures, numeric runoff treatment and retention controls, and hydromodification controls that will maintain watershed processes and protect water quality and beneficial uses.
- A process by which Regional Board staff will actively engage Permittees to adaptively manage requirements as determined by the assessment of watershed processes.
- An annual reporting program that involves Regional Board staff and State Board staff to inform statewide watershed process based criteria.

The regional watershed-process based approach must be approved by the Regional Water Board following a public process.

E.12.I. Alternative Post-Construction Storm Water Management Program

A Permittee may propose alternative post-construction measures in lieu of some or all of Section E.12. requirements for multiple benefit projects. Multiple-benefit projects include projects that may address any of the following, in addition to water quality: water supply, flood control, habitat enhancement, open space preservation, recreation, climate change. Multiple-benefit projects may be applied at various scales including project site, municipal or sub-watershed level. Multiple-benefit projects may include, but are not limited to, projects developed under Watershed Improvement Plans (Water Code §16100 et seq.), IRWMP implementation and green infrastructure projects. Multiple benefit projects must be equally or more protective of water quality than Section E.12. requirements.

The Regional Water Board or the Executive Officer, may approve alternative post-construction measures for multiple-benefit projects, as described above, after an opportunity for public comment, if the Regional Water Board or Executive Officer finds that the alternative measures are consistent with the MEP standard.

E.13. WATER QUALITY MONITORING

Traditional Small MS4 Permittees that are required to conduct monitoring of discharges to ASBS, TMDL, or 303(d) impaired water bodies, as described in Sections E.13.(a)–(c), are not required to perform additional monitoring as specified in Sections E.13.d.1. and E.13.d.2.

Permittees are encouraged to participate in a regional monitoring program in order to cost- effectively combine resources and water quality information. Regional monitoring is the collaboration of local and regional monitoring programs that are designed to create a more comprehensive picture of water quality conditions within a watershed.

The following management questions may be used to assist in guiding the development of a regional monitoring program, as applicable[25]:

1) Are water quality standards being met in receiving waters?
2) What is the extent and magnitude of the current or potential receiving water problems[26]?
3) What is the relative urban runoff contribution to the receiving water problem(s)?
4) What are the sources to urban runoff that contribute to the receiving water problem(s)?
5) Are conditions in receiving waters getting better or worse?

Regional monitoring programs shall be reviewed and approved by the Executive Officer of the applicable Regional Water Board[27].

Where a regional monitoring group has initiated plans, before the effective date of this Order, to conduct monitoring that achieves Section E.13. compliance, the Permittee may request the Executive Officer of the applicable Regional Board tailor compliance dates to synchronize with such efforts. Additionally, existing regional water monitoring efforts shall be reviewed and approved by a Regional Water Board Executive Officer.

Where a Permittee receives grant funding to conduct monitoring that achieves Section E.13. compliance, the Permittee may request the Regional Water Board Executive Officer tailor compliance dates to synchronize with such efforts.

E.13.a. ASBS Monitoring

All Permittees that discharge to an ASBS and are covered by an Ocean Plan exception shall comply with the monitoring requirements described in the terms, prohibitions and special conditions in Attachment C.

E.13.b. TMDL Monitoring

Permittees shall implement any monitoring requirements assigned to them in Attachment G. The Regional Water Board Executive Officer may require additional monitoring, per Water Code § 13383.

[25] The five core management questions are based on the Stormwater Monitoring Coalition's Model Monitoring Technical Committee Technical Report # 419: Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California.

[26] Water quality problems include exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts.

[27] The regional monitoring programs may deviate from the specific requirements in Section E.13.a. to the extent approved by the Executive Officer, except that the regional monitoring program shall be SWAMP comparable and that all data shall be placed in the California Environmental Data Exchange Network (CEDEN).

E.13.c. 303(d) Monitoring

All Permittees that discharge to waterbodies listed as impaired on the 303(d) list[28] where urban runoff is listed as the source, shall consult with the Regional Water Board within one year of the effective date of the permit to assess whether monitoring is necessary and if so, determine the monitoring study design and a monitoring implementation schedule. Permittees shall implement monitoring of 303(d) impaired water bodies as specified by the Regional Water Board Executive Officer.

E.13.d. Receiving Water Monitoring and Special Studies

Traditional Small MS4 Permittees with a population greater than 50,000 listed in Attachment A that are not already conducting ASBS, TMDL or 303(d) monitoring efforts shall participate in one of the following monitoring programs, subject to Regional Water Board Executive Officer approval:

E.13.d.1. Receiving Water Monitoring

E.13.d.2. Special Studies

E.13.d.1. Receiving Water Monitoring

(i) **Task Description –** Within the second year of the effective date of the permit, the Permittee shall develop and implement a receiving water monitoring program to Monitor receiving water quality at upstream location in an area undergoing development and evaluate changes in receiving water quality over time, and Monitor receiving water quality at a downstream location in an urban area and evaluate changes in receiving water quality over time. Permittees may, to the extent allowed by law, establish a monitoring fund into which all new development contributes on a proportional basis (% development fee, size/number of lots, etc.). Monitoring funding may be overseen by municipalities or coalition of municipalities.

(ii) **Implementation Level –** By the first year of the permit, the Permittee shall select one urban/rural interface monitoring site to monitor receiving water quality at an upstream location in an area undergoing development and evaluate changes in receiving water quality over time, and; one (1) urban area monitoring site to monitor receiving water quality at a downstream location in an urban area and evaluate changes in receiving water quality over time. Site selection shall include the following:

(a) Urban/Rural Interface. Identify one characteristic waterway at the top, or upstream, of a HUC 12 level watershed planned for development in the near future that traverses an urban/rural interface, using the 2010 Census Data and urban area maps, and establish a permanent monitoring location at the identified urban/rural interface[29]. Monitoring at the urban/rural interface shall address the question: Does receiving water quality change as LID BMPs are integrated into new development?

(b) Urban Downstream. Identify one characteristic waterway at the bottom, or downstream, of the same HUC 12 watershed as the urban/rural interface

[28] http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml.

[29] The urban/rural interface is identified as the geographical location at which urban land use and rural land use interact.

monitoring location and within an urbanized area and establish a permanent monitoring location at the identified urbanized area waterway. Monitoring at the urban area site shall address the question: Does receiving water quality improve as a result of efforts to control the sources of pollution and educate the public?

By the second year of the permit term and after establishment of site selection, the Permittee shall monitor the urban/rural interface site to address the hypothesis that receiving water quality will remain the same as new development proceeds, and the urban area site to address the hypothesis that receiving water quality will improve over time as storm water and other water quality programmatic efforts are implemented. Monitoring shall be implemented in accordance with Table 3: Receiving Water Monitoring Parameters and Protocols.

Table 3: Receiving Water Monitoring Parameters and Protocol

Information on Receiving Water Monitoring Parameters and Protocol for Table 3 includes:

Urban/Rural Interface:

Objective: Monitor receiving water quality at upstream location in an area undergoing development. Evaluate changes in receiving water quality over time.

Question: Does receiving water quality change as LID BMPs are integrated into new development?

Hypothesis: Receiving water quality will remain the same as new development proceeds.

Urban Downstream:

Objective: Monitor receiving water quality at a downstream location in an urban area. Evaluate changes in receiving water quality over time.

Question: Does receiving water quality improve as a result of efforts to control the sources of pollution and educate the public?

Hypothesis: Receiving water quality will improve over time as storm water and other water quality programmatic efforts are implemented.

* Pyrethroid monitoring is required at the urban/rural interface site only.

** Currently, pyrethroids are the pesticide of greatest concern and abundance in urban/suburban waterways. However, new regulations enacted by the Dept. of Pesticide Regulation restrict how pyrethroids may be applied. Initial models by UC Davis researchers suggest that this could result in a runoff reduction of 80-90%, depending on the amount of impervious cover in the watershed. In the future, other pesticides may become more of a threat to aquatic life in urban waterways. One pesticide that is being used with greater frequency is fipronil, a phenylpyrazole insecticide, that is more water soluble than pyrethroids. In order to use the resources of the permittees most efficiently, the State Water Resource Control Board reserves the right to modify the terms and conditions of the permit based on new information on pesticide use and toxicity. This could include substituting another pesticide for monitoring or eliminating this endpoint.

Parameter	Endpoint	Beneficial Used Protected	Justification	Protocol
Water Quality	Pyrethroids* (sediment)	Aquatic Life	Pyrethroids** among the most ubiquitous urban contaminant in storm water. Highly toxic to aquatic life.	Method with detection limit of 1 pptr (5 pptr for permethrin only) such as the GC-MS-MS method of Water Pollution Control Lab. Yearly in spring at urban/rural interface only. Refer to pending SWAMP guidelines.

Parameter	Endpoint	Beneficial Used Protected	Justification	Protocol
Water Quality	Dissolved oxygen (DO)	Aquatic life, recreation	DO reports on presence of excessive nutrients (Nitrogen, Phosphorus) and effects of organic matter loading into a waterbody. High DO during day, low DO at night suggests algae overgrowth.	Option 1: One week of evening grab samples (a minimum of 2 hours after dusk or 2 hours before sunrise) in spring (as soon as safe to get into waterway), summer, & fall. OR Option 2: Continuous sampling. 1 week in spring summer, fall. In rivers or lakes, 2 samplers to obtain depth-integrated values.
Water Quality	Temperature	Aquatic life	Aquatic life can survive within a temperature window, exceedances lethal. If loggers are deployed, DO probes often also measure temperature.	Option 1: Daytime measurement between noon – 5 pm, at the same time of day, for 2 weeks in the spring, summer, and fall. Option 2: Continuous sample. Same as for dissolved oxygen.
Water Quality	Bacteria	Recreation	Increase cell count linked to poor management practices, high bacteria levels limit recreational use of waterways.	Once yearly in later summer or fall. Collect 1 sample weekly x 4 weeks. Calculate geometric mean. Measure E. coli.

Parameter	Endpoint	Beneficial Used Protected	Justification	Protocol
Water Quality	Nutrients	Aquatic life Recreation Other	Excess nutrients can cause eutrophication of waterways leading to low dissolved oxygen which harms aquatic life. Algal overgrowth can also impair flows, adversely affect aesthetics, limiting recreation.	Benthic algal biomass and % cover (benthic chlorophyll a) from sediment in wadeable and non- wadeable streams or planktonic algal biomass (water column chlorophyll) from non-wadeable rivers and lakes. 3 times per year at beginning, middle, and end of growing season. Use SWAMP protocol.
Physical Habitat	PHAB assessment	Aquatic life	Expect to see few changes in habitat with effective LID implementation	Once yearly in spring. Use SWAMP protocol.
Physical Habitat	Channel cross sections	Aquatic life	Reports on stability of creek/river channel	Once yearly in spring.
Physical Habitat	Flow	Aquatic life	Expect minimal changes in flow rate if Low Impact Development practices minimizes changes in hydrograph usually seen with urbanization	Option 1: Pressure transducer. Use channel cross sections put in same time as DO probe. Measure spring, summer, and fall. Option 2: Install stage gage, develop rating curve. Evaluate spring, summer, and fall for 2 weeks.
Physical Habitat	Photo documentation	Overall conditions	Pictures and flood prone area will aid in the interpretation of the data	Once yearly in spring.

Parameter	Endpoint	Beneficial Used Protected	Justification	Protocol
Aquatic Life	Bioassessment	Aquatic life	Benthic macroinvertebrates (BMIs) integrate the sum of all conditions. Use early measurements as the baseline. In some cases, expect improved BMIs, depending on previous use of land.	In spring as soon as safe to enter water, use SWAMP protocol

(iii) **Reporting –** By the second year Annual Report, the Permittee shall complete and have available a report (50 page maximum) that includes a summary of baseline data collections and discussion of monitoring program results;

By the fifth year Annual Report, the Permittee shall complete and have available a report (50 page maximum) that includes a comparison of data collection to baseline data, and discussion of monitoring program results.

At a minimum, the second and fifth year Annual Reports shall include the following information:

(a) The purpose of the monitoring, brief contextual background and a brief description of the study design and rationale.

(b) Sampling site(s) locations, including latitude and longitude coordinates, water body name and water body segment if applicable. Sampling design, including sampling protocol, time of year, sampling frequency and length of sampling.

(c) Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable.

(d) Results of data collection, including concentration detected, measurement units, and detection limits if applicable.

(e) Quantifiable assessment, analysis and interpretation of data for each monitoring parameter.

(f) Comparison to reference sites (if applicable), guidelines or targets

(g) Discussion of whether data collected addresses the objective(s) or question(s) of study design

(h) Quantifiable discussion of program/study pollutant reduction effectiveness.

Where applicable, the Permittee shall prepare, maintain, and implement a Quality Assurance Project Plan (QAPP) in accordance with the Surface Water Ambient Monitoring Program. All monitoring samples shall be collected and analyzed according to the Program QAPP developed for the purpose of compliance with this Order. SWAMP Quality Assurance Program Plan (2008) is available at: http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/qaprp082209.pdf.

A formatted Microsoft Word document that includes guidelines and boilerplate language for developing the permit QAPP is available at: http://www.waterboards.ca.gov/water_issues/programs/swamp/tools.shtml#qa.

Water quality data shall be uploaded to SMARTS and must conform to California Environmental Data Exchange Network (CEDEN) Minimum Data Templates format. CEDEN Minimum Data Templates are also available at: http://ceden.org/.

E.13.d.2. Special Studies

(i) **Task Description –** Within the first year of the effective date of the permit, the Permittee, as an alternative to Section E.13.d.1. Receiving Water Monitoring may develop and implement a special study monitoring program to assess and evaluate the effectiveness of water quality projects or storm water program elements designed to

reduce specific water quality pollutants that are causing or contributing to beneficial use impairment. The special studies must demonstrate the nexus between storm water program implementation, water quality protection and pollutant reduction effectiveness and may include, but are not limited to:

(a) Assessment of effectiveness of habitat enhancement efforts and assessment of effectiveness of stream restoration projects (i.e., stream channel restoration as related to implementation of hydromodification standards);

(b) Assessment of effectiveness of low impact development pilot projects, and assessment of storm water program components through pollutant load reduction quantification and/or discharge water quality monitoring (i.e., reduction of impervious surface related to implementation of Post- Construction Storm Water Management Program).

(ii) **Implementation Level** – By the first year of the permit, the Permittee shall develop and implement a special study plan and shall submit to an applicable Regional Board for review and approval. Within the second year of the effective date of the permit, the Permittee shall begin implementation of the approved special study plan. The study plan shall include, at a minimum:

(a) Purpose/objective of the monitoring (sampling rationale), including reasoning to implement a special study in lieu of the Receiving Water Monitoring described in Section E.13.d.1.

(b) Brief project background information and overall study design (i.e., surrounding land uses, reference monitoring data, if applicable, and site conditions)

(c) Parameters that are being measured, how parameters are measured and rationale for parameter selection.

(d) Frequency that parameters are being measured (sampling frequency)

(e) Sampling site location

(f) Description of how the data will be managed, analyzed (including statistical analysis) and reported

(g) Expected results based on study plan design and hypothesis

(iii) **Reporting –** By the second year Annual Report, the Permittee shall complete and have available a report (50 pages maximum) that includes a summary of baseline data collections and discussion of monitoring program results.

By the fifth year Annual Report, the Permittee shall complete and have available a report (50 pages maximum) that includes a comparison of data collection to baseline data, and discussion of monitoring program results.

At a minimum, the second and fifth year Annual Reports shall include the following information:

(a) The purpose of the monitoring, contextual background and a description of the study design and rationale.

(b) Sampling site(s) locations, including latitude and longitude coordinates, water body name and water body segment if applicable. Sampling design, including sampling protocol, time of year, sampling frequency and length of sampling.

(c) Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable.

(d) Results of data collection, including concentration detected, measurement units, and detection limits if applicable.

(e) Quantifiable assessment analysis and interpretation of data for each monitoring parameter or other data type.

(f) Comparison to reference sites (if applicable), guidelines or targets

(g) Discussion of whether data collected addresses the objective(s) or question(s) in the study plan

(h) Quantifiable discussion of program/study pollutant reduction effectiveness.

Where applicable, the Permittee shall prepare, maintain, and implement a QAPP in accordance with SWAMP. All monitoring samples shall be collected and analyzed according to the Program QAPP developed for the purpose of compliance with this Order. SWAMP Quality Assurance Program Plan (2008) is available at: http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/qaprp082209.pdf.

A formatted Microsoft Word document that includes guidelines and boilerplate language for developing the permit QAPP is available at: http://www.waterboards.ca.gov/water_issues/programs/swamp/tools.shtml#qa.

Water quality data shall be uploaded to the Storm Water Multi-Application Reporting and Tracking System (SMARTS) and must conform to "CEDEN Minimum Data Templates" format. CEDEN Minimum Data Templates are also available at: http://ceden.org/

E.14. PROGRAM EFFECTIVENESS ASSESSMENT AND IMPROVEMENT

E.14.a. Program Effectiveness Assessment and improvement Plan

(i) **Task Description -** The Permittee shall develop and implement a Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. The Program Effectiveness Assessment and Improvement Plan will assist the Permittee to document compliance with permit conditions and to adaptively manage its storm water program and make necessary modifications to the program to improve program effectiveness at reducing pollutants of concern, achieving the MEP standard, and protecting water quality. The Program Effectiveness Assessment and Improvement Plan shall identify the strategy used to gauge the effectiveness of prioritized BMPs and program implementation as a whole. Prioritized BMPs include BMPs implemented based on pollutants of concern. Where pollutants of concern are unidentified, prioritized BMPs are based on common urban pollutants (i.e., sediment, bacteria, trash, nutrients). The annual effectiveness assessments will help identify potential modifications to the program to ensure long-term effectiveness.

(ii) **Implementation Level** - The Program Effectiveness Assessment and Improvement Plan may be modeled upon the most recent version (if applicable) Municipal Storm Water Program Effectiveness Assessment Guidance (CASQA, May 2007) or equivalent.

(a) The Program Effectiveness Assessment and Improvement Plan shall include the following elements, at a minimum as applicable:

1) Identification of overall program goals including pollutants of concern and prioritized BMPs
2) Documentation of the level of implementation of storm water program elements
3) Identification and targeting of target audience(s)
4) Assessment of BMP performance at achieving outcome levels
5) Assessment of pollutant source reductions achieved by individual BMPs
6) Quantification of pollutant loads and pollutant load reductions achieved by the program as a whole
7) MS4 discharge quality, where available, including analysis of the data
8) Receiving water quality data, including analysis of the data
9) Identification of long-term effectiveness assessment, to be implemented beyond the permit term

(b) The Program Effectiveness Assessment and Improvement Plan shall assess BMP and program effectiveness in terms of the following Outcome Levels:

1) Storm water program activities
2) Awareness
3) Behavior
4) Pollutant load reductions
5) MS4 discharge quality (where assessment is supported by MS4 discharge quality data)
6) Receiving water conditions

(c) The Program Effectiveness Assessment and Improvement Plan shall identify assessment methods for privately owned BMPs.

(d) The Program Effectiveness Assessment and Improvement Plan shall identify assessment methods the Permittee will use to quantitatively assess BMP performance at reducing pollutant loads wherever feasible, using the following or equivalent methods:

1) Direct quantitative measurement of pollutant load removal for BMPs that lend themselves to such measurement (e.g., measuring sediment collected through street-sweeping activities);
2) Science-based estimates of pollutant load removal for BMPs where direct measurement of pollutant removal is overly challenging (e.g., removal of heavy metals through a bioswale);
3) Direct quantitative measurement of behaviors that serve as proxies of pollutant removal or reduction (e.g., the percentage of construction sites demonstrated by inspection to be in compliance with permit conditions); or
4) Visual comparison (e.g., using photographs to compare the amount of trash in a creek between one year and the next).

(e) The Program Effectiveness Assessment and Improvement Plan shall ask and answer the following Management Questions for prioritized BMPs for which answers to management questions can be based on quantitative data appropriate to the question being answered.

1) Were prioritized BMPs or group of BMPs implemented in accordance with the permit requirements? The Permittee shall develop quantitative data using the following or equivalent methods:
   a) Confirmation – Documenting whether an activity or task has been completed, expressed as positive or negative outcome (i.e., yes or no)
   b) Tabulation – Simple accounting expressed in absolute (e.g., number of people participating), or relative terms (e.g. percent increase in recycled household hazardous waste)
2) To what extent did prioritized BMPs or group of BMPs change the target audience's behavior? The Permittee shall develop quantitative data using the following or equivalent methods:
   a) Surveys or interviews to discern knowledge, attitudes, awareness, behavior of specific population, etc.
   b) Interviews of site personnel to discern awareness and behavior
   c) Inspections or site visits to directly observe or assess a practice.
3) To what extent did prioritized BMPs or group of BMPs reduce pollutant loads from their sources to the storm drain system?

(f) The Program Effectiveness Assessment and Improvement Plan shall include water quality monitoring data, where available, to answer the following long-term management questions, effectiveness of BMPs and the overall storm water program will be assessed in future permit terms.
1) To what extent did implementation of the BMP, group of BMPs, or storm water program enhance or change the urban runoff and discharge quality?
2) To what extent did implementation of the BMP, group of BMPs, or storm water program enhance or change receiving water quality?
3) Did exceedance(s) of water quality objectives or water quality standards persist notwithstanding implementation of the storm water program?

The Program Effectiveness Assessment and Improvement Plan shall include documentation of the effectiveness of BMPs implemented to reduce the discharge of pollutants to the MS4 to the MEP and protect water quality.

(iii) **Reporting** – By the second year Annual Report complete and submit the Program Effectiveness Assessment and Improvement Plan. The Plan shall include the strategy the Permittee will use to assess the effectiveness of the program, the specific measures the Permittee will use to assess the effectiveness of BMPs and/or groups of BMPs, and how the Permittee will use the information obtained through effectiveness assessment to modify individual BMPs and the program as a whole to increase short and long-term effectiveness. In subsequent Annual Reports, describe implementation of the Program Effectiveness Assessment and Improvement Plan, summarize data obtained through effectiveness assessment measures and the short and long-term progress of the storm water program, and provide an analysis of the data to improve program effectiveness, to achieve the MEP standard, protect water quality, and to document the Permittee's compliance with permit conditions. Permittees that have a Program Effectiveness Assessment and Improvement Plans, or equivalent, approved by the applicable Regional Board, or that have a schedule approved by the applicable Regional Board to develop and implement such a Plan, shall adhere to the Plan and/or

schedule approved by the Regional Board unless otherwise directed by the Regional Board. By the fifth-year annual report, complete and submit an analysis of the effectiveness of modifications made at improving BMP and/or program effectiveness.

E.14.b. Storm Water Program Modifications

(i) **Task Description** –The Permittee shall modify BMPs and/or the program as a whole to improve compliance with permit conditions and improve program effectiveness at reducing pollutant loads, achieving the MEP standard, and protecting water quality. The Permittee shall use information gained through effectiveness assessment and MS4 discharge and receiving water monitoring to identify priority areas for program improvement. In addition, the Permittee shall identify and make modifications to BMPs, including new BMPs or modification to existing BMPs, to improve effectiveness in each priority area. The Permittee shall consult with the applicable Regional Water Board in setting expectations for the scope, timing, and frequency of BMP modifications.

(ii) **Implementation Level** – Within the fifth year of the effective date of the permit, the Permittee shall identify and summarize BMP and/or program modifications identified in priority program areas. Modifications shall include:

(a) Improving upon BMPs that are underperforming

(b) Continuing and expanding upon BMPs that proved to be effective, including identifying new BMPs or modifications to existing BMPs designed to increase pollutant load reductions;

(c) Discontinuing BMPs that may no longer be productive and replacing with more effective BMPs; and

(d) Shifting priorities to make more effective use of resources

(iii) **Reporting –** By the fifth year Annual Report, complete and submit the list of BMP and/or program modifications, as specified in E.14.c(ii), the Permittee will make for priority program areas, including identification of priority program areas and the schedule the Permittee will follow to complete identified modifications during the next permit term. The modifications shall be aimed at the goal of reducing pollutant loads, achieving the MEP standard and protecting water quality.

E.15. TOTAL MAXIMUM DAILY LOADS COMPLIANCE REQUIREMENTS

Attachment G contains a list of TMDL-specific, BMP-based water quality based effluent limitations (WQBELs) and other permit requirements, applicable to identified permittees, consistent with the assumptions and requirements of the applicable wasteload allocations of the TMDLs.

E.15.a. Permittees shall comply with the requirement in Section C.1 to reduce the discharge of pollutants to achieve applicable TMDL wasteload allocations as follows:

(i) Prior to the deadline to attain the final wasteload allocation, a permittee is deemed in compliance with the requirement in Section C.1 to *reduce the discharge of pollutants to achieve applicable TMDL wasteload allocations*, if the permittee is timely implementing all BMP-based WQBELs and other requirements specified in

Attachment G for that TMDL. The permittee may alternatively make a demonstration in accordance with section E.15.a.ii. below.

(ii) On or after the deadline to attain the final wasteload allocation, a permittee is deemed in compliance with the requirement in Section C.1 to *reduce the discharge of pollutants to achieve applicable TMDL wasteload allocations* if the permittee meets one or more of the criteria in subsections (a)-(g) below. For purposes of this section only, the wasteload allocations specified in the applicable TMDLs (as identified in the Fact Sheet) are incorporated by reference.

(a) Receiving water monitoring and analysis by the permittee or other responsible parties under the TMDL, as approved by the Regional Water Board or its designee, demonstrates attainment of the applicable receiving water limitation in the waterbody as determined at the TMDL monitoring attainment locations or as determined at or immediately downstream of the permittee's discharge; or

(b) Receiving water monitoring does not demonstrate attainment of the applicable receiving water limitation in the waterbody, but the permittee demonstrates, through an approach approved by the Regional Water Board or its designee, that exceedances of the receiving water limitations for the receiving water are due to loads from other sources and pollutant loads from the permittee are not causing or contributing to the exceedances; or

(c) Where the wasteload allocation is expressed as a concentration, sampling of the permittee's discharge, as approved by the Regional Water Board or its designee, indicates that the discharge has attained the applicable wasteload; or

(d) Where a mass-based wasteload has been allocated to an individual or jointly to a group or is expressed as a percent reduction in load, the permittee demonstrates, through an approach approved by the Regional Water Board or its designee, that the permittee's discharge is attaining the individual or joint allocation or the percent reduction; or

(e) Where a wasteload allocation is expressed as the number of allowable exceedance days, the permittee demonstrates, through an approach approved by the Regional Water Board or its designee, that the permittee's discharge conforms to the allowable exceedance days; or

(f) The permittee demonstrates, in a manner approved by the Regional Water Board or its designee, that no discharges, either directly or indirectly, from the permittee's MS4 to the applicable water body occurred during the relevant time period; or

(g) The permittee demonstrates the attainment of the wasteload allocation through other factors as described by the specific TMDL(s)[30] and as approved by the Regional Water Board or its designee.

[30] As an example, the TMDL for Sacramento and San Joaquin Delta - Diazinon and Chlorpyrifos states "In determining compliance with the wasteload allocations, the Regional Water Board will consider any data or information submitted by the discharger regarding diazinon and chlorpyrifos inputs from sources outside of the jurisdiction of the permitted discharger, including any diazinon and chlorpyrifos present in precipitation and other available relevant information, and any applicable provisions In the discharger's NPDES

(iii) Pursuant to Section D, a permittee deemed in compliance with Section C.1 in accordance with subsections i) and ii) of this section is also deemed in compliance with the Section D requirement to *not cause or contribute to an exceedance of water quality standards* for the specific pollutants and water bodies addressed.

E.15.b. In some cases, Attachment G includes dates that fall outside the term of this Order. Attainment dates for BMP-based WQBELs and other permit requirements that exceed the term of this Order are included for reference, and become enforceable in the event that this Order is administratively extended.

Wasteload allocation attainment dates that have already passed are enforceable on the effective date of this Order and have been assigned a due date of January 1, 2019.

(i) If the Regional Water Board Executive Officer makes a determination, on a case by case basis, that the language of a particular TMDL allows flexibility to extend a final deadline to attain a wasteload allocation, the State Water Board Executive Director may amend Attachment G to provide an extended deadline following public notice and comment.

Where a final deadline to attain a wasteload allocation is past and the permittee has not demonstrated compliance as specified in Section E.15.a.(ii) above, the permittee may seek a time schedule order pursuant to Water Code section 13300 from the Regional Water Board. Permittees may either individually request a time schedule order or may jointly request a time schedule order with all Permittees subject to the TMDL in Attachment G. Permittees may also request time schedule orders where the permittee has not timely complied with a BMP-based WQBEL or other permit requirement in Attachment G.
A request to the applicable Regional Water Board for a time schedule order shall include the following information:

(a) Any available data demonstrating the current quality of the MS4 discharge(s) in terms of the applicable wasteload allocation units (i.e. concentration and/or load) of the target pollutant(s) to the receiving waters subject to the TMDL;

(b) A description and chronology of structural controls and source control efforts carried out by the permittee since the effective date of the TMDL to reduce the pollutant load in the MS4 discharges to the receiving waters subject to the TMDL;

(c) Justification of the need for additional time to achieve the requirements;

(d) The specific actions the Permittee will take in order to meet the TMDL requirements and a time schedule of interim and final deadlines proposed to implement those actions. The actions will reflect the requirements specified for the TMDL in Attachment G; and

(e) A demonstration that the time schedule requested is as short as possible, taking into account the technological, operational, and economic factors that affect the design, development, and implementation of the control measures that are necessary to comply with the TMDL requirements.

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permit requiring the discharger to reduce the discharge of pollutants to the maximum extent possible." Resolution No. R5-2006-0061, Attachment 1, #11 Page 4.

(ii) It is not the intention of the State Water Board or the Regional Water Boards to bring an enforcement action for non-attainment of the wasteload allocation where:

(a) A permittee is in compliance with a time schedule order's implementation requirements and compliance schedule;

(b) A permittee has in good faith requested a time schedule order from the Regional Water Board and is in compliance with all BMP-based WQBELs and other permit requirements of Attachment G, except the requirement to attain the applicable wasteload allocation by the final attainment deadline;

(c) A Regional Water Board has initiated proceedings to revise the TMDL to provide additional time for attainment or to modify TMDL wasteload allocations and the permittee is in compliance with all BMP-based WQBELs and other permit requirements in Attachment G, except the requirement to attain the applicable wasteload allocation by the final attainment deadline.

E.15.c. The State Water Board may revise this Order through a reopener to incorporate any modifications or revisions to the TMDLs in Attachment G, or to incorporate any new TMDLs adopted during the term of this Order that assign a wasteload allocation to a Regulated Small MS4 or that identify a Regulated Small MS4 as a responsible party. In revising Attachment G, the State Water Board will allow adequate notice and public review.

E.15.d. The Permittee shall complete and report the status of their implementation of the specific TMDL implementation requirements that have been incorporated into the permit with each Annual Report via SMARTS. Reporting on TMDL implementation shall include the following information:

(i) A description of BMPs implemented, including types, number, and locations; and

(ii) All supplemental information and reports required under the specific TMDL implementation requirements in Attachment G; and

(iii) An assessment of the effectiveness of implemented BMPs in progressing towards attainment of wasteload allocations within the TMDLs' specified timeframes; and

(iv) All monitoring data, including a statistical analysis of the data to assess progress towards attainment of wasteload allocations within the TMDLs' specified timeframes; and

(v) Based on results of the effectiveness assessment and monitoring, a description of the additional BMPs that will be implemented to attain wasteload allocations within the TMDLs specified timeframes.

E.15.e. The Permittee shall comply with implementation requirements specified in Category 4b demonstrations associated with Clean Water Act Sections 303d, 306b, and 314 Integrated Reporting and Listing Decisions. Implementation requirements described in Category 4b demonstrations are effective upon Regional Water Board approval of that region's Integrated Reporting and Listing Decisions and associated Category 4b demonstrations. The most recent Integrated Reporting and Listing Decisions and associated Category 4b demonstrations are available at: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml

E.16. ANNUAL REPORTING PROGRAM

E.16.a. **By October 15 of each year**, the Permittee shall use State Water Board SMARTS to submit a summary of the past year activities for each program element and certify compliance with all requirements of this permit. If a Permittee is unable to certify compliance with a requirement, the Permittee must submit in SMARTS the reason for failure to comply, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance.

E.16.b. Permittees shall complete and retain all Annual Report information on the previous fiscal year beginning July 1 and ending June 30. The Annual Reporting requirements are set forth in Provisions E. The Permittee shall retain documentation as necessary to support their Annual Report. The Permittee shall make this supporting information available during normal business hours, unless agreed to by the applicable Regional Water Board's Executive Officer.

E.16.c. The Permittee shall submit when requested by the Executive Officer of the applicable Regional Water Board a detailed written online annual report or in-person presentation of the annual report that addresses the activities described in Provision E. The detailed Annual Report must clearly refer to the permit requirements and describe in quantifiable terms, the status of activities undertaken to comply with each requirement.

E.16.d. Permittees involved in regional programs may coordinate with the members to identify reporting responsibility. The one report submitted on behalf of Permittees involved in a regional program must include a summary of the past year activities for each program element and certification of compliance with all requirements of this Order for each of the Permittees in the regional program.

F. NON-TRADITIONAL SMALL MS4 PERMITTEE PROVISIONS

F.1. Non-Traditional Small MS4 Categories

The Non-Traditional Small MS4s identified in Attachment B or by a Regional Water Board Executive Officer shall comply with the specific provisions in this Section. For military installations, this permit applies to areas, where the activities and population density resemble that of a traditional small MS4, as defined in the permit boundary map in Section A.2.b.(3). For Department of Corrections and Rehabilitation Permittees, this permit

applies to facilities that are in active operation (i.e., does not apply to closed facilities lacking management oversight).

F.2. Security Concerns

Department of Defense, Department of Corrections and Rehabilitation Permittees, ports and transportation agencies are exempt from Annual Reporting of any provision in this section that could pose a security risk and/or compromise facility security.

F.3. Maximize Efficiency

Permittees may incorporate the required storm water provisions into already existing programs and leverage existing staff to implement BMPs during its day to day business and operations.

F.4. Equivalent or Existing Document

A Permittee may utilize an equivalent or existing document such as a Standard Operations and Procedures manual, Operation and Maintenance Plan, or Spill Response Plan if that document includes the necessary information required to comply with the provisions of this section.

F.5. PROVISIONS

F.5.a. PROGRAM MANAGEMENT ELEMENT

F.5.a.1. Legal Authority

(i) **Task Description** - Permittee shall have adequate legal authority to meet the requirements of this Order

(ii) **Implementation Level** – Within the second year of the effective date of the permit, the Permittee shall review, revise or adopt new relevant policies, contractual provisions, base orders, resolutions or other regulatory mechanisms, to the extent allowable under state or local law, to ensure it has at a minimum the legal authority to:

(a) Effectively prohibit non-storm water discharges through the MS4. Exceptions to this prohibition are NPDES-permitted discharges of non-storm water and non- storm water discharges from B.3 that are considered non-significant contributors of pollutants. Where the non-storm water discharge is to a segment of an MS4 that discharges directly to an ASBS, exceptions to the non-storm water prohibition are specified in Attachment C.

(b) Detect and eliminate illicit discharges and illegal connections to the MS4. Illicit connections include pipes, drains, open channels, or other conveyances that have the potential to allow an illicit discharge to enter the MS4. Illicit discharges include all non-storm water discharges not otherwise authorized in this Order, including, but not limited to discharges from mobile cleaning and pressure washing operations.

(c) Respond to spills, and prohibit dumping or disposal of materials other than storm water into the MS4.

(d) Require vendors, contractors and operators of commercial facilities to minimize the discharge of pollutants to the MS4 through the installation, implementation, and maintenance of BMPs consistent with the CASQA Best Management Practice Handbooks or equivalent.

(e) Ensure construction site or industrial facility operators provide a Waste Discharge Identification Number for coverage under the CGP and IGP and comply with the appropriate permit.

(f) Review designs and proposals for new development and redevelopment to determine whether adequate BMPs will be installed, implemented, and maintained during construction and after final stabilization (post-construction).

(g) Promptly cease and desist discharges and/or cleanup and abate a discharge, including the ability to:

1) Effectively require the discharger to abate and clean up their discharge, spill, or pollutant release within 72 hours of notification;
2) Require abatement, within 30 days of notification, for uncontrolled sources of pollutants that could pose an environmental threat;
3) Perform the cleanup and abatement work and bill the responsible party, if necessary;
4) Provide the option to order the cessation of activities until such problems are adequately addressed if a situation persists where pollutant-causing sources or activities are not abated;
5) Require a new timeframe and notify the appropriate Regional Water Board when all parties agree that clean-up activities cannot be completed within the original timeframe and notify the appropriate Regional Water Board in writing within five business days of the determination that the timeframe requires revision.

(iii) **Reporting** – All Permittees shall submit by the second year online Annual Report, a statement signed by both the Permittee's legal counsel and an authorized signatory certifying the Permittee has adequate legal authority to comply with all Order requirements.

F.5.b. EDUCATION AND OUTREACH PROGRAM

F.5.b.1. Compliance Participation Options

All Permittees shall comply with the requirements in this Section by participating in one or more of the following:

(a) Contributing to a countywide storm water program, as determined appropriate by the Permittee members, so that the countywide storm water program conducts education and outreach on behalf of its members; or

(b) Contributing to a regional education and outreach collaborative effort (a regional education and outreach collaborative effort occurs when all or a majority of the Permittees collaborate to conduct regional education and outreach. Regional education and outreach collaboration includes Permittees defining a uniform and consistent message, deciding how best to communicate the message, and how to facilitate behavioral changes. Then collaboratively apply what is learned through local jurisdiction groups, pooling resources and skills.); or

(c) Fulfilling education and outreach requirements within their jurisdictional boundaries on their own. Some level of coordination of education and outreach efforts with an adjacent Phase I MS4 Permittee is recommended/anticipated for watershed/region-wide consistency.; or

(d) A combination of the previous options, so that all requirements are fulfilled.

Reporting – By the first year online Annual Report, the Permittee shall submit information indicating which compliance participation option it will use to comply with the public education and outreach requirements in this Section. For each public education and outreach requirement in this Section that the Permittee will comply with through contribution to a countywide storm water program or regional education and outreach collaborative effort, the Permittee shall include in the first year online Annual Report documentation, such as a written agreement, letter or similar document, which confirms the collaboration with other MS4s.

F.5.b.2. Public Education and Outreach

The public for a Non-traditional MS4 Permittee is considered the following, if applicable:

- Faculty
- Inmates
- Military personnel
- Residents
- Students
- Staff
- Visitors

(i) **Task Description –** Within the second year of the effective date of the permit, the Permittee shall develop and implement a comprehensive storm water public education and outreach program. The public education and outreach program shall be designed to inform the public about storm water pollution and steps that can be taken to reduce storm water pollution. The Public Education and Outreach Program shall measurably increase the public's knowledge regarding the storm drain system, impacts of urban runoff and illicit discharges on receiving waters, and potential BMP solutions for the target audiences.

(ii) **Implementation Level** –The Permittee shall, at a minimum:

(a) Develop and implement a public education strategy that establishes education tasks based on water quality problems, target audiences, and anticipated task effectiveness. The strategy must include identification of who is responsible for implementing specific tasks and a schedule for task implementation. The strategy must demonstrate how specific high priority storm water quality issues in their jurisdiction or local pollutants of concern are addressed.

(b) Implement BMPs that gauge level of awareness in target audiences and effectiveness of education tasks.

(c) Develop and convey a specific storm water message that focuses on the following:

1) Local pollutants of concern
2) Target audience
3) Regional water quality issues

(d) Develop and disseminate appropriate educational materials to target audiences and translate into applicable languages when appropriate (e.g. the materials can utilize various media such as printed materials, billboard and mass transit advertisements, signage at select locations, stenciling at storm drain inlets, radio advertisements, television advertisements, and websites);

(e) Distribute educational materials, using whichever methods and procedures determined appropriate during development of the public education strategy;

(f) Develop and convey messages to explain the benefits of water-efficient landscaping (if appropriate);

(g) Utilize information from storm water-friendly landscaping[31] programs (if appropriate);

(h) Develop and convey messages specific to reducing illicit discharges with information about how the public can report incidents to the appropriate authorities;

(i) Develop and convey of messages specific to proper application of pesticides, herbicides, and fertilizers;

(j) Within the Permittee's jurisdiction, provide independent, parochial and public schools with materials to effectively educate school-age children, if applicable, about storm water and how they can help to protect water quality habitat in their local watersheds. The Permittee is encouraged to use environmental and place-based, experiential learning materials that are integrated into school curricula and school facility management[32]. In the case that a local program does not exist, the Permittee may use California's Education and Environment Initiative Curriculum[33] or equivalent;

(k) Develop (or coordinate with existing effective programs) and convey messages specific to reducing discharges from pressure washing operations and landscape irrigation;

(l) If applicable, utilize storm water-friendly education for organized car wash participants and provide information pertaining to car wash discharge reduction. The Permittee may use the Sacramento Stormwater Quality Partnership's River Friendly Carwash Program[34], or equivalent, for guidance;

(m) The Permittee shall conduct focused education in identified illicit discharge flow areas based on identified illicit discharge(s).

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance directions.

[31] For example, Surfrider's Ocean Friendly Garden Program (www.surfrider.org/programs/ocean-friendly-gardens)

[32] For example, Sacramento Splash Organization (www.sacsplash.org/), Effie Yeaw Nature Center (www.sacnaturecenter.net) or Yolo Basin Organization (yolobasin.org)

[33] http://www.californiaeei.org/

[34] http://www.beriverfriendly.net/riverfriendlycarwashing/

F.5.b.3. Staff and Site Operator Training and Education: Illicit Discharge Detection and Elimination Training

(i) **Task Description** – Permittees shall develop and implement a training program for all Permittee staff, who, as part of their normal job responsibilities, may be notified of, come into contact with, or otherwise observe an illicit discharge or illegal connection to the storm drain system.

(ii) **Implementation Level** – Within the third year of the effective date of the permit, the Permittee shall develop the training program. The training program shall include at a minimum:

(a) Identification of an illicit discharge or illegal connection;

(b) Proper procedures for reporting and responding to the illicit discharge or illegal connection;

(c) Follow-up training provided as needed to address changes in procedures, techniques, or staffing;

(d) Annual assessment of their trained staff's knowledge of illicit discharge response and shall provide refresher training as needed;

(e) Training of new staff who, as part of their normal job responsibilities may be notified of, come into contact with, or otherwise observe an illicit discharge or illegal connection;

(f) Contact information, including the procedure for reporting an illicit discharge, shall be included in each of the Permittee's fleet vehicles that are used by field staff.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance directions.

F.5.b.4. Staff Pollution Prevention and Good Housekeeping

The Permittee shall train employees on how to incorporate pollution prevention/good housekeeping techniques into Permittee operations.

(i) **Task Description** – The Permittee shall provide a biennial training program for appropriate employees involved in implementing pollution prevention and good housekeeping practices in the Pollution Prevention/Good Housekeeping for Permittee Operations sections of this permit. The Permittee shall determine the need for interim training during alternate years when training is not conducted, through an evaluation of employee Pollution Prevention/Good Housekeeping knowledge.

(ii) **Implementation Level** – The biennial training program shall include the following:

(a) General storm water education component, any new technologies, operations, or responsibilities that arise during the year and the permit requirements which apply to the staff being trained. Clear guidance on appropriate storm water BMPs to use at Permittee owned facilities and during typical Operation and Maintenance activities.

(b) An assessment of trained staff's knowledge of pollution prevention and good housekeeping and shall revise the training as needed.

(c) A requirement that any contractors hired by the Permittee to perform Operation and Maintenance activities shall be contractually required to comply with all of the storm water BMPs, good housekeeping practices, and standard operating procedures described above.

(d) The Permittee shall provide oversight of contractor activities to ensure that contractors are using appropriate BMPs, good housekeeping practices and following standard operating procedures.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance directions.

F.5.c. PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM

(i) **Task Description -** Within the third year of the effective date of the permit, the Permittee shall involve its public in the development and implementation of activities related to the program. The public participation and involvement program shall encourage volunteerism, public comment and input on policy, and activism in the community.

(ii) **Implementation Level** – The Permittee shall, at a minimum:

(a) Ensure that high priority storm drain inlets include a labeled, stenciled or other effective method (e.g., clearly visible sign strategically placed in area of high pedestrian activity) of communicating a storm water awareness message such as "drains to creek" or "only rain in the drain".

(b) Integrate storm water awareness messages and information on a publicly accessible website

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance

F.5.d. ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

The Permittee shall develop an Illicit Discharge Detection and Elimination program to detect, investigate, and eliminate illicit discharges, including illegal dumping, into its system or coordinate with an adjacent Phase I MS4 Permittees existing program. The existing program, at a minimum, must include the provisions in this section.

F.5.d.1. Outfall Mapping

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall maintain an up-to-date and accurate outfall map. The map may be in hard copy and/or electronic form or within a geographic information system (GIS). The development of the outfall map shall include a visual outfall inventory involving a site visit to each outfall. It is recommended the Permittee coordinate with an adjacent Phase I MS4 Permittee to collect outfall data for which they may discharge to. Renewal Permittees that have an existing and up-to-date outfall map that includes the minimum requirements specified in Section F.5.d.1.(ii)(a-b) are not required to re-create the outfall map. This does not exempt renewal Permittees with an existing outfall map from conducting the field sampling specified in Section F.5.d.2.

(ii) **Implementation Level** - The outfall map shall at a minimum show:

(a) The location of all outfalls and drainage areas within the urbanized area, contributing to those outfalls that are operated by the Permittee, and that directly discharge within the Permittee's jurisdiction to a receiving water. Each mapped outfall shall be given an individual alphanumeric identifier, which shall be noted on the map. Photographs shall be taken or an electronic database shall be utilized to provide baseline information and track operation and maintenance needs over time.

(b) The location (and name, where known to the Permittee) of all water bodies receiving direct discharges from those outfall pipes.

Submerged outfalls or other outfalls that may pose a threat to public safety are not required to be inventoried.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.d.2. Field Sampling to Detect Illicit Discharges

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall conduct field sampling to detect potential illicit discharges while conducting the outfall inventory specified in Section F.5.d. Outfall Inventory. If while conducting the outfall inventory specified in Section F.5.d., an outfall is flowing or ponding and it has been more than 72 hours since the last rain event, then the Permittee shall sample the discharge.

(ii) **Implementation Level** – If an outfall is flowing or ponding and it has been more than 72 hours since the last rain event, the Permittee shall:

(a) Conduct monitoring for the following indicator parameters identified in Table 1. Field Sampling Indicator Parameters (following page) to help determine the source and identification of the discharge. Alternatively, the Permittee may select parameters based on local knowledge of pollutants of concern in lieu of sampling for the parameters listed in Table 1. Modifications and associated justifications

shall be identified within SMARTS prior to conducting field sampling as specified in Section F.5.d.2.

Table 1. Field Sampling Indicator Parameters

Note: > = greater than
> 80% — Can almost always (>80% of samples) distinguish this discharge from clean flow types (e.g., tap water or natural water). For tap water, can distinguish from natural water.
> 50% — Can sometimes (>50% of samples) distinguish this discharge from clean flow types depending on regional characteristics, or can be helpful in combination with another parameter.
Poor — Poor indicator. Cannot reliably detect illicit discharges, or cannot detect tap water
Data sources: Pitt (this study)

* Fluoride is a poor indicator when used as a single parameter, but when combined with additional parameters (such as detergents, ammonia and potassium), it can almost always distinguish between sewage and wash water.

Parameter	Discharge Types It Can Detect				Laboratory/Analytical Challenges
	Sewage	Washwater	Tap Water	Industrial or Commercial Liquid Wastes	
Ammonia	> 80%	> 50%	Poor	> 50%	Can change into other nitrogen forms as the flow travels to the outfall
Color	> 50%	> 50%	Poor	> 50%	
Conductivity	> 50%	> 50%	Poor	> 50%	Ineffective in saline waters
Detergents – Surfactants	> 80%	> 80%	Poor	> 50%	Reagent is a hazardous waste
Fluoride*	Poor	Poor	>80%	> 50%	Reagent is a hazardous waste Exception for communities that do not fluoridate their tap water
Hardness	> 50%	> 50%	>50%	> 50%	
pH	Poor	> 50%	Poor	> 50%	
Potassium	> 50%	Poor	Poor	> 80%	May need to use two separate analytical techniques, depending on the concentration
Turbidity	> 50%	>50%	Poor	> 50%	

(c) Verify that indicator parameters with the following action level concentrations specified in Table 2. Action Level Concentrations for Indicator Parameters are not exceeded. Alternatively, the Permittee may tailor Table 2 to align with parameters based on local knowledge of pollutants of concern. Modifications and associated

justifications shall be identified within SMARTS prior to conducting field sampling as specified in Section F.5.d.2.

Table 2. Action Level Concentrations for Indicator Parameters

Indicator Parameter	Action Level Concentration
Ammonia	> = 50 milligram per liter
Color	>= 500 units
Conductivity	> = 2,000 microsiemens per centimeter
Hardness	< = 10 milligram per liter as $CaCO_3$ or > = 2,000 milligram per liter as $CaCO_3$
pH	< = 5 or > = 9
Potassium	> = 20 milligram per liter
Turbidity	> = 1,000 Nephelometric Turbidity Units

(d) Conduct follow up investigations per Section F.5.d.3. if the action level concentrations are exceeded.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance

F.5.d.3. Illicit Discharge Detection and Elimination Source Investigations and Corrective Actions

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop written procedures for conducting investigations into the source of all non-storm water discharges suspected to be illicit discharges, including approaches to requiring such discharges to be eliminated, and procedures to implement corrective actions (e.g., BMPs). These procedures shall be included as part of the Illicit Discharge Detection and Elimination program.

(ii) **Implementation Level -** At a minimum, the Permittee shall conduct an investigation(s) to identify and locate the source of any suspected illicit discharge within 72 hours of becoming aware of the suspected illicit discharge. For investigations that require more than 72 hours, the Permittee shall identify the actions being taken to identify and locate the source of the suspected illicit discharge. The Permittee shall prioritize investigations of suspected sanitary sewage and/or significant contributors over investigations of non-storm water discharges suspected of being cooling water, wash water, or natural flows.

(a) Report immediately the occurrence of any dry weather flows believed to be an immediate threat to human health or the environment to local Health Department.

(b) Determine and document through its investigations the source of all non-storm water discharges. If the source of the non-storm water discharge is found to be a discharge authorized under this permit, or authorized under another NPDES permit, no further action is required.

(c) Corrective Action to Eliminate Illicit Discharge – Once the source of the illicit discharge has been determined, the Permittee shall immediately notify the responsible party of the problem.

(d) Report immediately to the owners/operators of the downstream MS4 a non-storm water discharge suspected of being sanitary sewage and/or significantly contaminated.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance

F.5.e. CONSTRUCTION SITE RUNOFF CONTROL PROGRAM

The Permittee shall develop, implement, and enforce a program to prevent Construction site discharges of pollutants and impacts on beneficial uses of receiving waters. The program shall include the development of contract language ensuring the Permittee's in-house construction operators or outside contractors comply with the CGP.

(i) **Task Description –** Within the first year of the effective date of the permit, each Permittee shall develop and implement contract language ensuring all outside contractors comply with the CGP and implement appropriate BMPs. Contract language shall apply to all projects that result in a total land disturbance of either one acre or more or that result in a total land disturbance of less than one acre if part of a larger common plan or development or sale.

(ii) **Implementation Level** – The Permittee shall include CGP compliance requirements in construction contract language for all projects one acre or more or that result in a total land disturbance of less than one acre if part of a larger common plan or development or sale.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.f. POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR PERMITTEE OPERATIONS PROGRAM

The Permittee shall develop and implement a program to prevent or reduce the amount of pollutant runoff from Permittee operations. The Permittee shall train employees on how to incorporate pollution prevention/good housekeeping techniques into Permittee operations. Permittee shall implement appropriate BMPs for preventing or reducing the amount of storm water pollution generated by Permittee operations.

F.5.f.1. Inventory of Permittee-Owned or Operated Facilities

(i) **Task Description** - Prepare an inventory of Permittee-owned or operated facilities within their jurisdiction that are a threat to water quality, and are not covered by another storm water General Permit.

(i) **Implementation Level** - Within the second year of the effective date of the permit, the Permittee shall develop and maintain an inventory that shall include facilities that may impact storm water.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.f.2. Map of Permittee-Owned or Operated Facilities

(i) **Task Description –** Within the second year of the effective date of the permit, prepare and submit a map of the urban area covered by the MS4 permit and identify where the Permittee-owned or operated facilities are located.

(ii) **Implementation Level** - The Permittee shall complete and have available a map that identifies the storm water drainage system corresponding to each of the facilities as well as the receiving waters to which these facilities discharge. The map shall also show the facility and the manager of each facility, including contact information. Historic storm water collection facilities, conveyances and drainages located at historic places that are being operated for public interpretation and education shall be noted on this map so that the Regional Water Board can differentiate between modern and historic during site reviews or audits.

(iii) **Reporting** - The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.f.3. Facility Assessment

(i) **Task Description** –Within the third year of the effective date of the permit, conduct an inspection and assessment of pollutant discharge potential and pollutant hotspots.

(ii) **Implementation Levels** - The Permittee shall conduct an annual review and assessment of all Permittee-owned or operated facilities to determine their potential to impact surface waters. The assessment shall include the following:

(a) Identification of pollutant hotspots based on the assessment, the Permittee shall identify as pollutant hotspots those facilities that have a high potential to generate storm water and non-storm water pollutants. Among the factors to be considered are the type and volume of pollutants stored at the site, the presence of improperly stored materials, activities that should not be performed outside (e.g., changing automotive fluids, vehicle washing), proximity to water bodies, poor housekeeping practices, and the discharge of pollutant(s) of concern to receiving water(s). Pollutant hotspots shall include, at a minimum, the Permittee's maintenance yards, hazardous waste facilities, fuel storage locations, and any other facilities at which chemicals or other materials have a high potential to be discharged in storm water.

(b) Documentation of the assessment procedures and results. The Permittee shall document the procedures it uses for conducting the assessment along with a copy of any site evaluation checklists used to conduct the assessment.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.f.4. Storm Water Pollution Prevention Plans

(i) **Task Description** – the Permittee shall develop and implement SWPPPs for pollutant hotspots at high priority sites. If a Permittee has an existing or equivalent document such as Hazardous Materials Business Plan or Spill Prevention Plan, the Permittee is not required to develop a SWPPP if that document includes the necessary information required within a SWPPP.

(ii) **Implementation Level** – Within the fourth year of the effective date of this permit, the Permittee shall implement the following:

(a) The Permittee shall develop and implement a site-specific SWPPP that identifies a set of storm water BMPs to be installed, implemented, and maintained to minimize the discharge of pollutants in storm water.

(b) The SWPPP(s) shall be kept on-site at each of the Permittee-owned or operated facilities' offices for which it was completed. The SWPPP shall be updated as necessary.

(c) At a minimum the SWPPP will address the following:

1) Facility specific information (location, owner, address, etc.)
2) Purpose of the document
3) Key staff/contacts at the facility
4) Site map with drainage identified
5) Identification of significant materials that are handled and stored at the facility that may be exposed to storm water
6) Description of potential pollutant sources

7) BMPs employed at facility
8) Spill control and cleanup – response to spills

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.f.5. Inspections, Visual Monitoring and Remedial Action

(i) **Task Description** –Within the fifth year of the effective date of the permit, the Permittee shall conduct regular inspections of Permittee-owned and operated facilities not covered by another storm water General Permit. The Permittee may incorporate storm water inspections into existing, routine facility inspections.

(ii) **Implementation Level** – The Permittee shall conduct inspections as follows:

(a) Quarterly hotspot visual inspections – Perform quarterly visual inspections in accordance with the developed standing operating procedures of all hotspot Permittee-owned or operated facilities to ensure materials and equipment are clean and orderly, to minimize the potential for pollutant discharge, and to ensure implementation of BMPs. The Permittee shall look for evidence of spills and immediately clean them up to prevent contact with precipitation or runoff. The quarterly inspections shall be tracked in a log for every facility, and records kept with the SWPPP. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct the deficiencies.

(b) Quarterly Hotspot comprehensive inspections – At least once per quarter, a comprehensive inspection of hotspot facilities, including all storm water BMPs, shall be performed, with specific attention paid to the following, but not limited to waste storage areas, dumpsters, vehicle and equipment maintenance/fueling areas, material handling areas, and similar potential pollutant-generating areas. The quarterly inspection results shall be documented and records kept with the SWPPP. This inspection shall be performed in accordance with the developed standard operating procedures. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct deficiencies.

(c) Quarterly Hotspot visual observation of storm water and non-storm water discharges – At least once per quarter, visually observe discharge location from hotspot facilities. Where discharges are observed identify any observed problems (e.g., color, foam, sheen, turbidity) associated with pollutant sources or BMPs shall be remedied within seven days or before the next storm event, whichever is sooner. Visual observations shall be documented, and records kept with the SWPPP. This inspection shall be done in accordance with the developed standard operating procedures. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct the deficiencies.

(d) Non-Hotspot Inspection – At a minimum, inspect each inventoried facility that is not a hotspot, once per permit term. The inspection shall investigate and assess each of the items identified above.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.f.6. Storm Drain System Assessment and Prioritization

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop and implement procedures to assess and prioritize the MS4 storm drain system, including but not limited to catch basins, pipe and pump infrastructure, above-ground conveyances, including receiving waterbodies within the Permittee's urbanized area and detention basins.

(ii) **Implementation Level** – The Permittee shall:
Assess/prioritize storm drain system facilities for cleanout– Assign a priority to all storm drain system facilities within the Permittee's urbanized areas based on accumulation of sediment, trash and/or debris. In particular, assign high priority to catch basins meeting the following criteria:

1) Catch basins known to accumulate a significant amount of sediment, trash, and/or debris;
2) Catch basins collecting large volumes of runoff;
3) Catch basin collecting runoff from area that do not receive regular sweet sweeping;
4) Catch basins collecting runoff from drainage areas with exposed or disturbed soil; and
5) Catch basins that receive citizen complaints/reports.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.f.7. Maintenance of Storm Drain System

(i) **Task Description** –The Permittee shall begin maintenance of all high priority storm drain systems at least annually prior to the rainy season.

(ii) **Implementation Level** – Within the third year of the effective date of the permit, the Permittee shall begin a maintenance program of high priority storm drain systems that, at a minimum includes:

(a) Storm drain systems inspection – Based on the priorities assigned above, in Section F.5.f.6, develop a strategy to inspect storm drain systems within the Permittee's jurisdiction. At a minimum, inspect all catch basins of high priority systems annually, prior to the rainy season.

(b) Storm drain cleaning – Develop and implement a schedule to clean high priority catch basins and other systems. Cleaning frequencies shall be based on priority areas, with higher priority areas receiving more frequent maintenance.

(c) Maintenance of surface drainage structures –Visually monitor all Permittee- owned open channels, detention basins, and other drainage structures for debris at least once per year and identify and prioritize problem areas. At a minimum, removal of trash and debris from open channels and other drainage structures shall occur annually.

(d) Disposal of waste materials - Develop a procedure to dewater and dispose of materials extracted from catch basins. This procedure shall ensure that water removed during the catch basin cleaning process and waste material will not reenter the MS4.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.f.8. Permittee Operations and Maintenance Activities (O&M)

(i) **Task Description –**The Permittee shall assess their O&M activities for potential to discharge pollutants in storm water and inspect all BMPs on a quarterly basis.

(ii) **Implementation Level** - Within the third year of the effective date of the permit, the Permittee shall:

(a) Develop and implement O&M activity assessment. The O&M activities assessment shall include, but not be limited to, the potential to discharge pollutants in storm water.

(b) Identify all materials that could be discharged from each of these O&M activities.

(c) Develop and implement a set of BMPs that, when applied during Permittee O&M activities, will reduce the discharge of pollutants in storm water. The Permittee shall use the CASQA Municipal Handbook or equivalent.

(d) Evaluate annually all BMPs implemented during O&M activities.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the stormwater program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.f.9. Pesticide, Herbicide, and Fertilizer Application and New Landscape Design and Maintenance Management

(i) **Task Description** –The Permittee shall implement a program which focuses on pollution prevention, source control BMPs, and landscape design and maintenance to reduce the amount of pesticides, herbicides and fertilizers used during their Permittee

operations and activities. The Permittee shall implement the landscape design and maintenance on new or decorative landscapes.

(ii) **Implementation Tasks** – Within the second year of the effective date of the permit, the Permittee shall implement the following:

(a) Evaluate pesticides, herbicides and fertilizers used and application activities performed to identify pollution prevention and source control opportunities.

(b) Implement practices that reduce the discharge of pesticides, herbicides and fertilizers. At a minimum the Permittee shall do the following, but not limited to:

1) Educate applicators and distributors of storm water issues.

2) Implement integrated pest management measures that rely on non- chemical solutions, including:

a) Use of native and climate appropriate plants (reduces water usage and fertilization) for decorative landscape applications
b) Keeping clippings and leaves away from waterways and out of the street using mulching, composting, or landfilling
c) Preventing application of pesticides and fertilizers when two or more consecutive days with greater than 50% chance of rainfall are predicted by NOAA[35]
d) Limiting or replacing herbicide and pesticide use (e.g., conducting manual weed and insect removal)
e) Limiting or eliminating the use of fertilizers, including prohibiting application within five feet of pavement, 25 feet of a storm drain inlet, or 50 feet of a water body
f) Reducing mowing of grass to allow for greater pollutant removal, but not jeopardizing public safety

3) Collect and properly dispose of unused pesticides, herbicides, and fertilizers.

4) Minimize irrigation run-off.

(iii) **Reporting** - The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.g. POST CONSTRUCTION STORM WATER MANAGEMENT PROGRAM

Permittees shall regulate development to comply with the following Sections:

- Site Design Measures
- Low Impact Development Design Standards
- Alternative Post-Construction Storm Water Management Program
- Operation and Maintenance of Post Construction Storm Water Management Measures

[35] www.srh.noaa.gov/forecast

Non-traditional Permittees with Regional Water Board approved post-construction storm water management requirements based on a watershed process approach, as described in Section E.12.j. Post-Construction Storm Water Management Requirements Based on Assessment and Maintenance of Watershed Processes, shall implement those post-construction requirements in lieu of Section F.5.g. Post Construction Storm Water Management Program.

F.5.g.1. Site Design Measures

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall require implementation of site design measures for all projects that create and/or replace (including projects with no net increase in impervious footprint) between 2,500 square feet and 5,000 square feet of impervious surface, including detached single family homes that are not part of a larger plan of development.

(ii) **Implementation Level** - Projects shall implement one or more of the following site design measures to reduce project site runoff:

(a) Stream Setbacks and Buffers – a vegetated area including trees, shrubs, and herbaceous vegetation, that exists or is established to protect a stream system, lake reservoir, or coastal estuarine area;

(b) Soil Quality Improvement and Maintenance - improvement and maintenance soil through soil amendments and creation of microbial community;

(c) Tree planting and preservation – planting and preservation of healthy, established trees that include both evergreens and deciduous, as applicable;

(d) Rooftop and Impervious Area Disconnection - rerouting of rooftop drainage pipes to drain rainwater to rain barrels, cisterns, or permeable areas instead of the storm sewer;

(e) Porous Pavement - pavement that allows runoff to pass through it, thereby reducing the runoff from a site and surrounding areas and filtering pollutants;

(f) Green Roofs – a vegetative layer grown on a roof (rooftop garden);

(g) Vegetated Swales - a vegetated, open-channel management practice designed specifically to treat and attenuate storm water runoff;

(h) Rain Barrels and Cisterns - system that collects and stores storm water runoff from a roof or other impervious surface.

Project proponents shall use the State Water Board SMARTS Post-Construction Calculator[36], or equivalent to quantify the runoff reduction resulting from implementation of site design measures.

(iii) **Reporting** - The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm

[36] The State Water Board SMARTS Post-Construction Calculator can be found at: https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp

water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.g.2. Low Impact Development (LID) Design Standards

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall implement standards to effectively reduce runoff and pollutants associated with runoff from development projects.

(ii) **Implementation Level** - The Permittee shall regulate all development projects that create and/or replace 5,000 square feet or more of impervious surface (Regulated Projects). The Permittee shall require these Regulated Projects to implement measures for site design, source control, runoff reduction, storm water treatment and baseline hydromodification management as defined in this Order.

Regulated Projects do not include:

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

Regulated Projects include development projects. Development includes new and redevelopment projects on public or private land that fall under the planning and permitting authority of a Permittee. Redevelopment is any land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred. The following (a-c) describe specific Regulated Project requirements for redevelopment and road projects:

(a) Where a redevelopment project results in an increase of more than 50 percent of the impervious surface of a previously existing development, runoff from the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included to the extent feasible.

(b) Where a redevelopment project results in an increase of less than 50 percent of the impervious surface of a previously existing development, only runoff from the new and/or replaced impervious surface of the project must be included.

(c) Road Projects - Any of the following types of road projects that create 5,000 square feet or more of newly constructed contiguous impervious surface and that are public road projects and/or fall under the building and planning authority of a Permittee shall comply with Low Impact Development Standards except that treatment of runoff of the 85th percentile 24-hour storm runoff event) that cannot be infiltrated onsite shall follow U.S. EPA guidance regarding green infrastructure to the extent feasible. Types of projects include:

1) Construction of new streets or roads, including sidewalks and bicycle lanes built as part of the new streets or roads which create 5,000 square feet or more of impervious surface.

2) Widening of existing streets or roads with additional traffic lanes.
   a) Where the addition of traffic lanes results in an alteration of more than 50 percent of the impervious surface (5,000 square feet or more) of an existing street or road, runoff from the entire project, consisting of all

existing, new, and/or replaced impervious surfaces, must be included in the treatment system design.

b) Where the addition of traffic lanes results in an alteration of less than 50 percent (but 5,000 square feet or more) of the impervious surface of an existing street or road, only the runoff equivalent from new and/or replaced impervious surface of the project must be included in the treatment system design.

3) Specific exclusions are:
   a) Sidewalks built as part of new streets or roads and built to direct storm water runoff to adjacent vegetated areas.
   b) Bicycle lanes that are built as part of new streets or roads that direct storm water runoff to adjacent vegetated areas.
   c) Impervious trails built to direct storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas, preferably away from creeks or towards the outboard side of levees.
   d) Sidewalks, bicycle lanes, or trails constructed with permeable surfaces.

Effective Date for Applicability of Low Impact Development Runoff Standards to Regulated Projects: By the second year of the effective date of the permit, the Permittee shall require these Post-Construction Standards be applied on applicable new and redevelopment Regulated Projects. These include Regulated Projects that have not been deemed complete for processing, Regulated Projects without vesting tentative maps that have not requested and received an extension of previously granted approvals, and Regulated Projects that have received Project Planning Guide funding. Discretionary projects that have been deemed complete prior to the second year of the effective date of this permit are not subject to the Post-Construction Standards herein. For the Permittee's Regulated Projects, the effective date shall be the date their governing body or designee approves initiation of the project design.

Permittee’s Development Projects - The Permittee shall develop and implement an equivalent approach, to the approach used for private development projects, to apply the most current version of the low impact development runoff standards to applicable public development projects.

Where Project Planning Guide funding is applicable, Permittees shall ensure that adequate funding is available to implement post-construction treatment measures for Regulated Projects approved after the effective date of this permit.

Where State of California project approvals are applicable, Permittees shall implement post-construction treatment measures for Regulated Projects approved after the effective date of this permit.

F.5.g.2.a. Source Control Measures

(i) **Task Description** – Regulated Projects with pollutant-generating activities and sources shall be required to implement standard permanent and/or operational source control measures as applicable.

(ii) **Implementation Level** - Measures for the following pollutant-generating activities and sources shall be designed consistent with recommendations from the CASQA

Stormwater BMP Handbook for New Development and Redevelopment or equivalent manual, and include:

(a) Accidental spills or leaks
(b) Interior floor drains
(c) Parking/Storage area maintenance
(d) Indoor and structural pest control
(e) Landscape/outdoor pesticide use
(f) Pools, spas, ponds, decorative fountains, and other water features
(g) Restaurants, grocery stores, and other food service operations
(h) Storage and handling of solid waste
(i) Outdoor storage of equipment or materials
(j) Vehicle and equipment cleaning
(k) Vehicle and equipment repair and maintenance
(l) Fuel dispensing areas
(m) Loading docks
(n) Fire sprinkler test water
(o) Drain or wash water from boiler drain lines, condensate drain lines, rooftop equipment, drainage sumps, and other sources
(p) Unauthorized non-storm water discharges
(q) Building and grounds maintenance

F.5.g.2.b. Numeric Sizing Criteria for Storm Water Retention and Treatment
The Permittees shall require facilities designed to evapotranspire, infiltrate, harvest/use, and biotreat storm water to meet at least one of the following hydraulic sizing design criteria:

(1) Volumetric Criteria:
   a) The maximized capture storm water volume for the tributary area, on the basis of historical rainfall records, determined using the formula and volume capture coefficients in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998) pages 175-178 (that is, approximately the 85th percentile 24-hour storm runoff event); or
   b) The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology in Section 5 of CASQA's Stormwater Best Management Practice Handbook, New Development and Redevelopment (2003), using local rainfall data.

(2) Flow-based Criteria
   a) The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or
   b) The flow of runoff produced from a rain event equal to at least 2 times the 85th percentile hourly rainfall intensity as determined from local rainfall records.

F.5.g.2.c. Site Design Measures as defined in Section F.5.g.1. shall be based on the objective of achieving infiltration, evapotranspiration and/or harvesting/reuse of the 85th percentile rainfall event, to the extent feasible, to meet Section F.5.g.2.b. Numeric

Sizing Criteria for Storm Water Retention and Treatment. Site design measures shall be used to reduce the amount of runoff, to the extent technically feasible, for which retention and runoff is required. Any remaining runoff from impervious DMAs may then be directed to one or bioretention facility as specified in Section F.5.g.2.d. Storm Water Treatment Measures and Baseline Hydromodification Management Measures, described below.

F.5.g.2.d. Storm Water Treatment Measures and Baseline Hydromodification Management Measures After implementation of Site Design Measures in F.5.g.2.c., runoff from remaining impervious DMAs must be directed to one or more facilities designed to infiltrate, evapotranspire, and/or biotreat the amount of runoff specified in Section F.5.g.2.b. Numeric Sizing Criteria for Storm Water Retention and Treatment. The facilities must be demonstrated to be at least as effective as a bioretention system with the following design parameters.

(1) Maximum surface loading rate of 5 inches per hour, based on the flow rates calculated. A sizing factor of 4% of tributary impervious area may be used.

(2) Minimum surface reservoir volume equal to surface area times a depth of 6 inches.

(3) Minimum planting medium depth of 18 inches. The planting medium must sustain a minimum infiltration rate of 5 inches per hour throughout the life of the project and must maximize runoff retention and pollutant removal. A mixture of sand (60%-70%) meeting the specifications of American Society for Testing and Materials (ASTM) C33 and compost (30%-40%) may be used.

(4) Subsurface drainage/storage (gravel) layer with an area equal to the surface area and having a minimum depth of 12 inches.

(5) Underdrain with discharge elevation at top of gravel layer.

(6) No compaction of soils beneath the facility, or ripping/loosening of soils if compacted.

(7) No liners or other barriers interfering with infiltration.

(8) Appropriate plant palette for the specified soil mix and maximum available water use.

a) **Alternative Designs for Bioretention Facilities —** Facilities, or a combination of facilities, of a different design than in Section F.5.g.2.d. may be permitted if the following measures of equivalent effectiveness are demonstrated:

(1) Equal or greater amount of runoff infiltrated or evapotranspired

(2) Equal or lower pollutant concentrations in runoff that is discharged after bioretention

(3) Equal or greater protection against shock loadings and spills

(4) Equal or greater accessibility and ease of inspection and maintenance

b) **Allowed Adjustments for Bioretention Facilities for Special Site Conditions** - The bioretention design parameters as specified in Section F.5.g.2.d. may be adjusted for the following special site conditions:

(1) Facilities located within 10 feet of structures or other potential geotechnical hazards established by the geotechnical expert for the project may incorporate

an impervious cutoff wall between the bioretention facility and the structure or other geotechnical hazard.

(2) Facilities in areas with documented high concentrations of pollutants in underlying soil or groundwater, facilities located where infiltration could contribute to a geotechnical hazard, and facilities located on elevated plazas or other structures may incorporate an impervious liner and may locate the underdrain discharge at the bottom of the subsurface drainage/storage layer (this configuration is commonly known as a "flow-through planter").

(3) Facilities located in areas of highly infiltrative soils or high groundwater, or where connection of underdrain to a surface drain or to a subsurface storm drain are infeasible, may omit the underdrain.

c) **Exceptions to Requirements for Bioretention Facilities** - Contingent on a demonstration that use of bioretention or a facility of equivalent effectiveness is infeasible, other types of biotreatment or media filters (such as tree-box-type biofilters or in-vault media filters) may be used for the following:

(1) Projects creating or replacing an acre or less of impervious area, and located in a designated pedestrian-oriented commercial district (i.e., smart growth projects), and having at least 85% of the entire project site covered by permanent structures;

(2) Facilities receiving runoff solely from existing (pre-project) impervious areas;

(3) Historic sites, structures, or landscapes that cannot alter their original configuration in order to maintain their historic integrity.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.g.3. Alternative Post-Construction Storm Water Management Program

A Permittee may propose alternative post-construction measures in lieu of some or all of Section F.5.g. requirements for multiple benefit projects. Multiple-benefit projects include projects that may address any of the following, in addition to water quality: water supply, flood control, habitat enhancement, open space preservation, recreation, climate change. Multiple-benefit projects may be applied at various scales including project site, municipal or sub-watershed level. Multiple-benefit projects may include, but are not limited to, projects developed under Watershed Improvement Plans (Water Code §16100 et seq.), IRWMP implementation and green infrastructure projects. Multiple benefit projects must be equally or more protective of water quality than Section E.12. requirements.

The Regional Water Board or the Executive Officer may approve alternative post-construction measures for multiple-benefit projects, as described above, after an opportunity for public comment, if the Regional Water Board or Executive Officer finds that the alternative measures are consistent with the MEP standard.

F.5.g.4. Operation and Maintenance (O&M) of Post-Construction Storm Water Management Measures

(i) **Task Description** –Within the third year of the effective date of the permit, the Permittee shall implement an O&M Verification Program for new development projects regulated under this Order.

(ii) **Implementation Level** – At a minimum, the O&M Verification Program shall include the following elements:

(a) Projects shall at a minimum, require at least one of the following from all project proponents and their successors in control of the Project or successors in fee title:

(1) Written conditions in the sales or lease agreements or deed for the project that requires the buyer or lessee to assume responsibility for the O&M of the installed treatment system(s) and hydromodification control(s) (if any) until such responsibility is legally transferred to another entity;

(2) Any other legally enforceable agreement or mechanism, such as recordation in the property deed, that assigns the O&M responsibility for the installed treatment system(s) and hydromodification control(s) (if any) to the project owner(s) or the Permittee.

(b) Coordination with the appropriate mosquito[37] and vector control agency with jurisdiction to establish a protocol for notification of installed treatment systems and hydromodification management controls. On an annual basis, before the wet season, prepare a list of newly installed (installed within the reporting period) storm water treatment systems and hydromodification management controls to the local mosquito and vector control agency and the appropriate Regional Water Board. This list shall include the facility locations and a description of the storm water treatment measures and hydromodification management controls installed.

(c) A database or equivalent tabular format of all projects that have installed treatment systems. This database or equivalent tabular format shall include the following information for each project:

(1) Name and address of the project;

(2) Specific description of the location (or a map showing the location) of the installed treatment system(s) and hydromodification control(s) (if any);

(3) Date(s) that the treatment system(s) and hydromodification controls (if any) is/are installed;

(4) Description of the type and size of the treatment system(s) and hydromodification control(s) (if any) installed;

(5) Responsible operator(s) of each treatment system and hydromodification control (if any);

[37] "Best Management Practices for Mosquito Control on California State Properties" are available from the California West Nile virus website at http://www.westnile.ca.gov/resources.php. Please see Table 1, page 22, for a list of California mosquito control agencies or visit the Mosquito and Vector Control Association of California at: http://mvcac.org

(6) Dates and findings of inspections (routine and follow-up) of the treatment system(s) and hydromodification control(s) (if any) by the Permittee; and

(7) Any problems and corrective or enforcement actions taken.

(d) Maintenance Approvals: The Permittee shall ensure that systems and hydromodification controls installed at projects are properly operated and maintained for the life of the projects. In cases where the responsible party for a treatment system or hydromodification control has worked diligently and in good faith with the appropriate State and federal agencies and the Permittee to obtain approvals necessary to complete maintenance activities for the treatment system or hydromodification management control, but these approvals are not granted, the Permittee shall be deemed to be in compliance with this Provision.

(iii) **Reporting -** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.h. PROGRAM EFFECTIVENESS ASSESSMENT AND IMPROVEMENT

F.5.h.1. Program Effectiveness Assessment and Improvement Plan

(i) **Task Description -** The Permittee shall develop and implement a Program Effectiveness Assessment and Improvement Plan that tracks short and long-term progress of the storm water program. The Program Effectiveness Assessment and Improvement Plan will assist the Permittee to adaptively manage its storm water program and make necessary modifications to the program to improve program effectiveness, reduce pollutants of concern, achieve the MEP standard, and protect water quality, and to document the Permittee's compliance with permit conditions. The Program Effectiveness Assessment and Improvement Plan shall identify the strategy used to gauge the effectiveness of prioritized BMPs and program implementation as a whole. Prioritized BMPs include BMPs implemented based on pollutants of concern. Where pollutants of concern are unidentified, prioritized BMPs are based on common pollutants of concern (i.e., sediment, bacteria, trash, nutrients). The effectiveness assessments will build upon each other from one year to the next and shall identify modifications to the program the Permittee must undertake to improve effectiveness.

(ii) **Implementation Level** - The Program Effectiveness Assessment and Improvement Plan may be modeled upon the most recent version (if applicable) Municipal Storm Water Program Effectiveness Assessment Guidance (CASQA, May 2007) or equivalent.

(a) The Program Effectiveness Assessment and Improvement Plan shall include the following minimum elements:

(1) Implementation of storm water program elements

(2) Identification and targeting of Target Audience(s)

(iii) **Reporting -** By the second year Annual Report complete and submit the Program Effectiveness Assessment and Improvement Plan. At a minimum, the Plan shall include implementation of storm water program elements and identification of the Targeted Audience(s).

F.5.h.2. Storm Water Program Modifications

(i) **Task Description** – Within the fifth year of the effective date of the permit, based on the information gained from the effectiveness assessment, the Permittee shall identify modifications to control measures/significant activities, including new BMPs or modification to existing BMPs. The Permittee shall consult with the Regional Water Board in setting expectations for the scope, timing, and frequency of BMP modifications for the next permit cycle.

(ii) **Implementation Level** –The Permittee shall identify program modifications to include:

(a) Improving upon BMPs that did not accomplish goals;

(b) Continuing and expanding upon BMPs that proved to be effective, including identifying new BMPs or modifications to existing BMPs designed to increase pollutant load reductions;

(c) Discontinuing BMPs that may no longer be productive and replacing with more effective BMPs; and

(d) Shifting priorities to make more effective use of resources

(ii) **Reporting** – By the fifth year Annual Report complete and have available a list of maintenance activities of highest priority BMPs. By the fifth year Annual Report, complete and have available a summary of proposed modifications to the storm water program to improve program effectiveness, to achieve the MEP standard, and to protect water quality.

F.5.i. TOTAL MAXIMUM DAILY LOADS COMPLIANCE REQUIREMENTS

F.5.i.1. Attachment G contains a list of TMDL-specific, BMP-based water quality based effluent limitations (WQBELs) and other permit requirements, applicable to identified permittees, consistent with the assumptions and requirements of the applicable wasteload allocations of the TMDLs.

Permittees shall comply with the requirement in Section C.1. to reduce the discharge of pollutants to achieve applicable TMDL wasteload allocations as follows:

(i) Prior to the deadline to attain the final wasteload allocation, a permittee is deemed in compliance with the requirement in Section C.1 *to reduce the discharge of pollutants to achieve applicable TMDL wasteload allocations* if the permittee is timely implementing all BMP-based WQBELs and other requirements specified in Attachment G for that TMDL. The permittee may alternatively make a demonstration in accordance with section F.5.i.1.(ii) below.

(ii) On or after the deadline to attain the final wasteload allocation, a permittee is deemed in compliance with the requirement in Section C.1 *to reduce the discharge of pollutants to achieve applicable TMDL wasteload allocations* if the permittee meets one or more of the criteria in subsections (a)-(g) below. For purposes of this section only, the wasteload allocations specified in the applicable TMDLs (as identified in the Fact Sheet) are incorporated by reference.

(a) Receiving water monitoring and analysis by the permittee or other responsible parties under the TMDL, as approved by the Regional Water Board or its designee, demonstrates attainment of the applicable receiving water limitation in the waterbody as determined at the TMDL monitoring attainment locations or as determined at or immediately downstream of the permittee's discharge; or

(b) Receiving water monitoring does not demonstrate attainment of the applicable receiving water limitation in the waterbody, but the permittee demonstrates, through an approach approved by the Regional Water Board or its designee, that exceedances of the receiving water limitations for the receiving water are due to loads from other sources and pollutant loads from the permittee are not causing or contributing to the exceedances; or

(c) Where the wasteload allocation is expressed as a concentration, sampling of the permittee's discharge, as approved by the Regional Water Board or its designee, indicates that the discharge has attained the applicable wasteload; or

(d) Where a mass-based wasteload has been allocated to an individual or jointly to a group or is expressed as a percent reduction in load, the permittee demonstrates, through an approach approved by the Regional Water Board or its designee, that the permittee's discharge is attaining the individual or joint allocation or the percent reduction; or

(e) Where a wasteload allocation is expressed as the number of allowable exceedance days, the permittee demonstrates, through an approach approved by the Regional Water Board or its designee, that the permittee's discharge conforms to the allowable exceedance days; or

(f) The permittee demonstrates, in a manner approved by the Regional Water Board or its designee, that no discharges, either directly or indirectly, from the permittee's MS4 to the applicable water body occurred during the relevant time period; or

(g) The permittee demonstrates the attainment of the wasteload allocation through other factors as described by the specific TMDL(s)[38] and as approved by the Regional Water Board or its designee.

(iii) Pursuant to Section D, a permittee deemed in compliance with Section C.1 in accordance with subsections i) and ii) of this section is also deemed in compliance with the Section D requirement to *not cause or contribute to an exceedance of water quality standards* for the specific pollutants and water bodies addressed.

F.5.i.2. In some cases, Attachment G includes dates that fall outside the term of this Order. Attainment dates for BMP-based WQBELs and other permit requirements that

[38] As an example, the TMDL for Sacramento and San Joaquin Delta – Diazinon and Chlorpyrifos states "In determining compliance with the wasteload allocations, the Regional Water Board will consider any data or information submitted by the discharger regarding diazinon and chlorpyrifos inputs from sources outside of the jurisdiction of the permitted discharger, including any diazinon and chlorpyrifos present in precipitation and other available relevant information, and any applicable provisions In the discharger's NPDES permit requiring the discharger to reduce the discharge of pollutants to the maximum extent possible.", Resolution No. R5-2006-0061, Attachment 1, #11, Page 4.

exceed the term of this Order are included for reference, and become enforceable in the event that this Order is administratively extended.

Wasteload allocation attainment dates that have already passed are enforceable on the effective date of this Order and have been assigned a due date of January 1, 2019.

(i) If the Regional Water Board Executive Officer makes a determination, on a case by case basis, that the language of a particular TMDL allows flexibility to extend a final deadline to attain a wasteload allocation, the State Water Board Executive Director may amend Attachment G to provide an extended deadline following public notice and comment.

Where a final deadline to attain a wasteload allocation is past and the permittee has not demonstrated compliance as specified in Section F.5.i.1.(ii) above, the permittee may seek a time schedule order pursuant to Water Code section 13300 from the Regional Water Board. Permittees may either individually request a time schedule order or may jointly request a time schedule order with all Permittees subject to the TMDL in Attachment G. Permittees may also request time schedule orders where the permittee has not timely complied with a BMP-based WQBEL or other permit requirement in Attachment G.

A request to the applicable Regional Water Board for a time schedule order shall include the following information:

(a) Any available data demonstrating the current quality of the MS4 discharge(s) in terms of concentration and/or load of the target pollutant(s) to the receiving waters subject to the TMDL;

(b) A description and chronology of structural controls and source control efforts carried out by the permittee since the effective date of the TMDL to reduce the pollutant load in the MS4 discharges to the receiving waters subject to the TMDL;

(c) Justification of the need for additional time to achieve the requirements;

(d) The specific actions the Permittee will take in order to meet the TMDL requirements and a time schedule of interim and final deadlines proposed to implement those actions. The actions will reflect the requirements specified for the TMDL in Attachment G; and

(e) A demonstration that the time schedule requested is as short as possible, taking into account the technological, operational, and economic factors that affect the design, development, and implementation of the control measures that are necessary to comply with the TMDL requirements.

(ii) It is not the intention of the State Water Board or the Regional Water Boards to bring an enforcement action for non-attainment of the wasteload allocation where:

(a) A permittee is in compliance with a time schedule order's implementation requirements and compliance schedule;

(b) A permittee has in good faith requested a time schedule order from the Regional Water Board and is in compliance with all BMP-based WQBELs and other permit requirements of Attachment G, except the requirement to attain the applicable wasteload allocation by the final attainment deadline;

(c) A Regional Water Board has initiated proceedings to revise the TMDL to provide additional time for attainment or to modify TMDL wasteload allocations and the

permittee is in compliance with all BMP-based WQBELs and other permit requirements in Attachment G, except the requirement to attain the applicable wasteload allocation by the final attainment deadline.

F.5.i.3. The State Water Board may revise this Order through a reopener to incorporate any modifications or revisions to the TMDLs in Attachment G, or to incorporate any new TMDLs adopted during the term of this Order that assign a wasteload allocation to the Permittee or that identify the Permittee as a responsible party. In revising Attachment G, the State Water Board will allow adequate notice and public review.

F.5.i.4. The Permittee shall complete and have available a report that includes the status of their implementation of the specific TMDL implementation requirements that have been incorporated into the Order with each Annual Report. The TMDL implementation report shall include the following information:

(i) A description of BMPs implemented, including types, number, and locations;

(ii) All supplemental information and reports required under the specific TMDL implementation requirements in Attachment G;

(iii) An assessment of the effectiveness of implemented BMPs in progressing towards attainment of wasteload allocations within the TMDLs' specified timeframes;

(iv) All monitoring data, including a statistical analysis of the data to assess progress towards attainment of wasteload allocations within the TMDLs' specified timeframes;

(v) Based on results of the effectiveness assessment and monitoring, a description of the additional BMPs that will be implemented to attain wasteload allocations within the TMDLs' specified timeframes.

F.5.i.5. The Permittee shall comply with implementation requirements specified in Category 4b demonstrations associated with Clean Water Act Sections 303d, 306b, and 314 Integrated Reporting and Listing Decisions. Implementation requirements described in Category 4b demonstrations are effective upon Regional Water Board approval of that region's Integrated Reporting and Listing Decisions and associated Category 4b demonstrations.

F.5.j. ONLINE ANNUAL REPORTING

F.5.j.1. Department of Defense and Department of Corrections, ports, transportation agencies and Rehabilitation Permittees are exempt from Annual Reporting of any provision that could pose a security risk and compromise facility security. Any requested information to determine compliance with this Order [40 C.F.R. 122.41(h)] by the Water Boards or U.S. EPA shall be furnished during normal business hours.

F.5.j.2. By October 15 of each year, the Permittee shall use State Water Board's SMARTS to submit a summary of the past year activities for each program element and certify compliance with all requirements of this permit. If a Permittee is unable to certify compliance with a requirement, it must submit in SMARTS the reason for failure to comply, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance.

F.5.j.3. Permittees shall complete and retain all Annual Report information on the previous fiscal year beginning July 1 and ending June 30. The Annual Reporting requirements are set forth in Provisions E. The Permittee shall retain documentation as necessary to support their Annual Report. The Permittee shall make this supporting information available during normal business hours, unless agreed to by the Regional Water Board's Executive Officer.

F.5.j.4. The Permittee shall submit when requested by the Executive Officer of the applicable Regional Water Board a detailed written online annual report or in-person presentation of the annual report that addresses the activities described in Provision F. The detailed Annual Report must clearly refer to the permit requirements and describe in quantifiable terms, the status of activities undertaken to comply with each requirement.

F.5.j.5. Permittees involved in regional programs may coordinate with the members to identify reporting responsibility. The one report submitted on behalf of Permittees involved in a regional program must include a summary of the past year activities implemented for each program element and certification of compliance for each of the Permittees in the regional program.

G. REGIONAL WATER BOARD AUTHORITIES

Regional Water Boards are responsible for overseeing compliance with this Order. Oversight may include, but is not limited to, reviewing reports, requiring modification to storm water program components and various submissions, imposing region-specific monitoring requirements, conducting inspections and program evaluations (audits), taking enforcement actions against violators of this Order. Permittees shall modify and implement their storm water management programs and monitoring as required by the Regional Water Board Executive Officer. The Regional Water Board may designate additional Small MS4s as Regulated Small MS4s under this Order consistent with the criteria articulated in Finding 24 of this Order. Such designations must be approved by the Regional Water Board following public review and comment. The Executive Director of the State Water Board may amend Attachments A and B to add Regional Water Board designations. The Regional Water Boards may also issue individual permits to Regulated Small MS4s, and alternative general permits to categories of Regulated Small MS4s. Upon issuance of such permits by a Regional Water Board, this Order shall no longer regulate the affected Small MS4(s).

H. DISPUTE RESOLUTION

In the event of a disagreement between a Permittee or other interested party and a Regional Water Board over the interpretation or implementation of any provision of this Order, a Permittee or interested party shall first attempt to resolve the issue with the Executive Officer of the Regional Water Board. If a satisfactory resolution is not obtained at the Regional Water Board level, a Permittee or interested party may submit the issue in writing to the Executive Director of the State Water Board or his designee for resolution, with a copy to the Executive Officer of the Regional Water Board. The issue must be submitted to the Executive Director within thirty days of any final determination by the Executive Officer of the Regional Water Board; after thirty days the Permittee or

interested party will be deemed to have accepted the Regional Water Board Executive Officer's determination. The Executive Officer of the Regional Water Board will be provided an opportunity to respond. The Executive Director or his/her designee shall make a determination on the request within 60 days. Determinations of the Regional Water Board Executive Officers in interpreting and implementing this permit are considered actions of the State Water Board except where the Regional Water Board itself acts or the Executive Officer acts under Water Code Sections 13300, 13304, or 13383.

I. PERMIT RE-OPENER

This Order may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations 122.62, 122.63, 122.64, and 124.5. The State Board may additionally reopen and modify this Order at any time prior to its expiration under any of the following circumstances:

1. Present or future investigations demonstrate that the discharge(s) regulated by this Order may have the potential to cause or contribute to adverse impacts on water quality and/or beneficial uses.
2. New or revised Water Quality Objectives come into effect, or any TMDL is adopted or revised that is applicable to the Permittees
3. TMDL-specific permit requirements for adopted TMDLs are developed or revised by a Regional Water Board for incorporation into this Order.
4. The State Water Board determines, after opportunity for public comment and a public workshop, that revisions are warranted to those provisions of the Order addressing compliance with water quality standards in the receiving water or those provisions of the Order laying out an iterative process for implementation of management practices to achieve compliance with water quality standards in the receiving water.
5. The State Board completes the delineation of statewide watershed management zones based on watershed processes and the development of watershed based criteria for hydromodification measures.
6. The State Water Board completes the statewide policy for trash control in California's waterways.

J. PERMIT EXPIRATION

This Order expires on June 30, 2018. If this Order is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with 40 Code of Federal Regulations section 122.6 and remain in full force and effect. If you wish to continue an activity regulated by this Order after the expiration date of this Order, you must apply for and obtain authorization as required by the new permit once it is issued.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of State Water Board held on February 5, 2013.

AYE:	Chairman Charles R. Hoppin Vice Chair Frances Spivy-Weber Board Member Tam M. Doduc Board Member Steven Moore Board Member Felicia Marcus
NAY:	None
ABSENT:	None
ABSTAIN:	None

Jeanine Townsend
Clerk to the Board

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD
1001 I Street
Sacramento, CA 95814

FACT SHEET FOR

NPDES GENERAL PERMIT and WASTE DISCHARGE REQUIREMENTS FOR STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (ORDER)

ORDER No. 2013-0001-DWQ

As Amended by Order 2017-XXXX-DWQ

This Fact Sheet describes the factual, legal, and methodological basis for the General Permit, provides supporting documentation, and explains the rationale and assumptions used in deriving the limits and requirements.

I. BACKGROUND

History

A 1972 amendment to the federal Water Pollution Control Act (also referred to as the Clean Water Act) provides that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the Clean Water Act added section 402(p), which established a framework for regulating storm water discharges under the NPDES Program. Subsequently, in 1990, the U.S. Environmental Protection Agency (U.S. EPA) promulgated regulations for permitting storm water discharges from industrial sites (including construction sites that disturb five acres or more) and from municipal separate storm sewer systems (MS4s) serving a population of 100,000 people or more. These regulations, known as the Phase I regulations, require operators of medium and large MS4s to obtain storm water permits. On December 8, 1999, U.S. EPA promulgated regulations, known as Phase II regulations, requiring permits for storm water discharges from Small MS4s and from construction sites disturbing between one and five acres of land. The Order accompanying this Fact Sheet regulates storm water discharges from Small MS4s.

A municipal separate storm sewer is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) “owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity….” (ii) designed or used for collecting or conveying storm water; (iii) which is not a combined sewer; and (iv) which is not part of a Publicly Owned Treatment Works (POTW). [See Title 40, Code of Federal Regulations (40 C.F.R.) §122.26(b)(8).]

A Small MS4 is an MS4 that is not permitted under the municipal Phase I regulations. (40 C.F.R. §122.26(b)(16)). Small MS4s include systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares, but do not include separate storm sewers in very discrete areas, such as individual buildings. (40 C.F.R. §122.26(b)(16(iii).) This permit refers to MS4s that operate throughout a community as “Traditional MS4s” and MS4s that are similar to traditional MS4s but operate at a separate campus or facility as “Non-traditional MS4s.”

Federal regulations allow two permitting options for storm water discharges: individual permits and general permits. The State Water Resources Control Board (State Water Board) elected to adopt a statewide general permit for Small MS4s in order to efficiently regulate numerous storm water discharges under a single permit. In certain situations a storm water discharge may be more appropriately and effectively regulated by an individual permit, a region-specific general permit, or by inclusion in an existing Phase I MS4 permit. In these situations, the Regional Water Quality Control Board (Regional Water Board) Executive Officer will direct the Small MS4 operator to submit the appropriate application, in lieu of a Notice of Intent (NOI), to comply with the terms of this Order. In these situations, the individual or regional permits will govern, rather than this Order.

This Order regulates storm water runoff from small municipalities and other facilities, including federal and State operated facilities that can include universities, prisons, hospitals, military

bases (e.g. State Army National Guard barracks, parks and office building complexes.) Regulating many storm water discharges under one permit greatly reduces the administrative burden associated with permitting individual storm water discharges. Permittees obtain coverage under this Order by filing an electronic NOI through the State Water Board's Stormwater Multiple Application and Report Tracking System (SMARTS) and by mailing the appropriate permit fee to the State Water Board.

Order Goals

The goals for the Order included:

1. Ensure statewide consistency for Regulated Small MS4s.
2. Include more specificity in Order language and requirements to streamline implementation of storm water programs.
3. Implement and enhance actions to control 303(d) listed pollutants, pollutants of concern, achieve Wasteload Allocations adopted under Total Maximum Daily Loads, and protect Areas of Special Biological Significance.
4. Implement more specific and comprehensive storm water monitoring, including monitoring for 303(d) listed pollutants.
5. Incorporate emerging technologies, especially those that are being increasingly utilized by municipalities (e.g., low impact development).
6. Include program elements that address Program Management Effectiveness Assessments.
7. Implement a step-wise stakeholder collaborative approach.

Stakeholder Collaborative Process

State Water Board staff conducted a series of stakeholder meetings with Permittees and other interested parties over a five year period, from 2007- 2012. These meetings included the California Stormwater Quality Association (CASQA) Phase II Small MS4 Subcommittee, representatives of non-governmental organizations, Non-traditional Small MS4s and Regional Water Board staff. The following is a summary of the stakeholder process.

State Water Board staff completed an administrative draft Order and submitted it to CASQA, U.S. EPA, Natural Resources Defense Council, Coast/Bay Keepers, and Heal the Bay for informal stakeholder review in February 2011. Each of the nine Regional Water Boards provided comments. Staff revised the draft Order to address the informal comments received and released it for 60-day public review in June 2011.

Approximately 151 comments were received and several workshops were held throughout California to meet Stakeholders, answer questions and discuss the development process.

On May 4, 2012 a second administrative draft was completed and submitted for informal stakeholder review. On May 18, 2012 the second draft Order was released for 60-day public review. Approximately 110 comments were received and a public hearing was held on August 8, 2012 to hear oral comments on the second administrative draft.

On November 16, 2012 a third draft was completed and submitted for 30-day public review period. The comment deadline was set for noon on December 17, 2012. Approximately 55 comments were received and a board workshop was held on January 8, 2013 to hear comments on the revisions made to the second administrative draft.

On January 23, 2013, a final draft was completed and proposed for State Water Board adoption.

In 2015, State Water Board staff conducted a series of stakeholder meetings with Permittees and other interested parties over several months to discuss proposed changes to the Order, specifically revising and Attachment G with updated TMDL requirements. These meetings included the CASQA Phase II Small MS4 Subcommittee, representatives of non-governmental organizations, Non-traditional Small MS4s and Regional Water Board staff. On June 5, 2017 a draft amendment to this Order was issued for a 45-day public review period. The public review period was extended by request and the due date for public comments became August 21, 2017.

II. PERMITTING APPROACH

Existing General Permit Approach

U.S. EPA storm water regulations for Phase II storm water permits envision a process in which entities subject to regulation develop a Storm Water Management Plan (SWMP). The SWMP contains detailed Best Management Practices (BMPs) and specific level-of- implementation information reviewed and approved by the permitting agency before the Permittee obtains coverage under the storm water permit. The existing General Permit followed this approach as suggested by U.S. EPA and simply identified goals and objectives for each of the six Minimum Control Measures.

The existing General Permit approach provides the flexibility to target an MS4's problem areas while working within the existing organizational structure. However, audits of Permittees and information gained from interviews with Regional Water Board staff revealed that many of these storm water programs lacked a baseline program and specific details in the SWMP to implement an adequate program for protection from the impacts of storm water runoff. Regional Water Board staff found it difficult to determine Permittees' compliance with the existing General Permit, due to the lack of specific requirements. The permit language did not contain specific deadlines for compliance, did not incorporate clear performance standards, and did not include measurable goals or quantifiable targets for implementation.[1]

The Regional Water Boards conducted approximately 36 on-site audits of MS4 programs[2] in the state that addressed 122 Permittees, including some Phase II Small MS4s. They found that programs with more specific permit requirements generally resulted in more comprehensive and progressive storm water management programs. For example, the more prescriptive permit requirements in the Los Angeles and San Diego MS4 permits require Permittees to be specific in how they implement their storm water program. The auditors concluded that the specificity of the provisions enabled the permitting authorities to enforce the MS4 permits and improve the quality of MS4 discharges. In addition, U.S. EPA on-site audits of MS4s throughout the nation have

Given this information, State Water Board staff aimed to write permit language clear enough to set appropriate standards and establish required outcomes.

[1] Storm Water Phase I MS4 Permitting: Writing more effective, measurable permits, EPA, Kosco. repeatedly shown the need for clear, measurable requirements in MS4 permits to ensure an effective and enforceable program.

[2] Assessment Report on Tetra Tech's Support of California's MS4 Storm Water Program, July 2006

Current Order Approach

The current approach simplifies assessment of Permittee compliance and allows the public to more easily access measurable results. The Order provisions establish compliance implementation levels such as escalating enforcement and requirements for tracking projects. Required actions include specific reporting elements to substantiate compliance with implementation levels. Regional Water Board staff will be able to evaluate each individual Permittee's compliance through an online Annual Report review and the program evaluation (audit) process.

Federal regulations and State law require that the implementation specifics of Municipal Storm Water NPDES permits be adopted after adequate public review and comment.[3] This Order's approach satisfies the public involvement requirements of both the federal Clean Water Act and the California Water Code. Permit details are known at the time of adoption of the Order. Substantive information as to how the discharger will reduce pollutants to the Maximum Extent Practicable (MEP) is not left to the details of the SWMP. The public need not guess program details until Regional Water Board review and approval of a SWMP, as was the case in the existing General Permit.

This Order specifies the actions necessary to reduce the discharge of pollutants in storm water to the MEP in a manner designed to achieve compliance with water quality standards and objectives. This set of specific actions is equivalent to the requirements that were included in a separate SWMP for each Permittee in the existing General Permit.

This order effectively prohibits non-storm water discharges into municipal storm drain systems and watercourses within the Permittees' jurisdictions.

The State Board has also identified the most critical water quality problems as priorities in this Order. The priorities include (1) discharges to Areas of Special Biological Significance (2) discharges to water bodies listed as impaired on the 303[d] list (3) Post- Construction Requirements and (4) Water Quality Monitoring Requirements. A majority of the Permittees' implementation efforts focus on the four priority areas as identified by the State Water Board.

Permittee Diversity

In California, Permittees face highly variable conditions both in terms of threats to water quality from their storm water discharges and resources available to manage those discharges. Consequently, making one set of prescriptive requirements work for all of them is inherently difficult. This Order contains separate provisions for Traditional and Non-traditional MS4s. The

[3] On January 14, 2003, the U.S. Ninth Circuit Court issued a decision in *Environmental Defense Center v. EPA* ((9th Cir. 2003) 344 F.3d 832.) This ruling upheld the Phase II regulations on all but three of the 20 issues contested. The court determined that applications for general permit coverage (including the NOI and any Storm Water Management Program [SWMP]) must be made available to the public, the applications must be reviewed and determined to meet the Maximum Extent Practicable (MEP) standard by the permitting authority before coverage commences, and there must be a process to accommodate public hearings. Regarding the issue of public participation, the Ninth Circuit noted that such participation was required because the "substantive information about how the operator of a small MS4 will reduce discharges to the maximum extent practicable" was found in the storm water management plan rather than the permit itself" (344 F3d at 857).

requirements for the Non-traditional MS4s are tailored specifically to the Non-traditional management structure. Additionally, this permit introduces the concept of compliance tiers in particular sections, designed to relieve the Regional Water Board burden of reviewing and approving individual SWMPs while preserving the ability of the Permittees to tailor requirements that address their unique circumstances.

Non-traditional MS4 Categories and Provisions

This Order identifies specific provisions Non-traditional MS4 Permittees must comply with in Section F and considers the following categories to be Non-traditional MS4s, but not limited to:

- Community Services Districts
- Fairgrounds
- Higher Education Institutions (Community Colleges and Universities)
- Military Bases
- Ports
- State Parks/Beaches/Historical Areas
- School Districts K-12
- State and Federal Prisons/Health Institutions
- State Vehicle Recreation Areas
- Water Agencies
- Transit Agencies

The regulations direct that the term Small MS4s includes “large hospitals” and “prison complexes.” (40 C.F.R. §122.26(b)(16)(iii).) For purposes of State Water Board designation of state and federal hospitals and prisons, the Board interprets the terms “large hospital” and “prison complex” to mean health institutions and prison facilities with a resident and staff population of 5,000 or more. However, Regional Water Boards may designate smaller facilities on a case by case basis.

Guidance Document

The case for eliminating a SWMP for this second permit term has been clearly addressed, however, the latent advantages of having some form of a storm water management document has not.

First, a storm water management document assists Permittees in managing their storm water program. Such a document serves as guidance to (1) identify different staff involved in storm water compliance over multiple departments within the Permittee agency and, (2) provide those staff with a simple narrative connecting all the detailed, specific BMPs in relation to multiple Permittee departments. Simply put, the document provides the Permittee with a map to the compliance process.

Second, the storm water management document is an essential tool for Regional Water Board audits. During MS4 audits, the Regional Water Board typically requests and reviews a SWMP to understand the Permittee’s storm water program and management structure. Although the Order contains specific details on each program requirement, it lacks the simple narrative nexus that a storm water management document can provide on how the storm water program is implemented by a specific Permittee. The guidance document may be in spreadsheet form, as a flowchart, or as a written narrative. In other words, the structure is left up to the Permittee as to the way in which they want to demonstrate or illustrate the relationship between their

storm water program and their management structure. To that end, the guidance document will provide the Permittee with a clear map to the compliance process. Therefore, although the draft Order eliminates the submittal for review and approval of a SWMP, the requirement to develop a planning/guidance document has been retained for new Permittees.

New Permittees are allowed six months to develop and upload the guidance document to SMARTS along with the NOI and appropriate fee. The document is open for public viewing, but will not be reviewed and approved by the relevant Regional Water Board.

Renewal Permittees will also submit a guidance document and are allowed six months to develop and upload the guidance document to SMARTS along with the NOI and appropriate fee.

The State Water Board recognizes that in some instances Renewal Permittees' existing SWMPs have incorporated BMPs designed to address locality-specific storm water issues and that in some cases these BMPs may, because of locality-specific factors, be more protective of water quality than the minimum requirements established by this Order. Renewal Permittees will additionally include in the guidance document the following: identification and brief description of each BMP and associated measurable goal included in the Permittee's most current SWMP that constitutes a more specific local or tailored level of implementation that may be more protective of water quality than the minimum requirements of this Order; and identification of whether the Permittee proposes to maintain, reduce, or cease implementation for each more protective, locally-tailored BMP. In no instance may a BMP be reduced or ceased if it is required by the minimum standards set by this Order. Further, for each more protective, locally-tailored BMP and associated measurable goal for which the Renewal Permittee proposes to reduce or cease implementation, the Renewal Permittee may do so only if the Permittee can demonstrate, to the Regional Water Board Executive Officer, that the reduction or cessation is in compliance with this Order and the maximum extent practicable standard, and will not result in increased pollutant discharges. This process is designed to direct Renewal Permittees, where appropriate, to continue to implement more protective, locally-tailored BMPs and measurable goals developed in the previous permit term that were specifically designed to address local storm water priorities.

Summary of Significant Changes in this Order

This Order significantly differs from the previous order (Order 2003-0005-DWQ) by including the following:

- Specific BMP and Management Measure Requirements
- Elimination of submission of a SWMP for review and approval by the Regional Water Boards
- Electronic filing of NOIs and Annual Reports
- Waiver Certification
- New State Water Board and Regional Water Board designation criteria
- Separate requirements for Traditional and Non-traditional MS4s
- New program management requirements
- Post-construction storm water management requirements
- TMDL implementation requirements
- Requirements for ASBS discharges
- Water quality monitoring and BMP assessment
- Program effectiveness assessment

III. ECONOMIC CONSIDERATIONS

In 2000, the State Water Board issued a precedential order (Order WQ 2000-11 (Cities of Bellflower, et al.)) stating that cost of compliance with the programs and requirements of a municipal storm water permit is a relevant factor in determining MEP. The Order also explicitly stated that a cost benefit analysis is not required. The State Water Board discussed costs as follows:

While the standard of MEP is not defined in the storm water regulations or the Clean Water Act, the term has been defined in other federal rules...

These definitions focus mostly on technical feasibility, but cost is also a relevant factor. There must be a serious attempt to comply, and practical solutions may not be lightly rejected. If, from the list of BMPs, a permittee chooses only a few of the least expensive methods, it is likely that MEP has not been met. On the other hand, if a permittee employs all applicable BMPs except those where it can show that they are not technically feasible in the locality, or whose cost would exceed any benefit to be derived, it would have met the standard. MEP requires permittees to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs would not be technically feasible, or the cost would be prohibitive. Thus while cost is a factor, the Regional Water Board is not required to perform a cost-benefit analysis.

(State Water Board Order WQ 2000-11, supra, p.20.) The State Water Board received extensive comments addressing the costs associated with compliance with the first publicly released Phase II small MS4 draft Order in June 2011. The depressed economic conditions in California challenge Permittees' ability to fully implement the requirements of the first draft permit. The State Water Board recognizes that many Permittees currently have limited staff and resources to implement storm water provisions. State Water Board staff carefully considered comments received regarding economic feasibility while revising the June 2011 draft Order. The Order continues to address critical water quality priorities, namely discharges to ASBS, TMDLs, and waterbodies listed as impaired on the 303(d) list, but aims to do so in a focused and cost-effective manner.

Brief History

State Water Board staff completed an administrative draft Order and submitted it to CASQA, U.S. EPA, Natural Resources Defense Council, Water Keepers, and Heal the Bay for informal stakeholder review in February 2011. Each of the nine Regional Water Boards also provided comments. Staff revised the draft Order to address the informal comments received and released it for 60-day public review in June 2011. Approximately 151 comments were received and several workshops were held throughout California to meet Stakeholders, answer questions and discuss the development process.

On October 6, 2011, the California Senate Select Committee on California Job Creation and Retention held a hearing on the economic impacts of the State Water Board's three general or statewide storm water permits that were under renewal: the Phase II Small MS4 permit, the Industrial General Permit, and the Caltrans statewide MS4 permit. The Executive Director of the State Water Board testified at the hearing that the comments regarding cost of compliance with the permits were being considered carefully and that the three permits required substantial revision to address the comments. Following the hearing, State Water Board staff launched Stakeholder meetings beginning in November 2011 to April 2012. The meetings were held with CASQA, National Resources Defense Council, Water Keepers, Heal the Bay

and each category of Non- traditional Small MS4 proposed for designation in the draft permit. The meetings were designed to discuss implementation challenges and solutions for each section of this Order, given the issues raised at the Senate hearing and the written comments from the June 2011 draft Order. Substantial revisions were then made and were reflected in the May 2012 draft Order. State Water Board staff attempted to reduce costs while maintaining the level of water quality protection mandated by CWA, CWC and other applicable requirements.

Approach to Cost of Compliance

This section is a general discussion of the more significant changes between the June 2011 and the May 2012 draft Order, including cost of compliance. It is not possible to accurately predict the cost impact of requirements that involve an unknown level of implementation or that depend on environmental variables that are as yet undefined. Only general conclusions can be drawn from this information.

It is extremely important to note that many storm water program components and their associated costs existed before any MS4 permits were issued. For example, storm drain maintenance, street sweeping and trash/litter collection costs cannot be solely or even principally attributed to MS4 permit compliance since these long-standing practices preceded the adoption of the earliest storm water permit in 1990. Even many structural BMPs (erosion protection, energy dissipation devices, detention basins etc.) are standard engineering practice for many projects and are not implemented solely to comply with permit provisions. Therefore, the true cost resulting from MS4 permit requirements is some fraction of the total storm water program costs.

The California State University, Sacramento study found that only 38% of program costs are new costs fully attributable to MS4 permits. The remainder of program costs was either pre-existing or resulted from enhancement of pre-existing programs.[4] The County of Orange found that even lesser amounts of program costs are solely attributable to MS4 permit compliance, reporting that the amount attributable to implement its Drainage Area Management Plan is less than 20% of the total budget. The remaining 80% is attributable to pre-existing programs.[5] Any increase in cost to the Permittees by the requirements of this Order will be incremental in nature.

Testimony from the California Senate Select Committee on California Job Creation and Retention hearing and comment letters on the June 2011 draft Order asserted numerous estimates of compliance costs. Generally, the estimates are based on worst-case scenarios or the most restrictive interpretation of the June 2011 draft Order. A worst-case scenario would come about, for example, if a new Traditional MS4 Permittee fails to leverage existing resources and maximize efficiencies, and does not segregate pre-existing program expenditures and new costs to implement the storm water program when considering cost of compliance. Furthermore, the assertions do not take into consideration the phased-in nature of many of the June 2011 draft Order requirements. Finally, the cost estimate assertions did not address the diversity among Permittees, specifically the different levels of compliance from a

[4] Ibid. p. 58

[5] County of Orange, 2000. A NPDES Annual Progress Report. P. 60. More current data from the County of Orange is not used in this discussion because the County of Orange no longer reports such information.

new vs. renewal Traditional MS4 Permittee expenditure and new vs. renewal Non-traditional MS4 expenditure and funding sources.

State Water Board staff estimated the cost of compliance in two ways. First, staff utilized cost data from the California State University (CSUS) NPDES Stormwater Cost Survey[6]. The rationale for using this document is that it's very difficult to precisely determine the true cost of implementation of the Permittees' storm water management program as affected by this Order. Reported costs of compliance for the same program element vary widely from city to city and by a very great margin that cannot be explained. However, economies of scale play a great role for the great margin of compliance costs. Some Permittees storm water programs are general funded while others utilize a service/user/utility fees to support the program. Unfortunately, those Permittees with general funded programs must compete for dollars in a dwindling economic climate. Furthermore, a study by the Los Angeles Regional Water Board reported wide variability in the cost of compliance among municipal permit holders, which was not easily explained.[7] Due to the wide diversity among the Permittees, Traditional and Non-traditional and new and renewal Permittees, the uncertainty of the extent of needed improvements, and the difficulty in isolating program costs attributable to permit compliance, the true cost of implementation can only be discussed in a general way.

Second, staff considered comparisons between the June 2011 draft Order and first term Phase I MS4 permits. The municipalities chosen in the CSUS survey were smaller Phase I cities, were early in the first permit term, and had reported cost in their annual reports. In addition, the cost categories correspond to the federal Phase II Small MS4 six minimum control measures. Given these factors, State Water Board staff estimated the worst-case scenario example to be a $32 median annual cost per household to implement the June 2011 draft Order. The CSUS survey estimated the annual cost per household for the six storm water programs ranged from $18 to $46.

Of the 100 new Traditional Small MS4s proposed to be designated, 20,000 is the average population with an average of 2.8 individuals per household, therefore the average annual cost to implement the June 2011 draft Order is approximately $229,000.

The average population of a renewal Traditional MS4 Permittee identified in the June 2011 draft Order is 27,353 with an average of 2.8 individuals per household. Therefore, the average annual cost to implement the June 2011 draft Order is approximately $313,000.

As discussed previously, the May 2012 draft Order has undergone substantial edits and no requirements have been added to the draft Order that would materially increase the cost of compliance. State Water Board staff carefully evaluated comments from Stakeholder meetings, written public comments, and testimony from the Senate Select Committee hearing. And, although the May 2012 draft Order contains these substantial revisions, the draft Order continues to protect storm water quality without overburdening Permittees and Businesses. Below is a list of some of the more significant changes to reduce costs.

1. Deleted annual cost analysis
2. Deleted Industrial/Commercial Inspection Program
3. Deleted mandatory construction inspection frequency

[6] California State University, NPDES Stormwater Cost Survey, 2005

[7] LARWQCB, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003. p.2

4. Deleted Trash Reduction Program
5. Modified post-construction standard requirements
6. Modified Community-Based Social Marketing provision
7. Modified Non-traditional MS4 provisions
8. Extended compliance deadlines
9. Eliminated redundancy with construction inventory and tracking requirements
10. Deleted mandatory development of a citizen advisory group
11. Deleted costly IDDE monitoring, complaint response based
12. Made spatial data in a Geographic Information System (GIS) optional
13. Deleted requirement to identify 20% of storm drain system as high priority
14. Included Water Quality Monitoring Tiers

Though no firm conclusions or precise estimates can be drawn from this analysis, it is expected that the revisions to the May 2012 draft Order will significantly reduce the cost of compliance of the average annual cost per household from the estimated $32 to substantially lower.

TMDLs

The cost of complying with TMDL waste load allocations is not considered since TMDLs are not subject to the MEP standard. Federal law requires that NPDES permits contain effluent limitations consistent with the assumptions of any applicable wasteload allocation in a TMDL. (40 C.F.R. §122.44(d)(1)(vii)(B).)

Benefits of Permit Costs

The State Water Board further found in adopting Order WQ-2000-11 that in considering the cost of compliance, it is also important to consider the costs of impairment; that is, the negative impact of pollution on the economy and the positive impact of improved water quality. For example, economic benefits may result through program implementation, and alternative costs (as well as environmental impacts) may be incurred by not fully implementing the program.

Storm water management programs cannot be considered solely in terms of their costs. The programs must also be viewed in terms of their value to the public. For example, household willingness to pay for improvements in fresh water quality for fishing and boating has been estimated by U.S. EPA to be $158-210.[8] This estimate can be considered conservative, since it does not include important considerations such as marine waters benefits, wildlife benefits, or flood control benefits. The California State University, Sacramento study corroborates U.S. EPA's estimates, reporting annual household willingness to pay for statewide clean water to be $180.[9] Though these costs may be assessed differently at the state level than at the municipal level, the results indicate that there is public support for storm water management programs and that costs incurred by the Permittees to implement its storm water management program remain reasonable.

It is also important to consider the cost of not implementing a storm water management program. Urban runoff in southern California has been found to cause illness in people bathing

[8] Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68793.

[9] State Water Board, 2005. NPDES Storm water Cost Survey. P. iv.

near storm drains.[10] A study of south Huntington Beach and north Newport Beach found that an illness rate of about 0.8% among bathers at those beaches resulted in about $3 million annually in health-related expenses.[11] Extrapolation of such illness rates and associated health expenses to the beaches and other water contact recreation areas in the state would increase these costs significantly.

Storm water runoff and its impact on receiving waters also negatively affects the tourism industry. The California Travel and Tourism Commission estimated that out-of-state visitors spent $168 per person per day (including transportation) in California in 2007. The Commission estimated total direct travel spending in California was $97.6 billion, directly supporting 924,000 jobs, with earnings of $30.6 billion. Effects on tourism from storm water runoff (e.g. beach closures) can have a significant impact on the economy. The experience of Huntington Beach provides an example of the potential economic impact of poor water quality. Approximately eight miles of Huntington Beach were closed for two months in the middle of summer of 1999, impacting beach visitation and the local economy.

Finally, the benefits of storm water management programs must be considered in conjunction with their costs. A study conducted by University of Southern California and the University of California, Los Angeles assessed the costs and benefits of implementing various approaches for achieving compliance with the MS4 permits in the Los Angeles Region. The study found that non-structural systems would cost $2.8 billion but provide $5.6 billion in benefit. If structural systems were necessary, the study found that total costs would range from $5.7 to $7.4 billion, while benefits could reach

$18 billion.[12] Costs are anticipated to be borne over many years, approximately a ten year minimum. That the benefits of the programs would considerably exceed their costs is a view corroborated by U.S. EPA, which also found that the benefits of implementation of its Phase II storm water rule would outweigh the costs.[13]

IV. UNFUNDED MANDATES

Article XIII B, Section 6(a) of the California Constitution provides that whenever “any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service.” The requirements of this Order do not constitute state mandates that are subject to a subvention of funds.

First, the requirements of this Order do not constitute a new program or a higher level of service as compared to the requirements of the Existing Order. The overarching requirement to impose controls to reduce the pollutants in municipal storm water is dictated by the Clean Water Act and is not new to this permit cycle. (33 U.S.C. §1342(p)(3)(B).) The inclusion of new and advanced measures as the storm water programs evolve and mature over time is

[10] Haile, R.W., et al, 1996. An Epidemiological Study of Possible Adverse Health Effects of Swimming in Santa Monica Bay. Santa Monica Bay Restoration Project.

[11] Los Angeles Times, May 2, 2005. Here’s What Ocean Germs Cost You: A UC Irvine Study Tallies the Cost of Treatment and Lost Wages for Beachgoers Who Get Sick.

[12] LARWQCB, 2004. Alternative Approaches to Storm water Control.

[13] Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791.

anticipated under the Clean Water Act (55 Fed. Reg. 48052), and these new and advanced measures do not constitute a new program or higher level of service. Further, this Order sets out a more detailed set of requirements compared to the 2003 Order in large part because, unlike the 2003 Order, this Order does not require submission of SWMPs. Specifics concerning how the minimum measures will be implemented, which would have been proposed in the SWMP under the 2003 Order, are now incorporated into the Order itself.

Second, and more broadly, mandates imposed by federal law, rather than by a state agency, are exempt from the requirement that the local agency's expenditures be reimbursed. (Cal. Const., art. XIII B, §9, subd. (b).) The Draft Order implements federally mandated requirements under the Clean Water Act and its requirements are therefore not subject to subvention of funds. This includes federal requirements to effectively prohibit non-storm water discharges, to reduce the discharge of pollutants to the maximum extent practicable, and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. (30 U.S.C. §1342(p)(3)(B).) The authority exercised under this Order is not reserved state authority under the Clean Water Act's savings clause (cf. *Burbank v. State Water Resources Control Bd*. (2005) 35 Cal.4th 613, 627-628), but instead is part of a federal mandate to develop pollutant reduction requirements for municipal separate storm sewer systems. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, *City of Rancho Cucamonga v. Regional Water Quality Control Bd.- Santa Ana Region* (2006) 135 Cal.App.4th 1377, 1389; *Building Industry Ass'n of San Diego County v. State Water Resources Control Bd*. (2004) 124 Cal.App.4th 866, 882-883.)

Further, the maximum extent practicable standard is a flexible standard that balances a number of considerations, including technical feasibility, cost, public acceptance, regulatory compliance, and effectiveness. (*Building Ind. Asso., supra*, 124 Cal. App.4th at pp. 873, 874, 889.) Such considerations change over time with advances in technology and with experience gained in storm water management. (55 Fed.Reg. 48052.) Accordingly, the determination of whether the Draft Order conditions exceed the requirements of federal law cannot be based on a point by point comparison of the permit conditions and the six minimum measures that are required "at a minimum" to reduce pollutants to the maximum extent practicable and to protect water quality (40 C.F.R. §122.34). Likewise, individual permit provisions cannot be considered in isolation. When implementing the federal requirement to reduce pollutants to the maximum extent practicable, the entire permit must be evaluated as a whole. This is so because the permitting agency may decide that it is more practicable to expend limited municipal resources on one aspect of the permit rather than another. In other words, requirements in one area may be relaxed to account for greater expenditures in another that will reduce pollutants to the maximum extent practicable

In recent months, the County of Los Angeles and County of Sacramento Superior Courts have granted writs setting aside decisions of the Commission on State Mandates that held that certain requirements in Phase I permits constituted unfunded mandates.

In both cases, the courts found that the correct analysis in determining whether a municipal storm water permit constituted a state mandate was to evaluate whether the permit conditions were expressly specified in federal statute or regulation but whether the permit conditions exceeded the maximum extent practicable standard. *(State of Cal. v. Comm. On State Mandates* (Super. Ct. Sacramento County, 2012, No. 34-2010- 80000604), *State of Cal. v. County of Los Angeles* (Super. Ct. Los Angeles County, 2011, No. BS130730.) It should be noted that USEPA has issued an online MS4 Permit Improvement Guide (April 2010, available

at: http://www.epa.gov/npdes/pubs/ms4permit_improvement_guide.pdf) that recommends many provisions for Phase II MS4 permits not explicitly specified in the six minimum measures established at Code of Federal Regulations, title 40, section 122.34.

As laid out in this Fact Sheet and as supported by the record of this permitting action, the requirements of the Draft Order, taken as a whole rather than individually, are necessary to reduce the discharge of pollutants to the maximum extent practicable, to effectively prohibit non-storm water discharges, and to protect water quality. The findings as to implementing these federal requirements are the expert conclusions of the principal state agency charged with implementing the NPDES program in California. (Wat. Code, §§13001.) The requirements of the Draft Order do not constitute an unfunded mandate.

It should be noted that the Draft Order provisions to effectively prohibit non-storm water discharges are also mandated by the Clean Water Act. (33 U.S.C. §1342(p)(3)(B)(ii).) Likewise, the provisions of this Draft Order to implement total maximum daily loads (TMDLs) are federal mandates. Federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable wasteload allocation in a TMDL. (40 C.F.R. §122.44(d)(1)(vii)(B).)

Finally, even if any of the permit provisions could be considered unfunded mandates, under Government Code section 17556, subdivision (d), a state mandate is not subject to reimbursement if the local agency has the authority to charge a fee. The local agency permittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order. (See, e.g., *Apartment Ass'n of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 842.) The authority of a local agency to defray the cost of a program without raising taxes indicates that a program does not entail a cost subject to subvention. (*Clovis Unified School Dist. v. Chiang* (2010) 188 Cal. App.4th 794, 812, quoting *Connell v. Superior court* (1997) 59 Cal.App.4th 382, 401; *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487–488.)

V. ROLE OF THE REGIONAL WATER BOARDS

Under the Water Code, either the State Water Board or the regional boards have authority to issue NPDES permits (Wat. Code, §13377.) The State Water Board is issuing this Order; however Regional Water Board staff will continue to have the authority to evaluate each individual Permittee's compliance through online Annual Report review and by requesting a detailed annual report from Permittees anytime during the permit term. In addition, Regional Board staff can conduct program evaluations (audits). These evaluations can either be targeted or comprehensive evaluations. Responsibilities of Regional Water Board staff also include oversight of implementation and compliance with this Order. As appropriate, they can require modification to programs and other submissions, impose region-specific monitoring requirements, conduct inspections, take enforcement actions, and make additional designations of Regulated Small MS4s. The Regional Water Boards also have a role in approving water quality monitoring efforts and may also direct that dischargers carry out a particular type of education and outreach program (see discussion under Section XII).

Regional Water Boards may also issue individual permits to Regulated Small MS4s, and alternative general permits to categories of Regulated Small MS4s. In addition, Regional Water Boards may allow Phase II Permittees the ability to become Phase I Permittees within the same urbanized area. Upon issuance of such permits by a Regional Water Board, this Order shall no longer regulate the affected MS4s.

The Permittees and Regional Water Boards are encouraged to work together to accomplish the goals of the storm water program, specifically, by coordinating the oversight of construction and industrial sites. For example, certain Permittees are required to implement a construction program that must include procedures for construction site inspection and enforcement. Construction sites disturbing an acre of land or more are also subject to inspections by the Regional Water Board under the State Water Board's Construction General Permit for Storm Water Discharges associated with Construction and Land Disturbance Activities (CGP). U.S. EPA intended to provide a structure that requires permitting through the federal Clean Water Act while at the same time achieving local oversight of construction projects. A structured plan review process and field enforcement at the local level, which is also required by this Order, were cited in the preamble to the Phase II regulations as the most effective components of a construction program.

The Permittees and Regional Water Boards are encouraged to coordinate efforts and use each of their enforcement tools in the most effective manner. However, in order to further ensure coordination, this Order requires Permittees to include procedures for referring non-filers as identified in the Program Management section and violations of the storm water general permits to the Regional Water Board when observed.

Dispute Resolution

As discussed, several areas of the permit will be mandated at the discretion of the Regional Board Executive Officer after permit adoption. In this function, the Regional Water Board Executive Officers are in essence acting as agents of the State Water Board. Therefore, determinations of the Regional Water Board Executive Officers in interpreting and implementing this permit are considered actions of the State Water Board (and accordingly not actions of the Regional Water Board subject to the petition process under Water Code section 13320) except where the Regional Water Board itself acts or the Executive Officer acts under Water Code Sections 13300, 13304, or 13383. However, recognizing the need for some level of statewide consistency in interpretation and implementation of Order provisions, the Order includes a dispute resolution process where there is disagreement between a Permittee and a Regional Water Board Executive Officer. The Permittee should first attempt to resolve the issue with the Executive Officer of the Regional Water Board. If a satisfactory resolution is not obtained at the Regional Water Board level, the Permittee may submit the issue in writing to the Executive Director of the State Water Board or his designee for resolution, with a copy to the Executive Officer of the Regional Water Board. The issue must be submitted to the Executive Director within thirty days of any final determination by the Executive Officer of the Regional Water Board; after thirty days the Permittee will be deemed to have accepted the Regional Water Board Executive Officer's determination. The Executive Officer of the Regional Water Board will be provided an opportunity to respond.

VI. ENTITIES SUBJECT TO THIS ORDER

This Order regulates discharges of storm water from Regulated Small MS4s. A Regulated Small MS4 is a Small MS4 that has been designated as regulated in accordance with criteria described in 40 C.F.R. 122.32.

a. **Renewal Permittee - Traditional and Non-traditional MS4s**
All Traditional and Non-traditional MS4s currently covered under the existing General Permit are covered under this Order and must implement the requirements of this Order.

b. **New Traditional MS4 Permittee or New Urbanized Areas**
In some cases, the urbanized boundaries and/or infrastructure of previously permitted Traditional MS4 Permittees may expand to include new areas designated as urbanized under the 2010 U.S. Decennial Census (e.g., when new areas are annexed within the urbanized area). Permittees must identify and include these new urbanized areas as part of their existing storm water program. Any new urbanized areas must be indicated on Permittees permit boundary map. For cities, the permit area boundary is the city boundary. For counties, permit boundaries must include urbanized areas and places identified in Attachment A located within their jurisdictions. The boundaries must be proposed in the permit boundary map and may be developed in conjunction with the applicable Regional Water Board

New Traditional MS4 Permittees that are outside of Urbanized Areas have been designated as Regulated Small MS4s based on one or more of the following criteria developed by the State Water Board:

1) High population and population density – High population means a population of 10,000 or more. High population density means a density greater than 1,000 residents per square mile. Also considered in this definition is high density created by a non-residential population, such as tourists or commuters.
2) Discharge to Areas of Special Biological Significance (ASBS) as defined in the California Ocean Plan.

The above factors were considered when evaluating whether an MS4 outside an Urbanized Area should be regulated pursuant to this Order. An MS4 and the population that it serves need not meet all of the factors to be designated. The criteria selected to designate MS4s to be regulated are based on the potential impact to water quality due to conditions influencing discharges into their system or due to their discharge location(s).

On a case by case basis, the Regional Water Boards may designate Small MS4s outside of Urbanized Areas as Regulated Small MS4s. Case by case determinations of designation shall be based on the potential of a Small MS4's discharges to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts. Where such case by case designations have been recommended by the Regional Water Boards prior to adoption of this Order, the designated Small MS4s are listed on the relevant Attachments to the Order and the reasons for designation are laid out in the Fact Sheet. The Regional Water Boards may continue to make case by case determinations of designation during the permit term by notification to the discharger, which shall include a statement of reasons for the designation.

Finally, any Small MS4 that contributes substantially to the pollutant loadings of a physically interconnected municipal separate storm sewer that is regulated by the NPDES storm water program must be designated as Regulated Small MS4s. An MS4 is

interconnected with a separately permitted MS4 if storm water that has entered the MS4 is discharged to another permitted MS4. In general, if the MS4 discharges more than 10 percent of its storm water to the permitted MS4, or its discharge makes up more than 10 percent of the other permitted MS4's total storm water volume, it is a significant contributor of pollutants to the permitted MS4. In specific cases, the MS4s involved or third parties may show that the 10 percent threshold is inappropriate for the MS4 in question. The definition for significant contributor of pollutants to an interconnected permitted MS4 uses a volume of 10 percent, with the assumption that storm water contains pollutants. This is meant to capture flows that may affect water quality or the permit compliance status of another MS4, but exclude incidental flows between communities.

c. **New Non-traditional MS4 Permittees**

Non-traditional MS4s include, but are not limited to, universities, prisons, large hospitals, military bases (e.g., State Army National Guard barracks), and State parks.

The previous General Permit, Water Quality Order 2003-0005-DWQ, Attachment 3 listed Non-traditional MS4s anticipated to be designated by the end of the permit term, either by the State or Regional Water Boards. However, some Non- traditional MS4s were not designated. All Non-traditional MS4s, except K-12 School Districts, Offices of Education and Community Colleges, not yet designated are now subject to this Order. These entities are listed in Attachment B.

Additional Non-traditional MS4 Permittees have been designated as Regulated Small MS4s in accordance with the same criteria described in b above.

VII. APPLICATION REQUIREMENTS

All Regulated Small MS4s listed in Attachments A and B are automatically designated upon adoption of this Order and must file for coverage. To file for coverage, Permittees must electronically file an NOI on the State Water Board's SMARTS website (https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp) and mail the appropriate permit fee to the State Water Board:

The NOI will include a statement that the discharger intends to comply with the BMP requirements of the Order in lieu of proposing BMP practices. Permittees must file the NOI by July 1, 2013.

Joint Phase II Co-Permittees or Permittees relying on Separate Implementing Entities must also electronically file an NOI via SMARTS and mail the appropriate fee to the State Water Board, by July 1, 2013.

Census Designated Places (CDPs) are included in Attachment A to clearly show that they are designated Phase II entities. However, CDPs that are located within an urbanized area and within an existing NPDES permit area do not have a government entity and as such, are not required to file separately and pay fees. The Permittee (i.e. a designated county) will name the CDPs within their jurisdiction when they file their NOI via SMARTS.

For fee purposes, in determining the total population served by the MS4, both resident and commuter populations are to be included. For example, publicly operated school complexes including universities and colleges, the total population served would include the sum of the average annual student enrollment plus staff.

For community services districts, the total population served would include the resident population and any non-residents regularly employed in the areas served by the district.

Regulated Small MS4s that fail to obtain coverage under this Order or other NPDES permit for storm water discharges will be in violation of the Clean Water Act and the California Water Code.

The Order includes State and Regional Water Board contact information for questions and submittals.

Waiver Certification

This Order allows Regulated Small MS4s to request a waiver of requirements. Regulated Small MS4 must certify (1) their discharges do not cause or contribute to, or have the potential to cause or contribute to a water quality impairment, and (2) they meet one of the following three waiver options:

a. Option 1

(1) The jurisdiction served by the system is less than 1,000 people;
(2) The system is not contributing substantially to the pollutant loadings of a physically interconnected regulated MS4; and
(3) If the small MS4 discharges any pollutants identified as a cause of impairment of any water body to which it discharges, storm water controls are not needed based on waste load allocations that are part of an EPA approved or established TMDL that addresses the pollutant(s) of concern.

b. Option 2

(1) The jurisdiction served by the system is less than 10,000 people;
(2) The Regional Water Board has evaluated all waters of the U.S. that receive a discharge from the system;
(3) The Regional Water Board has determined that storm water BMPs are not needed based on wasteload allocations that are part of an EPA approved or established TMDL that addresses the pollutant(s) of concern or an equivalent analysis; and
(4) The Regional Water Board has determined that future discharges from the Regulated Small MS4 do not have the potential to result in exceedances of water quality standards.

c. Option 3 (applicable to Small MS4s outside an Urbanized Area only)

(1) Small Disadvantaged Community – a community with a population of 20,000 or less with an annual median household income (MHI) that is less than 80 percent of the statewide annual MHI (CWC § 79505.5 (a)).

VIII. POST-CONSTRUCTION STORMWATER MANAGEMENT CRITERIA FOR NEW DEVELOPMENT AND REDEVELOPMENT

This Order incorporates Site Design and Low Impact Development (LID) Runoff requirements for new development and redevelopment. The Order will incorporate runoff retention and hydromodification control criteria in the next permit term that will be keyed to specific watershed processes as identified by the State Water Board within specific Watershed

Management Zones (WMZs). The WMZs will be used to identify applicable areas and appropriate criteria for runoff retention and hydromodification control.

IX. DISCHARGE PROHIBITIONS

Storm Water Discharges

This Order authorizes storm water and conditionally exempt non-storm water discharges[14] from the Permittees' MS4s subject to effluent and receiving water limitations. This Order prohibits the discharge of material other than storm water, unless specifically authorized in this Order.

Non-Storm Water Discharges

Section 402(p)(3)(B)(ii) of the Clean Water Act requires that MS4 permits include a requirement to effectively prohibit non-storm water discharges into the storm sewers. Prohibition B.3 of the Order implements this requirement. Although the Clean Water Act phrases the non-storm water discharge prohibition as a prohibition of discharges "into the storm sewers," this Order states that "discharges *through the MS4* of material other than storm water to waters of the U.S. shall be effectively prohibited." There is no meaningful distinction between the two language iterations as both prohibit discharges from reaching receiving waters and are consistent with the intent of the Clean Water Act. When discussing the effective prohibition of non-storm water discharger, U.S. EPA's preamble to its Phase I regulations uses the term "through" interchangeably with the term "into." (55 Fed. Reg. 47995.) Staff believes that the use of the phrasing "through the MS4 . . . to waters of the U.S." allows the Permittees greater flexibility with regard to utilizing dry weather diversions.

The Phase I regulations at 40 C.F.R. §122.34(b)(3)(iii). specify certain categories of non- storm water discharges that are conditionally exempt from the prohibition and the Order follows this approach. Unless authorized by a separate NPDES permit, non-storm water discharges that are not specifically exempted by this Order are prohibited. Certain enumerated conditionally exempt non-storm water discharges are allowed provided they are not found to be significant source of pollution If a discharger or a Regional Water Board Executive Officer determines that any individual or class of conditionally exempt non-storm water discharge may be a significant source of pollutants, the Regional Water Board may require the discharger to monitor and submit a report and impose BMPs to control the discharge.

Areas of Special Biological Significance

The State Water Board adopted the California Ocean Plan (Ocean Plan) on July 6, 1972 and revised the Ocean Plan in 1978, 1983, 1988, 1990, 1997, 2000, 2005 and 2009. The Ocean Plan prohibits the discharge of waste to Areas of Special Biological Significance (ASBS). The State Water Board designates ASBS as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable.

The Ocean Plan states that the State Water Board may grant an exception to Ocean Plan provisions where the State Water Board determines that the exception will not compromise protection of ocean waters for beneficial uses and the public interest will be served.

[14] Conditionally exempt non-storm water also refers to authorized non-storm water.

On October 18, 2004, the State Water Board directed several dischargers to cease the discharge of storm water and nonpoint source waste into ASBS, or request an exception to the Ocean Plan. Several of these dischargers are designated as Regulated Small MS4s.

On March 20, 2012, the State Water Board adopted Resolution 2012-0012 granting an exception from the Ocean Plan prohibition to 13 parties (Attachment D) designated as Regulated Small MS4s under this Order. In order to legally discharge into an ASBS, the parties must comply with the terms of the exception and have an appropriate authorization to discharge. Authorization for point source discharges to ASBS consists of coverage under this NPDES Order.

The parties authorized to discharge under the general exception are listed in Attachment D. The general exception contains “Special Protections” to protect beneficial uses and maintain natural water quality in ASBS. Limited by the special conditions in the resolution, parties listed in Attachment D can legally discharge waste into ASBS as long as the discharges are also regulated under this Order.

This Order incorporates the terms of the exception and includes the monitoring requirements the 13 parties identified as Regulated Small MS4s must comply with.

X. EFFLUENT LIMITATIONS

Consistent with Clean Water Act section 402(p)(3)(B)(iii), this Order requires that Permittees implement controls to reduce the discharge of pollutants from their MS4s to waters of the U. S. to the Maximum Extent Practicable (MEP). The MEP standard requires Permittees to apply Best Management Practices (BMPs) that are effective in reducing or eliminating the discharge of pollutants to the waters of the U.S. MEP emphasizes pollutant reduction and source control BMPs to prevent pollutants from entering storm water runoff. MEP may require treatment of the storm water runoff if it contains pollutants. The MEP standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling urban runoff continues to evolve, so does that which constitutes MEP. BMP development is a dynamic process and may require changes over time as the Permittees gain experience and/or the state of the science and art progresses. Permittees must conduct and document evaluation and assessment of each relevant element of the program, and of the program as a whole, and revise activities, control measures/BMPs, and measurable goals, as necessary to meet MEP. MEP requires Permittees to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs are not technically feasible, or the cost is prohibitive. Further, because local conditions vary, some BMPs may be more effective in one community than in another. MEP is the cumulative result of implementing, evaluating, and creating corresponding changes to a variety of technically appropriate and economically feasible BMPs, ensuring that the most appropriate BMPs are implemented in the most effective manner. Under 40 Code of Federal Regulations section 122.44(k)(2) & (3), the State Water Board may impose BMPs for control of storm water discharges in lieu of numeric effluent limitations.[15]

[15] On November 12, 2010, U.S. EPA issued a revision to a November 22, 2002, memorandum in which it had “affirm[ed] the appropriateness of an iterative, adaptive management best management practices (BMP) approach” for improving storm water management over time. In the revisions, U.S. EPA recommended that, in the case the permitting authority

In 2004, the State Water Board assembled a blue ribbon panel to address the feasibility of including numeric effluent limits as part of NPDES municipal, industrial, and construction storm water permits. The panel issued a report dated June 19, 2006, which included recommendations as to the feasibility of including numeric limits in storm water permits, how such limits should be established, and what data should be required.

The report concluded that "It is not feasible at this time to set enforceable numeric effluent criteria for municipal BMPs and in particular urban discharges. However, it is possible to select and design them much more rigorously with respect to the physical, chemical and/or biological processes that take place within them, providing more confidence that the estimated mean concentrations of constituents in the effluents will be close to the design target."

Consistent with the federal regulations, the findings of the Blue Ribbon Panel, and precedential State Water Board orders (State Water Board Orders Nos. WQ 91-03 and WQ 91-04), this Order allows the Permittees to implement BMPs to comply with the requirements of the Order.

XI. RECEIVING WATER LIMITATIONS

Under federal law, an MS4 permit must include "controls to reduce the discharge of pollutants to the maximum extent practicable . . . and such other provisions as . . . the State determines appropriate for the control of such pollutants." (Clean Water Act §402(p)(3)(B)(iii).) Consistent with this provision, requirements to meet water quality standards are at the discretion of the permitting agency. (*Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F3d 1159.)

The State Water Board has previously determined that limitations necessary to meet water quality standards are appropriate for the control of pollutants discharged by MS4s and must be included in MS4 permits. (State Water Board Orders WQ 91-03, 98-01, 99- 05, 2001-15).). This Order accordingly prohibits discharges that cause or contribute to violations of water quality standards. Consistent with federal law, the State Water Board has also found it appropriate to require implementation of BMPs in lieu of numeric water quality-based effluent limitations and further, in lieu of "strict compliance" with water quality standards, has prescribed an iterative process of BMP improvement to achieve water quality standards. (State Water Board Orders WQ 91-03, 98-01, 2001-15; 40 C.F.R. §122.44(k).) As a result, this Order further sets out that, upon determination that a Permittee is causing or contributing to an exceedance of applicable water quality standards, the Permittee must engage in an iterative process of proposing and implementing additional control measures to prevent or reduce the pollutants causing or contributing to the exceedance. This iterative process is modeled on receiving water limitations set out in State Water Board precedential Order WQ 99-05 and required by that Order to be included in all municipal storm water permits.

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determines that MS4 discharges have the reasonable potential to cause or contribute to a water quality excursion, the permitting authority, where feasible, include numeric effluent limitations as necessary to meet water quality standards. However, the revisions recognized that the permitting authority's decision as to how to express water quality based effluent limitations (WQBELs), i.e. as numeric effluent limitations or BMPs, would be based on an analysis of the specific facts and circumstances surrounding the permit. U.S. EPA has since invited comment on the 2010 memorandum and will be making a determination as to whether to "either retain the memorandum without change, to reissue it with revisions, or to withdraw it." http://www.epa.gov/npdes/pubs/sw_tmdlwla_comments_pdf

The Water Boards have generally directed dischargers to achieve compliance with water quality standards by improving control measures through the iterative process and, as a matter of practice, have generally declined to initiate enforcement actions against MS4 permittees who have been actively engaged in the iterative process. At the same time, however, the Water Boards have maintained that the iterative process does not provide a "safe harbor" to MS4 permittees:[16] that is, when a discharger is shown to be causing or contributing to an exceedance of water quality standards, that discharger is in violation of the relevant discharge prohibitions and receiving water limitations of the permit and potentially subject to enforcement by the Water Boards or through a citizen suit, even if the discharger is actively engaged in the iterative process.

The question of the "safe harbor" became a priority concern for storm water dischargers following the Ninth Circuit's holding in *Natural Resources Defense Council, Inc. v. County of Los Angeles* (2011) 673 F.3d 880 that engagement in the iterative process does not provide a safe harbor from liability for violations of permit terms prohibiting exceedances of water quality standards. Although the U.S. Supreme Court has reversed the judgment of the Ninth Circuit and remanded (on grounds unrelated to the "safe harbor" holding), *LA County Flood Control District v. NRDC* (2013) 568 U.S., the receiving water limitations provisions is expected to remain a significant issue for dischargers based on the position, to date, of the Water Boards that the iterative process does not provide a "safe harbor" from violations. The State Water Board has received multiple comments, from dischargers and from other interested parties, expressing confusion and concern about the Order provisions regarding receiving water limitations and the iterative process. Many commenters have stated that the provisions as currently written do not provide the dischargers with a viable path to compliance with the proposed Order. Other commenters, including environmental parties, support the current language.

As stated above, the provisions in this Order regarding receiving water limitations and the iterative process are based on precedential Board orders. Accordingly, substantially identical provisions are found in the adopted Caltrans MS4 NPDES permit, as well as the Phase I NPDES permits issued by the Regional Water Boards. Because of the broad applicability of any policy decisions regarding the receiving water limitations and iterative process provisions, the State Water Board held a public workshop on November 20, 2012, to consider this issue and seek public input.

Rather than delay consideration of adoption of the tentative Order in anticipation of any future changes to the receiving water limitations and iterative process provisions that may result from the public workshop and deliberation, the Board has added a specific reopener clause at Section H to facilitate any future revisions as necessary.

XII. STORM WATER MANAGEMENT PROGRAM FOR TRADITIONAL MS4S PROGRAM ELEMENTS

Program Management

This component is essential to ensure timely implementation of all elements of the storm water program and consistency with the Order requirements. Lessons learned in California from

[16] *Building Industry Assn. of San Diego County v. State Water Resources Control Bd*. (2004) 124 Cal.App.4th 866; *City of Rancho Cucamonga v. Regional Water Quality Control Bd*. (2006) 135 Cal.App.4th 1377.

Phase I Permittees and various municipal audits are that a Program Management element can:

1. Identify departments that assist with the implementation of the program as well as their roles and responsibilities; and
2. Maintain and enforce adequate legal authority to control pollutant discharges.

Adequate Legal Authority and Certification

Legal Authority: Clean Water Act § 402(p)(3)(b); 40 C.F.R. §§ 122.22(b), 122.34(b)(3)(ii)(B), (b)(4)(ii)(A), and (b)(5)(ii)(B); 122.41(k). MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001; MS4 Program Evaluation Guidance, U.S. EPA, EPA-833-R-07-003

Adequate legal authority is required for Permittees to implement and enforce their storm water programs. Without adequate legal authority, Permittees would be unable to perform many vital program elements such as performing inspections and requiring installation of control measures. In addition, Permittees would not be able to conduct enforcement activities, assess penalties and/or recover costs of remediation.

Enforcement Response Plan

Legal Authority: Clean Water Act §402(p)(3)(b); MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001; MS4 Program Evaluation Guidance, U.S. EPA, EPA-833-R-07-003

In ordinances or other regulatory mechanisms, Permittees are required to include penalty provisions to (1) ensure compliance with construction and industrial requirements, (2) to require the removal of illicit discharges, and (3) to address noncompliance with post-construction requirements. To meet these requirements, this Order requires enforcement responses that vary with the type of permit violation, and escalate if violations are repeated or not corrected. The Permittee must develop and implement an Enforcement Response Plan (ERP), which clearly describes the action to be taken for common violations associated with the construction program, illicit discharge detection and elimination, or other program elements. A well-written ERP provides guidance to inspectors on the different enforcement responses available, actions to address general permit non-filers, when and how to refer violators to the State, and how to track enforcement actions.

Education and Outreach on Storm Water Impacts

Legal Authority: Clean Water Act § 402(p)(3)(b); 40 C.F.R. § 122.34(b)(1); MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001; MS4 Program Evaluation Guidance, U.S. EPA , EPA-833-R-07-003; U.S. EPA Stormwater Phase II Final Rule Fact Sheet Series, U.S. EPA Stormwater Phase II Final Rule (64 FR 68722), EPA National Menu of Best Management Practices for Stormwater Phase II[17]; Measurable Goals Guidance for Phase II Small MS4s; U.S. EPA Getting In Step

Without a focused and comprehensive program, outreach and education efforts will be poorly coordinated and ineffective. This Order requires Permittees to develop an education and outreach program that is tailored and targeted to specific water quality issues of concern in the community. These community-wide and targeted issues should then guide the development of the comprehensive outreach program, including the creation of appropriate messages and

[17] http://cfpub.epa.gov/npdes/stormwater/menuofbmps/

educational materials. Outreach and education not only includes the public as the target audience, but includes Permittee staff and construction site operators as well.

This Order includes a different compliance path that, upon determination by a Regional Board Executive Officer, requires the possible implementation of Community-Based Social Marketing (CBSM). CBSM is a systematic way to change the behavior of communities to reduce their impact on the environment. Simply providing information is usually not sufficient to initiate behavior change. CBSM uses tools and findings from social psychology to discover the perceived barriers to behavior change and ways of overcoming these barriers.[18]

CBSM is also cited in EPA's Getting in Step[19] outreach guide which includes successful CBSM case studies. The CBSM path is included in Attachment E.

To ensure effective implementation of CBSM principles, Regional Water Boards who have invoked Attachment E, CBSM Requirements, are encouraged to consult with Permittees to ensure CBSM principles are implemented adequately. Regional Board staff should use the first year annual report and effectiveness assessment information during the consultation. The information gained from the consultation should assist the Regional Water Board's evaluation of program effectiveness and whether a Permittee should continue implementation of Attachment E.

In addition to external public outreach, outreach and education efforts should also be directed internally at Permittee staff who, as part of their normal job responsibilities, participate in storm water program operations such as illicit discharge detection and elimination, construction, and pollution prevention and good housekeeping. The training program will ensure proper illicit discharge and illicit connection identification, reporting and response. The construction training program will ensure that Permittee staff who is responsible for construction storm water program implementation receive adequate training. Additionally, the Permittee must develop educational materials and training for construction site operators to ensure program compliance. Construction operators must be educated about site requirements for control measures, local storm water requirements, enforcement activities, and penalties for non-compliance. Permittee staff training in pollution prevention/good housekeeping will ensure the incorporation of pollution prevention/good housekeeping techniques into Permittee operations.

A comprehensive and cohesive outreach and education program will likely be effective and well-coordinated if it involves the public, storm water program staff, and construction site operators.

This Order includes a list of potential residential and commercial pollution sources, but the Permittee may also identify other sources that contribute significant pollutant loads to the MS4. The Order identifies specific pollutant generating activities that must be addressed, including organized car washes, mobile cleaning and power washing operations, and landscape over-irrigation.

[18] A variation of social marketing, referred to as CBSM by Canadian environmental psychologist Doug McKenzie- Mohr

[19] Getting in Step, 3rd Edition, A Guide to Watershed Outreach Campaigns, November 2010 EPA 841-B-10-002

The Permittee is encouraged to use existing public educational materials in its program. The Permittee is also encouraged to leverage resources with other agencies and municipalities with similar public education goals.

In addition, this Order requires storm water education for school-age children. The United States suffers from a "nature deficit disorder" as discussed in popular literature (e.g., "Last Child in the Woods" by Richard Louv) and elsewhere (American Fisheries Society "Fisheries" magazine, available online at www.fisheries.org). As discussed in the "America's Great Outdoors: A Promise to Future Generations" report, in order to make environmental stewardship and conservation relevant to young Americans, environmental and place-based, experiential learning must be integrated into school curricula and school facility management across the country.[20] If a program such as Splash (www.sacsplash.org/),Effie Yeaw Nature Center (www.sacnature.net) or Yolo Basin (www. Yolobasin.org) does not exist, Permittees are encouraged to use California's Education and Environment Initiative Curriculum (EEI)[21] or equivalent. California's landmark EEI Curriculum is a national model designed to help prepare today's students to become future scientists, economists, and green technology leaders.

The K-12th grade curriculum is comprised of 85 units teaching select Science and History-Social Science academic standards. Each EEI Curriculum unit teaches these standards to mastery using a unique set of California Environmental Principles and Concepts. The EEI curriculum was created to bring education about the environment into the primary and secondary classrooms of more than 1,000 school districts serving over 6 million students throughout California.

Classroom education plays an integral role in any storm water pollution outreach program. Providing storm water education through schools conveys the message not only to students but to their parents. Permittees should partner with educators and experts to develop storm water-related programs for the classroom. These lessons need not be elaborate or expensive to be effective.

The Permittees' role is to support a school district's storm water education efforts, not to dictate what programs and materials the school should use. Permittees should work with school officials to identify their needs. For example, if the schools request storm water outreach materials, Permittees can provide a range of educational aids, from simple photocopied handouts, overheads, posters and slide shows, to more costly and elaborate working models and displays.

The principal goal of any public education and outreach effort is to change awareness and knowledge. The advanced level public education and outreach effort goes a step further in pursuit of changing behavior. The Permittee should develop a process to assess its public education and outreach programs and to determine necessary improvements to raise public awareness and knowledge. The Permittee is encouraged to use a variety of assessment methods to evaluate the effectiveness of different public education activities. The first evaluation assessment must be conducted before the final year of the Permittee's coverage under this permit, before the next permit is issued. Permittees should coordinate their evaluation assessment with other Permittees on a regional level to determine how best to get

[20] http://americasgreatoutdoors.gov/files/2011/02/AGO-Report-With-All-Appendices-3-1-11.pdf
[21] http://www.californiaeei.org/

the regional message out and how to facilitate awareness, knowledge and ultimately, behavior changes.

Public Involvement/Participation

Legal Authority: Clean Water Act § 402(p)(3)(b); 40 C.F.R. § 122.34(b)(2). MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001

Storm water management programs can be greatly improved by involving the community throughout the entire process of developing and implementing the program. Involving the public benefits both the Permittee as well as the community. By listening to public concerns and coming up with solutions together, the Permittee stands to gain public support and the community should become invested in the program. The Permittees will likewise gain more insight into the most effective ways to communicate their messages.

This Order requires the development of a public involvement strategy, which may include a citizen advisory group or process to solicit feedback on the storm water program, and opportunities for citizens to participate in implementation of the storm water program. If a citizen advisory group is developed, the group should meet with the local land use planners and provide input on land use code or ordinance updates so that land use requirements incorporate provisions for better management of storm water runoff and watershed protection. Public participation in implementation of the storm water program can include many different activities such as stream clean-ups, storm drain markings, volunteer monitoring, and participation in integrated regional water management and watershed planning efforts.

Permittees are encouraged to work together with other entities that have an impact on storm water (for example, schools, homeowner associations, Department of Transportation agencies, other MS4s). Permittees are also encouraged to work through existing advisory groups, community groups or processes in order to implement these public involvement requirements.

Illicit Discharge Detection and Elimination

Legal Authority: Clean Water Act § 402(p)(3)(b); 40 C.F.R. § 122.34(b)(3). MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001

Studies have shown that dry weather flows from the storm drain system may contribute a larger amount of some pollutants than wet weather storm water flows.[22] Detecting and eliminating these illicit discharges involves complex detective work, which makes it hard

to establish a rigid prescription to identify and correct all illicit connections. There is no single approach to take, but rather a variety of ways to get from detection to elimination. Local knowledge and available resources can play significant roles in determining which path to take. At the very least, communities need to systematically understand and characterize their stream, conveyance, and storm sewer infrastructure systems. Illicit discharges need to be identified and eliminated. The process is ongoing and the effectiveness of a program should improve with time. A well-coordinated IDDE programs can benefit from and contribute to other

[22] Evaluation of Non-Storm water Discharges to California Storm Drains and Potential Policies for Effective Prohibition. California Regional Water Quality Control Board. Los Angeles, CA., Duke, L.R. 1997., Results of the Nationwide Urban Runoff Program. Water Planning Division, PB 84-185552, Washington, D.C. U.S. EPA. 1983.

community-wide water resources- based programs such as public education, storm water management, stream restoration, and pollution prevention.[23]

This Order requires the Permittees to address illicit discharges into the MS4. An illicit discharge is defined as any discharge to a municipal separate storm sewer system that is not composed entirely of storm water, except allowable discharges pursuant to an NPDES permit (40 C.F.R. 122.34(b)(3)).[24] This Order includes requirements that the Permittee have the legal authority to effectively prohibit non-storm water discharges from entering storm sewers as well as provisions requiring the development of a comprehensive, proactive IDDE program.

Specifically, this Order requires the development of a map that includes outfalls operated by the Permittee within the urbanized area. The map will also include identification of receiving water bodies, priority areas (i.e. areas with a history of past illicit discharges), and the permit boundary.

It is essential for Permittees to understand their stream and storm sewer systems and how illicit discharge sources are connected to outfalls that discharge to their system. To that end, this Order requires the development of an inventory that identifies potential illicit discharge sources and facilities. To proactively identify illicit discharges originating from priority inventoried sources, it is essential that an assessment is conducted at least once over the permit term. The assessment may include field observations, field screening, inspections and any other appropriate and effective survey methods that proactively identify potential illicit discharges. As an alternative, the Permittee may require a self-certification program that all appropriate BMPs are in place to prevent illicit discharges from the inventoried source or facility.

Further, a once per permit term survey of outfalls will identify outfalls needing sampling and possible follow-up actions[25]. The outfall inventory will also assist Permittees in the identification of “problem” outfalls, or those outfalls that may have a history of past illicit discharges. The inventory can be utilized to conduct source investigations and corrective actions for potential illicit discharges into their system.

Additionally, dry weather sampling must be conducted in each subsequent year of the permit term for outfalls identified as priority areas. While the Order specifies indicator parameters used to detect illicit discharges, the Permittee may select alternative parameters to sample that are based on local pollutants of concern. Similarly, the action level concentrations for the indicator parameters may also be tailored to match the parameters selected based on local knowledge. Finally, the outfall inventory will assist Permittees in clearly understanding the stream system and the storm sewer system within their jurisdiction.

The Permittee shall provide a mechanism for public reporting of illicit discharges and spills.

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[23] Illicit Discharge Detection and Elimination A Guidance Manual for Program Development and Technical Assessments, CWP and Pitt, 2006

[24] Non-point source return flows from irrigated agriculture are not considered illicit discharges.

[25] The Permittee may utilize existing forms such as the CWP Outfall Reconnaissance Inventory/Sample Collection Field Sheet (http://cfpub.epa.gov/npdes/stormwater/idde.cfm) while conducting the mapping inventory and Field Sampling as specified below, in Section E.9.c.

Construction Site Storm Water Runoff Control

Legal Authority: Clean Water Act § 402(p)(3)(b); 40 C.F.R. § 122.34(b)(4). MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001

Permittees must implement a construction site storm water runoff management program that includes an enforceable ordinance or other regulatory mechanism with commonly understood and legally binding definitions. These terms should be defined consistently across other related guidance and regulatory documents. The construction site storm water runoff management program is designed to prevent pollutants associated with construction activity from entering receiving water bodies (i.e. sediment, fertilizers, pesticides, paints, solvents and/or fuels).

The Permittee must ensure that construction site operators select and implement appropriate construction site storm water runoff management measures to reduce or eliminate impacts to receiving waters. The Permittee is required to utilize California Stormwater Quality Association's (CASQA) Construction BMP handbook or equivalent to help guide their Construction Program). In the case that a project proponent is not implementing appropriate measures to reduce or eliminate impacts to receiving waters (i.e. ineffective BMPs installed), the Permittee must take appropriate enforcement action to address the problem. Enforcement may include verbal warnings, written notices and escalated enforcement measures as described in the Enforcement Response Plan (Section E.6.c. of the Order).

While the construction site storm water runoff management program focuses the Permittee's detailed inspections on projects less than one acre, Permittees must use their discretion to provide oversight to projects that are subject to the CGP that pose a threat to water quality. For example, in the case that a Permittee identifies a project subject to the CGP that has BMPs that have not been maintained, the Permittee should notify the local Regional Water Board. Priority project sites include: sites with 5 acres or more of soil disturbance, sites with one acre or more soil disturbance that discharge to a tributary listed as impaired water for sediment or turbidity under the CWA Section 303(d), and other sites with one acre or more of soil disturbance determined by the Permittee or State or Regional Water Quality Control Board to be a significant threat to water quality.

Pollution Prevention/Good Housekeeping for Permittee Operations

Legal Authority: Clean Water Act § 402(p)(3)(b); 40 C.F.R. § 122.34(b)(6)

Permittees are required to develop a program to:

a. Prevent or reduce the amount of storm water pollution generated by permittee operations.
b. Train employees on how to incorporate pollution prevention/good housekeeping techniques into permittee operations.
c. Identify appropriate control measures and measurable goals for preventing or reducing the amount of storm water pollution generated by permittee operations.

Permittees must first assess the areas and municipal facilities that it controls, determine which activities may currently have a negative impact on water quality, and find solutions for any problems. The simplest solution is to limit the number of activities that are conducted outside and exposed to storm water.

Storm Drain System Maintenance

Storm drain systems need maintenance to ensure that structures within the storm drain system that are meant to reduce pollutants do not become sources of pollution. Maintenance of catch basins and storm sewers will prevent the accumulation of pollutants that are later released during rain events as well as blockages, backups, and flooding. Most Permittees have an existing program to maintain the storm sewer infrastructure. Some of these programs have tended to focus on flood control and complaint response rather than reducing water quality impacts from storm water discharges.

This Order requires that the system be maintained to prevent the discharge of pollutants into receiving waters. To achieve this, the storm sewer system must be mapped and a program of regular maintenance established. The Permittee must establish a tiered maintenance schedule for the entire storm sewer system area, with the highest priority areas being maintained at the greatest frequency. Priorities are driven by water quality concerns and can be based on the land use within the watershed, the condition of the receiving water, the amount and type of material that typically accumulates in an area, or other location-specific factors. The Permittee also must use spill and illicit discharge data to track areas that may require immediate sewer infrastructure maintenance. Any waste that is collected must be disposed of in a responsible manner.

All storm sewer system maintenance procedures should be documented in the Permittee's standard operating procedures (SOPs) or similar type of documents. All staff should be trained on these SOPs. Maintenance activities should be documented and, where possible, quantified (e.g., number and location of inspections and clean- outs, type and quantity of materials removed). Characterization of the quantity, location, and composition of pollutants removed from catch basins can be used to assess the program's overall effectiveness, identify illicit discharges, and help the Permittee better prioritize implementation activities in the future.

Pollutant Generating Activities

This Order contains specific requirements and recommendations related to pollutant-generating activities such as discouraging conventional landscaping practices (including the application of pesticides, herbicides, and fertilizer) and operating and maintaining public streets.

Resource-sensitive landscaping practices such as integrated pest management (IPM), climate appropriate plant selection and irrigation, and mechanical (non-chemical) removal of unwanted plants are required under this Order. The use of other landscaping practices, such as mulch and compost, minimizing chemical inputs (pesticides, herbicides, and fertilizer), emphasis on maintaining and enhancing soil quality, and erosion control is required. The Order recognizes the storm water quality benefits that will likely result from implementation of the Water Efficient Landscape Ordinance required under AB 1881.

Flood Management Projects

The Order requires that water quality be considered when designing new and upgraded flood management projects. The focus of storm water management in the past has been to control flooding and mitigate property damage, with less emphasis on water quality protection. These structures may handle a significant amount of storm water and therefore offer an opportunity to modify their design to include water quality features for less than the cost of building new controls. This requirement applies to new and upgraded flood control projects.

Municipally-owned or operated facilities

Municipally-owned or operated facilities often serve as the focal point of activity for municipal staff from different departments. Some municipalities have one facility at which all activities take place (e.g., the municipal maintenance yard), while others may have several specialized facilities. A comprehensive inventory and map of facilities will help Permittee staff build a better awareness of facility locations within the MS4 and their potential to contribute storm water pollutants. The facility inventory will also serve as a basis for scheduling periodic facility assessments and developing, where necessary, facility storm water pollution prevention plans.

The best way to avoid pollutant discharges is to keep precipitation and runoff from coming into contact with potential pollutants. For example, the Permittee should cover or build berms around stockpiles, create dedicated structures for stored materials, and maintain a minimum distance between stockpiles and storm water infrastructure and receiving waters.

Inspections

This Order requires comprehensive quarterly site inspections which is an appropriate frequency to ensure that material stockpiles that might be moved or utilized on a seasonal basis are protected from precipitation and runoff. Also, quarterly inspections will allow inspectors to observe different types of operations that occur at different times of the year (e.g., landscape maintenance crews are less active in the winter). Quarterly visual observations are required so that inspectors can see in real time the qualitative nature of the storm water discharge so that corrective action can be taken where necessary to improve on-site storm water controls.

This Order also specifies documentation requirements of inspection procedures and results, including inspection logs for each facility to ensure that the site inspections are consistent and that maintenance of storm water controls remains part of the municipality's standard operating procedures. The requirement for an inspection log will allow the Regional Water Boards to verify that periodic site inspections have been performed.

Storm Sewer System Maintenance

Fine particles and pollutants from run-off, run-on, atmospheric deposition, vehicle emissions, breakup of street surface materials, littering, and sanding (for improving traction in snow and ice) can accumulate in the gutters between rainfall events. Storm drain maintenance is often the last opportunity to remove pollutants before they enter the environment. Because storm drain systems effectively trap solids, they need to be cleaned periodically to prevent those materials from being picked up during high flow storm events.

Some catch basins will accumulate pollutants faster than others due to the nature of the drainage area and whether controls are present upstream of the catch basin. A priority ranking system is required for catch basins so that municipal resources are directed to the areas and structures that generate the most pollutants. Catch basins with the highest accumulations will need to be cleaned more frequently than those with low accumulations. The Order also includes a requirement that triggers catch basin cleaning when a catch basin is one-third full.[26]

Proper storm drain system cleanout includes vacuuming or manually removing debris from catch basins; vacuuming or flushing pipes to increase capacity and remove clogs; removing

[26] Note: This requirement was eliminated from the Final Order as adopted on February 5, 2013.

sediment, debris, and overgrown vegetation from open channels; and repairing structures to ensure the integrity of the drainage system. It is important to conduct regular inspections of all storm sewer infrastructure and perform maintenance as necessary. Though these activities are intended to ensure that the storm drain system is properly maintained and that any accumulated pollutants are removed prior to discharge, if not properly executed, cleanout activities can result in pollutant discharges. The Permittee should carefully evaluate maintenance practices to minimize unintended pollutant discharges, such as flushing storm drains without capturing the discharge.

Materials removed from catch basins must not be allowed to reenter the MS4. If necessary, the material can be dewatered in a contained area and the water treated with an appropriate and approved control measure or discharged to the sanitary sewer. The solid material must be disposed of properly to avoid discharge during a storm event. Some materials removed from storm drains and open channels may require special handling and disposal, and may not be suitable for disposal in a landfill.

Green waste on the streets[27]

For some Traditional MS4 Permittees, residents are allowed to deposit non- containerized green waste (lawn and garden clippings) onto the street for weekly collection by the municipal staff. Permittees instruct residents to put the green waste out right before collection and to avoid putting it in gutters or near storm drains. However, green waste on the street is a potential illicit discharge and maintenance concern.[28] This Order prohibits green waste on the streets. Permittees must find additional ways to educate residents on the potential problems this practice can cause or to find alternatives to the current practice.

Street Sweeping and Cleaning Streets

Street sweeping and cleaning streets and parking lots is a practice that most municipalities initially conducted for aesthetic purposes or air quality benefit. However, the water quality benefits are now widely recognized. As a result, many California MS4 permits require some sort of street sweeping provision that require the MS4 to prioritize streets as high, medium, and low pollutant-generators and base the cleaning schedule appropriately.

This Order does not include street sweeping and cleaning streets as a permit requirement because MS4s already conduct these activities for aesthetics and air quality benefit. Permittees should count street sweeping not as a storm water compliance cost, but an aesthetic and air quality cost.

Third-party contractors

Third-party contractors conducting municipal maintenance activities must be held to the same standards as the Permittee. These expectations are required to be defined in contracts between the Permittee and its contractors; however, the Permittee is responsible for ensuring, through contractually-required documentation or periodic site visits, that contractors are using storm water controls and following standard operating procedures.

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[27] Note: This requirement was eliminated form the Final Order as adopted on February 5, 2013.

[28] Program Evaluation Report, Sacramento Area Stormwater Program, NPDES Permit No. CA0082597, May 21, 2002, USEPA and Tetra Tech Inc.

Post Construction Storm Water Management for New Development and Re-development

Legal Authority: Clean Water Act § 402(p)(3)(b); 40 C.F.R. § 122.34(b)(5). MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001; U.S. EPA Incorporating Environmentally Sensitive Development into Municipal Stormwater Programs, EPA 833-F-07-011

In California, urban storm water is listed as the primary source of impairment for ten percent of all rivers, ten percent of all lakes and reservoirs, and 17 percent of all estuaries (2010 Integrated Report). Although these numbers may seem low, urban areas cover just six percent of the land mass of California[29], and so their influence is disproportionately large. Urbanization causes a number of changes in the landscape, including increased loads of chemical pollutants; increased toxicity; changes to flow magnitude, frequency, and seasonality of various discharges; physical changes to stream, lake, or wetland habitats; changes in the energy dynamics of food webs, sunlight, and temperature; and biotic interactions between native and exotic species.[30] These impacts are also referred to as “urban stream syndrome [31]. In addition to surface water impacts, urbanization can alter the amount and quality of storm water that infiltrates and recharges groundwater aquifers. In essence, once watershed processes are disturbed, receiving water conditions also become disturbed, (Figure 1)

In California and the rest of the United States, the challenge to storm water managers and regulators has been to establish goals and performance standards that account for the highly variable nature of urban flow and pollutant inputs while ensuring that the ultimate biological response is within “acceptable” limits. The Surface Water Ambient Monitoring Program (SWAMP) is attempting to define biological responses through their Biological Objectives Development Process. Although final results and policy recommendations from this effort are not yet available, linking urbanization drivers to biological response represents the next phase in storm water management and cannot be delayed.[32]

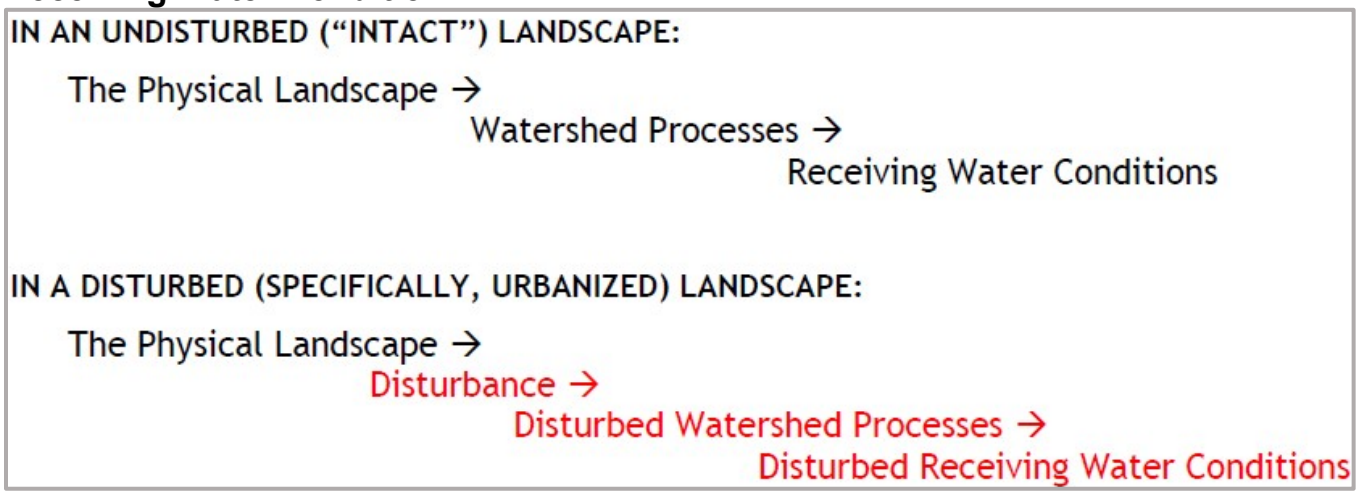
[29] U.S. Department of Agriculture, 2009

[30] Urban Storm Water Management in the United States, National Research Council, 2008.

[31] Walsh, C.J., A.H.Roy, J.W. Feminella, P.D. Cottingham, P.M. Groffman, and R.P. Morgan. 2005. The urban stream syndrome: current knowledge and the search for a cure. J. N. Am. Benthol. Soc. 24(3):706–723.

[32] Urban Storm Water Management in the United States, National Research Council, 2008.

Figure 1 – Relationship between Physical Landscape, Watershed Processes, and Receiving Water Condition



The Water Boards have historically derived site design, runoff reduction and hydromodification control criteria without identifying the dominant watershed processes and the sensitivity of receiving waterbodies to degradation of those processes. In most MS4 permits, projects are subject to the same set of criteria regardless of the dominant watershed processes and the sensitivity of receiving waters to degradation of those processes. In reality, every location on the landscape does not require the same set of control criteria because of intrinsic differences in the dominant watershed processes at each location and sensitivity of receiving waters to degradation of those processes. In recognizing this, the State Water Board is developing criteria that are more protective of receiving water quality.

The existing General Permit requires post-construction controls for areas of high growth or areas with a population greater than 50,000. These requirements are contained in Attachment 4 of Order 2003-0005-DWQ and include matching pre-development peak discharge rates, conserving natural areas, minimizing storm water pollutants of concern, protecting slopes and channels, and designing volumetric and flow through treatment measures to handle a specific volume or flow rate. These requirements represented an initial attempt at establishing performance standards that account for hydrological and geomorphological processes (Figure 1). Recent research has yielded new information on complex watershed process interactions. For example, storm water management techniques that are intended to mimic natural hydrologic functions (e.g., low impact development) can protect key hydrologic processes such as surface and base flow, and groundwater recharge. Additionally, there is increasing awareness that, while site- based requirements are important to reduce impacts from urbanization, a site-based approach alone is unable to achieve a broader set of watershed goals, especially given the State Water Board's interest in regional issues such as water reuse, groundwater management, and maintaining instream flows. Consequently, a better understanding of watershed conditions and processes has become increasingly important in the development of MS4 permits.

This Order has specific site design and LID requirements for all projects. The LID requirements emphasize landscape-based site design features that are already required elsewhere (e.g., the Water Efficient Landscape Ordinance required under AB 1881).

Hydromodification Requirements

This Order also incorporates a baseline peak flow matching requirement for hydromodification control. During this permit term, the State Board will work towards developing runoff retention and hydromodification control criteria that are keyed to watershed processes (See discussion in Section VIII.) Watershed management zones[33] will be delineated by the State Board during this permit term. The watershed management zones will be used to identify applicable areas and to determine appropriate criteria for runoff retention and hydromodification control. Watershed process based runoff retention and hydromodification criteria will be incorporated into the next permit. Through the development of hydromodification measures based on watershed management zones, key watershed processes will be protected, and where degraded, restored. As a result of restored and maintained watersheds, key relationships between hydrology, channel geomorphology and biological health will be created and maintained and water quality/beneficial uses protected.

The State Water Board's efforts in developing runoff retention and hydromodification control criteria keyed to watershed processes can be significantly informed by similar efforts carried out regionally under the Regional Water Boards. This Order provides at Provision E.12.k (also referenced in F.5.g.) that Small MS4s shall comply with any post- construction storm water management requirements based on a watershed process approach developed by Regional Water Boards in lieu of the post-construction requirements of E.12 (also referenced in F.5.g.). The regional watershed process- based approach must be approved by the Regional Water Board following a public process and must include the following:

- Completion of a comprehensive assessment of dominant watershed processes affected by urban storm water
- LID site design and runoff reduction measures, numeric runoff treatment and retention controls, and hydromodification controls that will maintain watershed processes and protect water quality and beneficial uses.
- A process by which Regional Board staff will actively engage Permittees to adaptively manage requirements as determined by the assessment of watershed processes.
- An annual reporting program that involves Regional Board staff and State Board staff to inform statewide watershed process based criteria.

A watershed process-based approach is already being used for Phase II MS4s that participated in the Central Coast Joint Effort for developing hydromodification control criteria. By Resolution No. R3-2012-0025 dated September 6, 2012, the Central Coast Water Board approved modifications to the SWMPs of MS4s participating in the Joint Effort. These modifications would incorporate the Central Coast-Specific Post- Construction Requirements into the SWMPs. Several petitions are currently pending before the State Water Board challenging the Resolution. In the November 16, 2012, draft of this Order, the requirements developed in the Joint Effort were proposed to be adopted into the Order as Attachment J. After receiving extensive public comment on Attachment J, the State Water Board determined that, while the Board continues to support a watershed process-based approach to hydromodification requirements, the Joint Effort process should be allowed to evolve and

[33] A Watershed Management Zone (WMZ) is a combination of a Physical Landscape Zone (PLZ, based on surficial geology and slope) and direct receiving water type. Key watershed processes potentially impacted by urbanization (e.g., infiltration and groundwater recharge) are derived from each PLZ-receiving water combination.

proceed, without incorporation into this Order, to address several unresolved issues acknowledged by the parties to that process, including the Regional Water Board.

Under Provisions E.12.k (also referenced in F.5.g), the Central Coast Region Small MS4s will be required to implement watershed process-based requirements developed through the Joint Effort only after those requirements have been reconsidered and approved by the Central Coast Water Board. Because the requirements cannot be imposed through existing Resolution No. R3-2012- 0025 (which operated as an update to SWMPs that are no longer required under this Order), the State Water Board expects the pending petitions on that Resolution to be moot as of adoption of this Order. As part of the petition process, the State Water Board will evaluate whether the entirety of the petitions are moot following adoption of the Order. However, any future action by a Regional Water Board, including the Central Coast Water Board, to adopt a regional watershed process-based approach would be subject to petitions for review by the State Water Board.

Multiple-benefits Projects

This Order encourages and allows for multiple-benefits projects at various scales. At the development site scale, multiple-benefit site design measures are required for all projects that create and/or replace more than 2,500 square feet of impervious surface. Designers are able to quantify runoff reduction using a site design runoff calculator in SMARTS for site design measures (e.g., trees, stream setbacks and buffers, and soil quality improvement). The site design measures in this Order all have multiple benefits (e.g., shading from trees, wildlife habitat from stream setbacks and buffers, less need for pesticides and irrigation from soil quality improvement) in addition to storm water runoff and pollutant load reduction. At the site and local scale, smart growth projects that utilize density, design and land use strategically to achieve multiple benefits including environmental, economic and social benefits are encouraged. For example, high density development contributes to less impervious surface than low density development, generally resulting in less vehicle-related emissions and pollutants (e.g., heavy metals, oil and grease, fine sediment), improved water and air quality results, thus, achieving environmental benefits. The clustering of populations through high density development essentially substitutes evaluation of individual site design criteria for evaluation of per capita loading (Jacob and Lopez 2009[34]). As such, Permittees may implement an alternative approach to requirements for bioretention measures if they can effectively demonstrate a reduction in runoff volume per capita. In other words, alternative compliance may be achieved through the implementation of high density development, or smart growth projects.

Section E.12.l gives “credit” and creates incentive for Permittees to identify and implement watershed scale projects that achieve multiple-benefits. When evaluating watershed-scale, multiple-benefits projects, environmental, social, technical, economic, and political considerations can become intertwined to the point of intractability. These criteria need to be systematically examined through an organizing framework for rational analysis and alternative comparison. A Multi-Criterion Decision Analysis (MCDA) approach provides a flexible, rational, and transparent means to establish decision- making criteria and prioritize alternatives, assuring that projects achieve the desired multiple-benefit outcomes. Watershed scale

[34] Jacob, John S. and Lopez, Ricardo. Is Denser Greener? An Evaluation of Higher Density Development as an Urban Stormwater-Quality Best Management Practice. Journal of the American Water Resources Association. June 2009: 45:3: 687 – 701.

multiple-benefit projects include projects that address water quality, water supply, flood control, habitat enhancement, open space preservation, recreation, and climate change.

Once these projects are identified under Watershed Improvement Plans (Water Code §16100 et seq.), through an IRWMP process, or as part of an overall green infrastructure effort, the Permittee may impose requirements and create incentives on the site, local, and watershed scale to ensure project success.

Post-Construction BMP Condition Assessment

Permittees must understand how their actions reduce the discharge of pollutants to receiving waters. This is accomplished through an assessment of the performance of the Permittees BMPs, especially structural practices designed for specific pollutant/flow reductions. Only Renewal Permittees were required to install structural post- construction BMPs in the existing permit term. However, during MS4 audits by State and Regional Water Board staff, many of those BMP locations were unknown and not maintained causing water quality threats. In this Order, only Renewal Permittees are asked to implement a plan that contains simple and repeatable field observation and data management tools that can assist them in determining the relative condition of BMPs. The primary purpose is to inform Permittees of: 1) where the BMPs are located, 2) the relative urgency of water quality maintenance and, 3) provide a practical, consistent and reliable tool to track the condition of BMPs relative to observed condition at time of installation or immediately following complete maintenance. Permittees may implement this plan themselves or may be determined through a Self-Certification Annual Report submitted annually by an authorized party demonstrating proper maintenance and operations. Allowing an authorized party to conduct the BMP condition assessment offsets program costs and shifts responsibility to the party that should be maintaining the BMP they initially installed.

Applicability

Renewal Permittees currently listed in Attachment 4 to WQO 2003-0005-DWQ (Attachment 4) must continue to implement Attachment 4 Post-Construction Requirements up until the date when Section E.12 requirements of this Order are effective (the second year of the effective date of the Permit). All Permittees that are not subject to Attachment 4 must implement the CGP Post-Construction Requirements up until the second year of the effective date of the Permit. In the second year of the effective date of the permit, all Permittees, New and Renewal, must implement Section E.12. Post-Construction Requirements contained within this Order.

Lastly, extensive monitoring studies conducted by the California Department of Public Health (CDPH) have documented that mosquitoes opportunistically breed in structural storm water Best Management Practices (BMPs), particularly those that hold standing water for over 96 hours. Certain Low Impact Development (LID) site design measures that hold standing water such as rainwater capture systems may similarly produce mosquitoes. These structures create a potential public health concern and increase the burden on local vector control agencies that are mandated to inspect for and abate mosquitoes and other vectors within their jurisdictional boundaries. These unintended consequences can be lessened when structures incorporate design, construction, and maintenance principles developed specifically to minimize standing water available to mosquitoes1 while having negligible effects on the capacity of the structures to provide water quality improvements as intended. The California Health and Safety Code prohibits landowners from knowingly providing habitat for or allowing the production of

mosquitoes and other vectors, and gives local vector control agencies broad inspection and abatement powers. This Order requires regulated MS4s to comply with applicable provisions of the Health and Safety Code and to cooperate and coordinate with CDPH and local mosquito and vector control agencies on vector-related issues.

Water Quality Monitoring Requirements

Legal Authority: Clean Water Act §§308(a), 402(p)(3)(b); 40 C.F.R. §§122.44(i), 122.48(b); MS4Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001; W[35]; Ecological Condition Assessments of California's Perennial Wadeable Streams: Highlights from the Surface Water Ambient Monitoring Program's Perennial Streams Assessment (PSA) (2000-2007)[36]; National Research Council Report on Urban Storm Water in the United States, 2008[37]

The existing General Permit included requirements meant to eliminate or reduce the discharge of pollutants to receiving waters. Improved knowledge of the water quality impacts and management practices, obtained either as part of the permit requirements or from outside sources (e.g., scientific literature, studies, and expert panels), is intended to be used in an adaptive management fashion to inform requirements in subsequent permits. As such, monitoring and assessment represents a critical component in understanding the link between permit requirements, the benefits achieved due to those requirements, and the condition of receiving waters. Aside from general knowledge that storm water discharges from urbanized watersheds contribute pollutants to receiving waters, little is known about the specific conditions in such receiving waters outside of major metropolitan areas. The effectiveness of almost a decade of storm water management in Phase I MS4s has not been systematically evaluated through receiving water monitoring.

Nationwide, there are few of analyses of available data and guidance on how Permittees should be using the data to inform their storm water management decisions.

This Order prioritizes monitoring for ASBS, TMDLs, and 303d listed waterbodies. Permittees that have a population of 50,000 or greater and are part of an urbanized area are required to choose from a number of monitoring options. These larger Permittees are assumed to have the resources to undertake monitoring. For the majority of Phase II Permittees, this permit term will be the first time a monitoring program has been implemented. As such, prioritization of monitoring allows for a firm foundation from which Phase II Permittees may initiate and develop monitoring programs that will result in improvement of local knowledge of water quality impacts and implementation of storm water management practices. Any of the monitoring requirements may be conducted through participation in a regional monitoring group. Regional

[35] 2010 Integrated Report can be found at: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml

[36] Ode, P.R.1, T.M. Kincaid2, T. Fleming3 and A.C. Rehn 9. 2011. Ecological Condition Assessments of California's Perennial Wadeable Streams: Highlights from the Surface Water Ambient Monitoring Program's Perennial Streams Assessment (PSA) (2000-2007). A collaboration between the State Water Resources Control Board's Non-Point Source Pollution Control Program (NPS Program), Surface Water Ambient Monitoring Program (SWAMP), California Department of Fish and Game Aquatic Bioassessment Laboratory, and the U.S. Environmental Protection Agency.

[37] Urban Storm Water in the United States, National Research Council, 2008 can be found at: http://www.epa.gov/npdes/pubs/nrc_stormwaterreport.pdf

monitoring not only allows Permittees to share costs but also facilitates monitoring data and information sharing across local regions. In effect, regional programs provide a broad-scale picture of water quality condition within a watershed.

Program Effectiveness Assessment

Legal Authority: Clean Water Act § 402(p)(3)(b); 40 C.F.R.C.F.R. § 122.34(g) 40 CFR 122.34(g)(3), CASQA Effectiveness Assessment Guide[38]; Evaluating the Effectiveness of Municipal Stormwater Programs, U.S. EPA, EPA 833-F-07-010, MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001

A key requirement in the storm water Phase II rule is a report that includes "the status of compliance with permit conditions, an assessment of the appropriateness of identified [control measures] and progress towards achieving identified measurable goals for each of the minimum control measures." This assessment is critical to the storm water program framework which uses the iterative approach of implementing controls, conducting assessments, and designating refocused controls leading toward attainment of water quality standards. As a result, this Order requires a quantitative evaluation of the Permittees MS4 programs. Measurable program evaluations are critical to the development, implementation, and adaptation of effective local storm water management programs.

To date, only a small number of Phase I MS4s have provided measurable outcomes with regard to aggregate pollutant reduction achieved by their municipal storm water programs. Most Permittees, both Phase I and II, are struggling simply to organize or document their program activities and few have provided a quantitative link between program activities and water quality improvements. The few that have determined whether or not water quality is improving as a result of storm water program implementation took many years. Despite these past obstacles, the process of evaluating and understanding the relationship between the storm water program implementation and water quality needs to begin now.

Building on the monitoring and assessment program, the Permittee must conduct an annual effectiveness assessment to assess the effectiveness of prioritized BMPs, program elements and the storm water program as a whole. Prioritized BMPs include BMPs implemented based on pollutants of concern. Where pollutants of concern are unidentified, prioritized BMPs are based on common urban pollutants (i.e., sediment, bacteria, trash, nutrients). The California Stormwater Quality Association's (CASQA) Municipal Stormwater Program Effectiveness Guidance describes strategies and methods for assessing effectiveness, including examples of effectiveness assessment for each program component. The CASQA Effectiveness Guidance is available at www.casqa.org for purchase. A two-hour EPA webcast focusing on the CASQA Guide is also available (available at www.epa.gov/npdes/training under "Assessing the Effectiveness of Your Municipal Stormwater Program"). A resources document from the webcast includes a 10 page summary of the CASQA Guide and example pages from the municipal chapter:
(www.epa.gov/npdes/outreach_files/webcast/jun0408/110961/municipal_resources.pdf)

The Municipal Stormwater Program Effectiveness Assessment Guidance synthesizes information on designing and conducting program effectiveness assessments. The document also explains how to select certain methods based on programmatic outcomes and goals. The

[38] https://www.casqa.org/casqastore/products/tabid/154/p-7-effectiveness-assessment-guide.aspx

reader is led through a series of questions and case studies to demonstrate how proper assessments are selected. Techniques are related to different level of outcomes: level one – documenting activities, level two – raising awareness, level 3 – changing behavior, level 4 – reducing loads from sources, level 5 – improving runoff quality, and level 6 – protecting receiving water quality. The Guide includes fact sheets for all six NPDES program elements, outlining methods and techniques for assessing effectiveness of each program.

Annual Reporting

In general, an annual report must document and summarize implementation of the storm water program during the previous year, evaluate program results and describe planned changes towards continuous improvement. The annual report also can serve as a "state of the storm water program" report for the general public or other stakeholders in the community serving as an excellent summary document to provide about the status of storm water program.

However, lessons learned from Phase I MS4 annual reports demonstrate that many Permittees tend to submit too much information, and, as a result, Regional Water Boards receive large binders full of materials that do not provide useful information to assess compliance. As a result, this Order requires Permittees to annually submit a summary of the past year activities. For example, the Permittees should not only address "bean counting" of required task, but address such questions as:

- For illicit discharge data, what are the most prevalent sources and pollutants in the illicit discharge data, and where are these illicit discharges occurring?
- How many illicit discharges have been identified, and how many of those have been resolved?
- How many outfalls or screening points were visually screened, how many had dry weather discharges or flows, at how many were field analyses completed and for what parameters, and at how many were samples collected and analyzed?
- Does the MS4 need to conduct more inspections in these areas, or develop more specific outreach targeting these sources and pollutants?

In addition, Permittees use SMARTS to certify Annual Reports which verifies compliance with all requirements of this Order.

Nexus Between Annual Reporting and Program Effectiveness Assessment

In addition to submitting program element summaries, Permittee must analyze their yearly activities and link it to their Program Effectiveness Assessment and Improvement Plan which tracks and documents their annual and long-term effectiveness of the storm water program. For example:

- Planned Activities and Changes. The annual report should describe activities planned for the next year highlighting any changes made to improve control measures or program effectiveness.

Detailed Annual Report

Most major areas of this Order require Permittees to submit, via SMARTS, a summary annual report for the past year's activities. For certain program elements such as Water Quality Monitoring, Program Effectiveness Assessment, and TMDLs, more detailed annual report information is required to be tracked and submitted via SMARTS.

Additionally, at any time during the permit term, the Executive Officer of the applicable Regional Water Board can request a more detailed annual report. This information may be required to determine compliance or prior to targeted or comprehensive storm water program audit. The table below shows detailed annual reporting information an Executive Officer of the applicable Regional Water Board may require:

Permit Provision	Detailed Annual Reporting Information
E.6.c.	By the third year Annual Report and annually thereafter, report on the Enforcement Response Plan summarizing all enforcement activities including inspections of chronic violators and the incentives, disincentives, or escalated enforcement responses at each site. Summarizations of enforcement activities shall include, at a minimum, the following information for each type of site or facility: (a) Number of violations, including a listing of sites or facilities with identified violations (b) Number of enforcement actions, including types (c) Other follow-up actions taken (d) Demonstration that compliance has been achieved for all violations, or a description of actions that are being taken to achieve compliance
E.7.a.	By the third year Annual Report, and annually thereafter, submit a report on the implementation and progress of the public education strategy and general program development and progress. Report on the development of education materials, methods for educational material distribution, public input, landscaping outreach, reporting of illicit discharges, proper application of pesticides, herbicides, and fertilizers, elementary school education, reduction of discharges from organized car washes, mobile cleaning and pressure washing operations, and landscape irrigation efforts. By the fifth year Annual Report, submit a report summarizing changes in public awareness and knowledge resulting from the implementation of the program and any modifications to the public outreach and education program.
E.7.b.1.	By the third year Annual Report, document and maintain records of the training provided and the staff trained annually. The annual report shall include the number and percentage of Permittee's applicable staff that were trained and summarize the knowledge assessment as specified in E.7.b.1.(ii)(d).
E.7.b.2. Permittee Staff	By the second year of the permit and annually thereafter, submit the following information: a. Training topics covered b. Dates of training c. Number and percentage of Permittees' staff, as identified in Sections E.7.b.2. possessing the specified credentials.
E.7.b.2. Construction Site Operator Education	By the third year Annual Report and annually thereafter, submit a report including the following information: (a) Training topics covered; (b) Dates of training; (c) Number and percentage of Permittee's operators and number of contractors attending each training; (d) Results of any surveys conducted to demonstrate the awareness and potential behavioral changes in the attendees.

Permit Provision	Detailed Annual Reporting Information
E.7.b.3.	By the second year Annual Report and annually thereafter, submit a summary that includes oversight procedures and identifies and tracks all personnel requiring training and assessment and records. The annual report shall include the number and percentage of Permittee's applicable staff that were trained during the year and summarize the knowledge assessment as specified in E.7.b.3(ii)(b).
E.8.	By the second year Annual Report and annually thereafter, submit a description of the public involvement program and summary of the MS4s efforts related to facilitating public involvement, including efforts to engage citizen advisory groups, increase citizen participation, and involvement with the IRWMP or other watershed-level planning effort.
E.9.a.	Submit a map by the second year Annual Report, and annually thereafter submit either (a) a current updated outfall map, or (b) verification that no changes or additions were made to the Permittee's MS4.
E.9.b.	By the second year online Annual Report, submit inventory and annually thereafter an updated inventory. By the second year online Annual Report, identify the illicit discharge procedures implemented and the locations of the implementation. Also identify in each online Annual Report the remaining inventoried facilities and priority areas still requiring illicit discharge assessment over the permit term.
E.9.c.	By the second year Annual Report, submit a report summarizing the field investigation results and areas of follow up actions, including the following information: (a) The number of outfalls found to be flowing or ponding more than 72 hours after the last rain event; (b) The number of such outfalls sampled in accordance with permit conditions; (c) Sampling result in tabular form; and (d) The number of outfalls found to be in exceedance of action levels
E.9.d.	By the second year Annual Report, submit all source investigations and corrective actions. At a minimum the report shall include: (a) Brief description of each non-stormwater discharge reported or observed; (b) Date(s) the non-storm water discharge was reported or observed; (c) Brief description of any actual or potential water quality impact resulting from the discharge; (d) Description and results of steps taken to investigate the source of the discharge; (e) Description and results of all follow-up or enforcement actions taken as a result of the investigation; (f) Date the investigation was closed, and whether the discharge was eliminated.

Permit Provision	Detailed Annual Reporting Information
E.9.e.	Within the first year of the effective date of the permit, submit a spill response plan that contains the items specified in Section E.9.e. In subsequent Annual Reports summarize any spill response activities, and any follow-up actions, as specified in the spill response plan.
E.10.a.	Submit an up to date construction site inventory enumerating items listed in this Section with each Annual Report.
E.10.b.	By the first year Annual Report, submit a summary of review procedures. The summary should clearly indicate how the procedures will achieve compliance with all requirements of this Section, and clearly delineate responsibilities for implementing, and ensuring implementation of each aspect of the procedures.
E.10.c.	By the second year Annual Report and annually thereafter, submit the following information: (a) Total number of active sites disturbing less than one acre of soil requiring inspection; (b) Number and percentage of each type of enforcement action taken as listed in each Permittee's Enforcement Response Plan; (c) Number of sites with discharges of sediment or other construction related materials, both actual and those inferred through evidence.; (d) Number and percentage of violations fully corrected prior to the next rain event but no longer than 10 business days after the violations are discovered or otherwise considered corrected in a Permittee-defined timely period. (e) Number and percentage of violations not fully corrected 30 days after the violations are discovered. (f) Number of follow-up inspections that demonstrated the operator continued to implement BMPs according to plan and the number of follow-up inspections that required further enforcement.
E.11.a.	By the second year Annual Report submit the inventory and submit annual updates thereafter.
E.11.b.	By the second year Annual Report, submit the completed map and update annually thereafter if any of the information indicated on the map has changed.
E.11.c.	By the third year Annual Report, submit the results of the Permittee's annual assessment, including the list of identified hotspots and any identified deficiencies and corrective actions taken. The Permittee shall identify designated hotspots on the facility inventory updated and submitted in each subsequent year annual report.
E.11.d.	By the fourth year Annual Report, submit a summary of SWPPPs developed for pollutant hotspots. In subsequent Annual Reports, submit a summary of SWPPPs updated.

Permit Provision	Detailed Annual Reporting Information
E.11.e.	By the fifth year Annual Report and annually thereafter, submit the following information: (a) Total number of facilities required to be inspected. (b) Verification that all inspections were conducted at all facilities in accordance with the requirements of this Section (c) Summary of spills and corrective actions (d) Summary of the results of inspections, including a summary of deficiencies noted and corrective actions taken (e) Results of the quarterly visual observations of storm water discharges (f) Total number of facilities inspected (visual and comprehensive inspections) and frequency of inspections (g) All inspection records, reports, and logs (h) Records of corrective actions taken and the results of corrective actions
E.11.f.	By the second year Annual Report, submit the assessment procedures and maintenance prioritization list, including a description of the method used to identify high priority storm drain system features and catch basins and number of catch basins identified as high priority. If flood conveyance maintenance is undertaken by another entity, submit a summary report of coordination by the first year Annual Report.
E.11.g.	By the third year Annual Report, submit a summary of the following information: (a) Storm sewer maintenance schedule (b) List of storm sewer systems and the maintenance priority assigned (c) Documentation of all required storm sewer systems maintenance logs (d) Documentation of waste material disposal procedure By the third Annual Report and annually thereafter, the Permittee shall submit verification that all storm drain facilities were maintained according to the priorities, procedures, and schedules developed according to this Section. The report shall include a summary of the results of inspections, deficiencies found, corrective actions taken, and the results of corrective actions.
E.11.h.	By the third year Annual Report, submit the following: (a) List of BMPs and associated pollutants with each O&M activity (b) BMPs applied during Permittee O&M activities (c) Log of quarterly BMP evaluations. By the third Annual Report and annually thereafter, the Permittee shall submit verification that identified BMPs were effectively implemented for all O&M activities.
E.11.i.	By the third year Annual Report, submit a summary of the development and implementation process to incorporate water quality and habitat enhancement design into new or upgraded flood management projects. By the fourth year Annual Report and annually thereafter, submit a list of new or upgraded flood management projects, including a summary of water quality and habitat enhancement features incorporated into their design.

Permit Provision	Detailed Annual Reporting Information
E.11.j.	By the second year Annual Report, submit an evaluation of materials used and activities performed for pollution prevention and source control opportunities and a list of practices implemented to minimize the use of herbicide, pesticide, and fertilizers. By the second year Annual Report and annually thereafter, submit verification that identified BMPs were effectively implemented for all landscaping design and maintenance activities. By the second year Annual Report, submit a summary identifying the measures that the Permittee will use to demonstrate reductions in the application of pesticides, herbicides, and fertilizers. In subsequent annual reports, verify implementation of this measure, and describe reductions in pesticide, herbicide, and fertilizer application.
E.12.b	By the second year Annual Report and annually thereafter, the Permittee shall submit the following information: (a) A list of all project creating or replacing 2,500 square feet or more of impervious surface, as described above; and (b) A brief description of site design measures applied to each project.
E.12.c.	For each Regulated Project approved, the following information shall be submitted by the third year Annual Report: (a) Project Name, Number, Location (cross streets), and Street Address; (b) Name of Developer, Phase No. (if project is being constructed in phases, each phase shall have a separate entry), Project Type (e.g., commercial, industrial, multiunit residential, mixed-use, public), and description; (c) Project watershed(s); (d) Total project site area and total area of land disturbed; (e) Total new impervious surface area and/or total replaced impervious surface area; (f) For a redevelopment or road widening project: total pre-project impervious surface area and total post-project impervious surface area; (g) Status of project (e.g., application date, application deemed complete date, project approval date); (h) Source control measures; (i) Site design measures; (j) All post-construction storm water treatment systems installed onsite, at a joint storm water treatment facility, and/or at an offsite location; (k) O&M responsibility mechanism for the life of the project. (l) Water quality treatment calculations used; (m) Off-site compliance measures for Regulated Project (if applicable); Additional (watershed-specific) hydromodification standards used.

Permit Provision	Detailed Annual Reporting Information
E.12.h.	By the second year Annual Report and annually thereafter, for each Regulated Project inspected during the reporting period the following information shall be submitted in tabular form: (1) Name of facility/site inspected. (2) Location (street address) of facility/site inspected. (3) Name of responsible operator for installed storm water treatment systems and hydromodification management controls. (4) Inspection details including: date of inspection, type of inspection (e.g., initial, annual, follow-up, spot), type(s) of storm water treatment systems inspected (e.g., swale, bioretention unit, tree well, etc.) and an indication of whether the treatment system is an onsite, joint, or offsite system. (5) Type of hydromodification management controls inspected. (6) Inspection findings or results (e.g., proper installation, proper O&M, system not operating properly because of plugging, bypass of storm water because of improper installation, maintenance required immediately, etc.). (7) Enforcement action(s) taken, if any (e.g., verbal warning, notice of violation, administrative citation, administrative order). (8) A discussion of the inspection findings for the year and any common problems encountered with various types of treatment systems and/or hydromodification management controls. This discussion shall include a general comparison to the inspection findings from the previous year. (9) A discussion of the effectiveness of the Permittee's O&M Program and any proposed changes to improve the O&M Program (e.g., changes in prioritization plan or frequency of O&M inspections, other changes to improve effectiveness of O & M program). On an annual basis, before the wet season, provide a list of newly installed (installed within the reporting period) storm water treatment systems and hydromodification management controls to the local mosquito and vector control agency and the appropriate Regional Water Board. This list shall include the facility locations and a description of the storm water treatment measures and hydromodification management controls installed.
E.12.i.	By the third year Annual Report and subsequently thereafter, submit the post-construction best management practice condition assessment plan as required in E.12.i.(ii)a-d.
F.5.b.2.	By the third year Annual Report and annually thereafter, submit the public education strategy and general program development and progress. By the fifth year Annual Report, summarize changes in public awareness and knowledge resulting from the implementation of the program and any modifications to the public education and outreach program. If applicable, submit a report on development of education materials, methods for educational material distribution, public input, Water Efficient Landscape Ordinance, elementary school education, reduction of discharges from mobile cleaning and pressure washing operations, and landscape irrigation efforts.

Permit Provision	Detailed Annual Reporting Information
F.5.b.3.	By the third year Annual Report, submit records of the training provided and the staff trained annually.
F.5.b.4.	By the second year Annual Report and annually thereafter, submit a summary of oversight procedures and identify and track all personnel requiring training and assessment and records.
F.5.c.	By the third year Annual Report and annually thereafter, submit a description of the public involvement program and summary of the MS4s efforts related to facilitating public involvement.
F.5.d.	By second year Annual Report submit the outfall inventory map, and annually thereafter submit either (a) a current updated outfall map, or (b) verification that no changes or additions were made to the Permittee's MS4.
F.5.d.1.	By the second year Annual Report, submit a report summarizing the field investigation results and areas of follow up investigations. The report shall summarize all applicable observations. By the second year of the permit term and annually thereafter, submit all source investigations and corrective actions. At a minimum the report shall include: (a) Date(s) the non-storm water discharge was observed; (b) Results of the investigation; (c) Date the investigation was closed. (d) A summary of all non-storm water discharges that were found.
F.5.e.	By the second year Annual Report, the Permittee submit an updated contract language that includes CGP compliance requirements for all projects subject to the CGP.
F.5.f.1.	By the second year Annual Report submit and annually thereafter an updated inventory.
F.5.f.2.	By the second year Annual Report and annually thereafter, submit the map.
F.5.f.3.	By the third year Annual Report, submit the results of the Permittee's annual assessment, any identified deficiencies and corrective actions taken, list of the pollutant hotspots.
F.5.f.4.	By the fourth year Annual Report and annually thereafter, submit a summary of SWPPPs developed and updated for pollutant hotspots.
F.5.f.5.	By the fifth year Annual Report and annually thereafter, the following information shall be submitted: (a) Total number of facilities required to be inspected. (b) Total number of facilities inspected (visual and comprehensive inspections) and frequency of inspections (c) Summary of spills and corrective actions (d) Results of the quarterly visual observations of storm water discharges
F.5.f.6	By the second year Annual Report, submit the assessment procedures and maintenance prioritization list.

Permit Provision	Detailed Annual Reporting Information
F.5.f.7	By the third year Annual Report, submit a summary of the following information: (a) Storm sewer maintenance schedule (b) List of storm sewer systems and the priority assigned (c) Documentation of all required storm sewer systems maintenance logs (d) Documentation of waste material disposal procedure
F.5.f.8.	By the third year Annual Report, submit the following: (a) List of BMPs and associated pollutants with each O&M activity (b) BMPs applied during Permittee O&M activities (c) Log of annual BMP evaluations.
F.5.f.9	By the second year Annual Report, submit an evaluation of materials used and activities performed for pollution prevention and source control opportunities and a list of practices implemented to minimize the use of herbicide, pesticide, and fertilizers. By the second year Annual Report, submit a document identifying the measures that the Permittee will use to demonstrate reductions in the application of pesticides, herbicides, and fertilizers. In subsequent annual reports, use this measure to demonstrate reductions in pesticide, herbicide, and fertilizer application.

F.5.g.	By the second year Annual Report and annually thereafter, the Permittee shall submit the following information: (a) A list of all project creating or replacing 2,500 square feet or more of impervious surface, as described above; and A brief description of site design measures applied to each project. For each project approved, the following information shall be submitted by the second year Annual Report: (a) Project Name, Number, Location (cross streets), and Street Address; (b) Name of Developer, Phase No. (if project is being constructed in phases, each phase shall have a separate entry), Project Type (e.g., commercial, industrial, multiunit residential, mixed-use, public), and description; (c) Project watershed(s); (d) Total project site area and total area of land disturbed; (e) Total new impervious surface area and/or total replaced impervious surface area; (f) If a redevelopment or road widening project, total pre-project impervious surface area and total post-project impervious surface area; (g) Status of project (e.g., application date, application deemed complete date, project approval date); (h) Source control measures; (i) Site design measures; (j) All post-construction storm water treatment systems installed onsite, at a joint storm water treatment facility, and/or at an offsite location; (k) O&M responsibility mechanism for the life of the project. (l) Water quality treatment calculations used; (m) Off-site compliance measures (if applicable) (n) Additional (watershed-specific) hydromodification standards used (a) For each project inspected during the reporting period the following information shall be submitted in tabular form as part of each year's Annual Report: (1) Name of facility/site inspected. (2) Location (street address) of facility/site inspected. (3) Name of responsible operator for installed storm water treatment systems and hydromodification management controls. (4) Inspection details including: Date of inspection, type of inspection (e.g., initial, annual, follow-up, spot), type(s) of storm water treatment systems inspected (e.g., swale, bioretention unit, tree well, etc.) and an indication of whether the treatment system is an onsite, joint, or offsite system. (5) Type of hydromodification management controls inspected. (6) Inspection findings or results (e.g., proper installation, proper O&M, system not operating properly because of plugging, bypass of storm water because of improper installation, maintenance required immediately, etc.). (7) Enforcement action(s) taken, if any (e.g., verbal warning, notice of violation, administrative citation, administrative order). (8) A discussion of the inspection findings for the year and any common problems encountered with various types of treatment

Permit Provision	Detailed Annual Reporting Information
	systems and/or hydromodification management controls. This discussion shall include a general comparison to the inspection findings from the previous year. (9) A discussion of the effectiveness of the Permittee's O&M Program and any proposed changes to improve the O&M Program (e.g., changes in prioritization plan or frequency of O&M inspections, other changes to improve effectiveness of program). (b) On an annual basis, before the wet season, provide a list of newly installed (installed within the reporting period) storm water treatment systems and hydromodification management controls to the local mosquito and vector control agency and the appropriate Regional Water Board. This list shall include the facility locations and a description of the storm water treatment measures and hydromodification management controls installed.

Program Management
Without the requirement of a SWMP, this section serves as the framework/backbone for the storm water program. This section is a consolidation of all of the Permittee's relevant ordinances or other regulatory requirements, the description of all programs and procedures (including standard forms to be used for reports and inspections) that will be implemented and enforced to comply with the permit and to document the selection, design, and installation of all storm water control measures.

Legal Authority
Without adequate legal authority the MS4 would be unable to perform many vital program functions such as performing inspections and requiring installation of control measures. In addition, the Permittee would not be able to penalize and/or attain remediation costs from violators.

Certification
Submittal and signature certifies Permittee will comply with this Order.

Enforcement Response Plan (ERP)
This Order requires Permittees to have an established, escalating enforcement policy identified in the ERP that clearly describes the action to be taken for common violations. The plan must describe the procedures to ensure compliance with local ordinances and standards, including the sanctions and enforcement mechanisms that will be used to ensure compliance. (See 40 CFR 122.26(d)(2)(i)). It is critical that the Permittee have the authority to initiate a range of enforcement actions to address the variability and severity of noncompliance.

IDDE and Good Housekeeping
Both these programs pose potential immediate threat to water quality without quick access to information submitted in SMARTS. For example, in order to respond to discharges, an effective IDDE program responds to complaints about illicit discharges or spills such as illegal connections to the storm sewer system, improper disposal of wastes, or dumping of used motor oil or other chemicals. In order to trace the origin of a suspected illicit discharge or connection, the Permittee must have an updated map of the storm drain system and a formal plan of how to locate illicit discharges and how to respond to them once they are located or reported.

Construction Inventory
To effectively conduct inspections, the Permittee must know where construction activity is occurring. A construction site inventory tracks information such as project size, disturbed area, distance to any waterbody or flow channel, when the erosion and sediment control/stormwater plan was approved by the Permittee, and whether the project is covered by the CGP. This inventory will allow the Permittee to track and target its inspections.

Effectiveness Assessment
Without assessing the effectiveness of the stormwater management program the Permittee will not know which parts of the program need to be modified to protect and/or improve water quality and instead will essentially be operating blindly.

XIII. TOTAL MAXIMUM DAILY LOAD (TMDL)

Section 303(d) of the Clean Water Act requires States to identify waters that do not meet water quality standards after applying certain required technology-based effluent limitations ("impaired" waterbodies). States are required to compile this information in a list and submit the list to the U.S. EPA for review and approval. This list is known as the Section 303(d) list of impaired waters, which is incorporated into the Integrated Report.

This listing process requires States to prioritize waters/watersheds for future development of TMDLs. A TMDL is defined as the sum of the individual waste load allocations for point sources of pollution, plus the load allocations for nonpoint sources of pollution, plus the contribution from background sources of pollution. The Water Boards have ongoing efforts to monitor and assess water quality, to prepare the Section 303(d) list, and to subsequently develop TMDLs. The 2010 California 303(d) List identifies impaired receiving water bodies and their watersheds within the state.

TMDLs are developed by either the Regional Water Boards or U.S. EPA in response to Section 303(d) listings. Regional Water Board-developed TMDLs are subject to approval by the State Water Board, approval by the Office of Administrative Law, and ultimately approval by U.S. EPA. TMDLs developed by Regional Water Boards are incorporated as Basin Plan amendments and include implementation provisions.

TMDLs developed by U.S. EPA typically contain the total load and waste load allocations required by Section 303(d), but do not contain comprehensive implementation provisions.

TMDLs are not self-implementing but rely on other regulatory mechanisms for implementation and enforcement. Urbanized areas typically utilize municipal storm water permits as the implementation tool. Incorporation of TMDL implementation requirements into general permits (as opposed to individual MS4 permits) is difficult. First, there are numerous Traditional MS4s (municipalities) and Non-traditional MS4s such as military bases, public campuses, prison and hospital complexes covered under this Order. Second, the waste load allocations for many TMDLs are shared among several dischargers; that is, a single waste load allocation may be assigned to multiple dischargers, making it difficult to assign responsibility. Further, individual dischargers may not be explicitly identified. For example, "urban runoff" may be listed as a source of impairment, but the individual MS4s responsible for the impairment may not be identified. Third, the implementation plans adopted by the Regional Water Boards often provide for phased compliance with multiple milestones and deliverables, with optional and alternative means of compliance depending on the results of monitoring and special studies.

Section C.1 of this Order requires that permittees "shall . . . reduce the discharge of pollutants . . .to achieve TMDL wasteload allocations established for discharges by the MS4s." The variance in the level of detail of TMDLs necessitates the development of TMDL-specific permit requirements to provide clarity on the Permittees' compliance responsibilities.

The Regional Water Boards submitted proposed TMDL-specific permit requirements to the State Water Board for applicable TMDLs, with statements explaining how these requirements are designed to implement the TMDLs and the corresponding wasteload allocations. (40 C.F.R. §122.44(d)(1)(vii)(B)) Sections E.15 and F.5 of this Order require permittees to comply with all applicable TMDL-based requirements listed in Attachment G; the requirements are directly enforceable through this Order. Attachment G does not restate the final applicable wasteload allocations for each TMDL; however, those wasteload allocations are specified in the Fact Sheet and this Order incorporates them by reference as appropriate.

In a few cases, the TMDL-specific requirements of Attachment G are based on a load allocation, rather than a wasteload allocation. Several TMDLs incorporated into this Order assign load allocations to storm water that may not have been regulated as NPDES discharges at the time of the TMDL adoption, but have now been determined to be subject to this Order. USEPA has issued guidance providing that in such circumstances, the "NPDES permit authority could identify an appropriate allocation share and include a corresponding limitation specific to the newly permitted stormwater source."[39]

Some TMDLs do not name specific Permittees but name a category of discharges such as "urban runoff." This Order identifies the Permittees subject to the TMDL. In most cases, the permittees subject to the TMDLs are Traditional MS4s. For some TMDLs the State Water Board has determined that the TMDL requirements are also applicable to specific Non-traditional MS4s. Attachment G specifically names such permittees and sets out how the permittees will implement the TMDL. The State Water Board or the applicable Regional Water Board may, in the future, designate additional Traditional or Non-traditional MS4s based on further determination of TMDL applicability.

Attachment G assigns monitoring requirements to certain Permittees and section E.13.b. of this Order states that "Permittees shall implement any monitoring requirements assigned in Attachment G." Section E.13. also states, in part, "Traditional Small MS4 Permittees that are required to conduct monitoring of discharges to … TMDL… waterbodies… are not required to perform additional monitoring as specified in Sections E.13.d.1 and E.13.d.2." Therefore, a Permittee that is assigned TMDL-related monitoring in Attachment G is not required to implement monitoring in accordance with Sections E.13.d.1. or E.13.d.2.

Permittees will report compliance with TMDL permit requirements in the Annual Report required to be submitted electronically via SMARTS.

The previous General Permit, Water Quality Order 2003-0005-DWQ, relied in part on the preparation, approval, and implementation of a Storm Water Management Program to incorporate TMDL-specific requirements for Permittees. This Order does not rely on preparation of a Storm Water Management Program, but rather incorporates programmatic requirements, including the TMDL-specific requirements in Attachment G, in the Order itself. In some cases, as noted in the discussion below, this Order directs the Permittee to continue implementing requirements specified in the Storm Water Management Plan required by the previous 2003 Permit. In those cases, Attachment G incorporates those specific requirements by reference.

In sum, Attachment G contains specific management practice-based planning and implementation requirements that act as BMP-based WQBELs. Attachment G also contains monitoring and other requirements. These requirements are referred to in the Order as "BMP-based WQBELs and other permit requirements," and are expected to achieve the water quality results specified by the wasteload allocations. Because the ultimate purpose of TMDL implementation is to reach the water quality results specified in the TMDL wasteload allocations in order to attain water quality standards in receiving waters that are currently impaired, Attachment G requires a demonstration of attainment of the waste load allocation at the final compliance deadline. This demonstration ensures that Attachment G incorporates

[39] Revisions to the November 22, 2002 Memorandum 'Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs,'" issued by USEPA, November 26, 2014.

BMP-based WQBELs and other permit requirements that are consistent with the assumptions and requirements of the applicable waste load allocations (40 C.F.R. § 122.44(d)(1)(vii)(B)) and implements the basin plans into which the TMDL implementation plans are incorporated (Wat. Code, §§13263, subd. (a), 13377.) Permittees are to make this demonstration consistent with criteria articulated in sections E.15.b. and F.5.i.2 of the Order.

This Order implements TMDLs with either past deadlines or soon approaching deadlines. In precedential Order WQ 2015-0075, the State Water Board found that final TMDL attainment deadlines should not be extended through permitting actions. The State Water Board stated as follows:

> *Final TMDL deadlines are established and incorporated into the Basin Plans during the TMDL development process. That process invites stakeholder participation and the proposed schedule is subject to public review and comment and approval by the relevant regional water board, the State Water Board, and USEPA. The deadlines are established with consideration of the time needed for compliance for all dischargers contributing to an impairment, including industrial and construction storm water dischargers and traditional NPDES dischargers. Although we recognize that it may not always be feasible for municipal storm water dischargers to meet final TMDL deadlines, short of amending the Basin Plan to modify the deadlines (see California Association of Sanitation Agencies v. State Water Resources Control Board (2012) 208 Cal.App.4th 1438), we find it appropriate for the dischargers to request time schedule orders rather than be granted an extension within the provisions of the [regional water board permits].*
> (State Water Board Order WQ 2015-0075, p. 37, fn. 110.)

Attachment G incorporates the final attainment deadlines for each TMDL; some TMDL attainment deadlines are now past. In these instances, the associated wasteload allocations are effective on the effective date of the Order, i.e. January 1, 2019. Where appropriate, the State Water Board will work with the Regional Water Boards to determine if there is any regulatory flexibility for extension of final attainment dates consistent with any particular TMDL. The State Water Board and the Regional Water Boards additionally have discretion with regard to enforcement actions and will exercise that discretion on a case-by-case basis based on all the facts underlying a violation, including how recently the Permittee was assigned TMDL-specific requirements in the permit and the Permittee's efforts, to date, to meet the TMDL-specific requirements. A permittee with a past or imminent TMDL attainment deadline may request a Time Schedule Order (TSO) from the applicable Regional Water Board in accordance with criteria established in the Order. A Regional Water Board's issuance of a TSO will establish an implementation schedule for the Permittee to comply with the TMDL requirements.

The State Water Board delayed the effective date of the Order to January 1, 2019, one year following adoption, to allow permittees additional time to demonstrate attainment of the wasteload allocations, request time schedule orders incorporating compliance schedules for the attainment of the wasteload allocations, or request consideration by the Regional Water Board Executive Officer of whether the particular regulatory language of a given TMDL allows for an extension of a deadline for attainment of the wasteload allocation.

Attachment G specifies BMP-based WQBELs and other permit requirements for attainment of the wasteload allocations even in cases where the final wasteload allocation deadline is past. These requirements are included because the Order states that it is not the intention of the State Water Board or the Regional Water Boards to take enforcement action against a

permittee where (1) a permittee has applied in good faith for a time schedule order and is implementing the requirements in Attachment G pending approval of the time schedule order or (2) the Regional Board has initiated proceedings to revise the implementation schedule or other requirements of a TMDL and the permittee is implementing the requirements in Attachment G pending the outcome of the proceedings.

Unfunded Mandates Considerations Specific to TMDL Requirements in the Order
The TMDL requirements of this Order do not constitute unfunded state mandates requiring reimbursement.

The TMDL-specific requirements do not constitute a new program or higher level of service:

When a state agency requires a local government to provide "a new program or higher level of service," the state must "reimburse that local government for the costs of the program or increased level of service." (Cal. Const., art. XIII B, §6, subd. (a).) The TMDL-specific requirements of this Order, as amended on December 19, 2017, do not constitute a new program or higher level of service for two reasons.

First, the Order, as adopted on February 5, 2013 (effective July 1, 2013), requires permittees to "reduce the discharge of pollutants . . . to achieve TMDL wasteload allocations . . . established for discharges by the MS4s." (Section C.1.) Attachment G listed the applicable TMDLs and specified requirements for implementation of the wasteload allocations. The 2017 amendments to the Order revise or clarify TMDL implementation requirements where requirements in the 2013 Order were unclear or too general. The amendments do not change the baseline requirement in Section C.1 that permittees reduce discharges of pollutants to achieve the wasteload allocations, but simply provide more clarity to the permittees in how to implement that ongoing requirement. Thus, the amendments do not constitute a new program, and do not constitute an increased level of service as permittees were already required to meet TMDL wasteload allocations by implementation of appropriate actions. Refinements of existing requirements do not constitute a higher level of service, even where there may be an increase in costs. (See *County of Los Angeles v. Comm'n on State Mandates*, 110 Cal.App.4th 1176, 1189-1195 [discussing case law on "new program" and "higher level of service"].)

Second, even where the 2013 Order has been amended to include requirements for TMDLs adopted since 2013, the TMDL-specific requirements are not a new program or higher level of service because the TMDLs are simply the mechanism to achieve compliance with water quality standards. The Order, as adopted in 2013, included receiving water limitations stating that "discharges shall not cause or contribute to an exceedance of water quality standards contained in a Statewide Water Quality Control Plan, the California Toxics Rule (CTR), or in the applicable Regional Water Board Basin Plan." (Section D.) TMDLs are the means to implement water quality standards in impaired water bodies. Incorporation of TMDL-based requirements into the MS4 permit, consistent with applicable basin plans, allows the permittee greater flexibility in achieving the water quality standards in the receiving water by allowing additional time to meet the receiving water limitations or, in some cases, permitting interim compliance through management practice implementation rather than immediate compliance with numeric limitations. The TMDL-specific requirements accordingly do not constitute a new program or higher level of service as compared with the baseline requirement of the receiving water limitations.

The TMDL-specific requirements impose requirements that are mandated by federal law:

The TMDL-specific requirements of this Order also fit under exceptions to the requirement to reimburse local government for a new program or higher level of service. Most significantly, one exception exists if "[t]he statute or executive order imposes a requirement that is mandated by a federal law or regulation and results in costs mandated by the federal government, unless the statute or executive order mandates costs that exceed the mandate in that federal law or regulation." (Gov. Code, §17556, subd.(c).)

The TMDL-specific requirements of Attachment G are mandated by federal law and federal regulations. Clean Water Act Section 303(d) states that each state "shall" identify impaired waterbodies, "shall" prioritize such waters/watersheds for future development of TMDLs, and "shall" develop TMDLs for the appropriate pollutants in accordance with the prioritization. (33 U.S.C. § 1313(d).) The TMDLs must be approved by U.S. EPA. (Id.) The Code of Federal Regulations provides that once U.S. EPA approves a TMDL for a waterbody, the effluent limitations in any NPDES permit "shall" be "consistent with the assumptions and requirements of any available wasteload allocations." (40 C.F.R. § 122.44(d)(1)(vii)(B).) Specific to Phase II MS4 permits, the Code of Federal Regulations states that "the permit will include… [m]ore stringent terms and conditions… based on an approved total maximum daily load…" (40 C.F.R. § 122.34(c)(1).)

Federal law thus compels the State Water Board to include the TMDL-specific provisions of Attachment G in the Phase II MS4 Permit.[40]

The California Supreme Court's 2016 decision in *Department of Finance v. Comm'n on State Mandates* (2016) 1 Cal.5th 749, *as modified on denial of rehearing* (Nov. 16, 2016) (*Department of Finance*) established a new framework for analyzing the federal mandates exception to article XIII B, section 6 of the Constitution. An agency order is not a federal mandate if (1) federal law gives the State discretion to impose the particular implementing requirement, and (2) the State exercises that discretion in imposing the requirement by virtue of a "true choice." (*Department of Finance*, *supra*, 1 Cal.5th at 765.) That case concerned the discretion of the Los Angeles Water Board under the MEP standard and the court held that the Board had exercised a true choice in imposing certain requirements on the permittees. Here, the discretion exercised by the State Water Board in complying with section 122.44, subdivision (d)(1)(vii)(B) of Title 40 of the federal regulations is different and more limited than under the MEP standard. Title 40, Section 122.44, subdivision (d)(1)(vii)(B) specifically directs the Board to include effluent limitations which are consistent with the assumptions of any applicable wasteload allocations. The State Water Board had no choice but to include the TMDL-specific provisions in this Order that would result in attainment of the wasteload allocation within the timeframe established in the TMDL. The only discretion the Board employed when complying with section 122.44, subdivision (d)(1)(vii)(B) was crafting

[40] USEPA has similarly required attainment of applicable wasteload allocations in MS4 permits. (See, e.g., sections 1.4.2 and 4.10 of Modified NPDES Permit No. DC0000022 for the MS4 for the District of Columbia, issued October 7, 2011, modified November 9, 2012, available at https://www3.epa.gov/reg3wapd/pdf/pdf_npdes/stormwater/DCMS4/MS4FinalLimitedModDocument/FinalModifiedPermit_10-25-12.pdf and section 2.1.1 and Appendix F of the General Permit for Small MS4s in Massachusetts, issued April 4, 2016, available at https://www3.epa.gov/region1/npdes/stormwater/ma/2016fpd/final-2016-ma-sms4-gp.pdf)

provisions which were consistent with the assumptions and requirements of the applicable wasteload allocations. In exercising this limited discretion, the Board simply translated the wasteload allocations directly into effluent limitations in the form of required control actions. This involved significantly less discretion than did the provisions at issue in *Department of Finance*. Further, in instances where the State Water Board and the appropriate regional water board determined that a choice of actions is available to the permittee to achieve the wasteload allocations in the required timeframe, Attachment G provides that the permittee may propose a set of actions for approval by the relevant regional water board.

Additional federal laws and regulations mandate inclusion of portions of the TMDL-specific requirements of this Order. Under Clean Water Act section 402, subdivision (p)(3)(B)(ii), MS4 permits must effectively prohibit non-storm water discharges into MS4s. (33 U.S.C. §1342(p)(3)(B)(ii); see also 40 C.F.R. § 122.34(b)(3).) Several TMDLs implemented through this Order apply to dry weather discharges, i.e. non-storm water discharges, and require illicit discharge detection and elimination efforts to address non-storm water discharges. The federal regulations also require Phase II permits to incorporate an evaluation of "compliance with the terms and conditions of the permit, including the effectiveness of the components of [ ] storm water management program[s] and the status of achieving the measurable requirements in the permit" (40 C.F.R. §122.34(d)(1).) The TMDL requirements include monitoring and reporting to determine that the TMDL-specific requirements are leading to appropriate progress toward achievement of the wasteload allocations.

The MS4s have authority to levy service charges, fees, and assessments:

Another exception applies where "the local agency . . . has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service." (Gov't Code, § 17556, subd. (d).) The MS4 permittees have the ability to charge fees, such as inspection fees or storm water fees, to cover the cost of the TMDL-specific requirements.

The TMDL-specific requirements are requirements of general applicability:

Finally, reimbursement to local agencies is required only for the costs involved in carrying out functions peculiar to government, not for expenses incurred by local agencies as an incidental impact of laws that apply generally to all state residents and entities. (*City of Richmond v. Comm'n on State Mandates* (1998) 64 Cal.App.4th 1190, 1199.) The Clean Water Act and the federal regulations' TMDL requirements are laws of general applicability, uniformly imposed on all NPDES permittees, including not just MS4s, but also industrial and construction storm water dischargers, as well as traditional NPDES permittees such as wastewater treatment plants.

For the foregoing reasons, the TMDL requirements of this Order do not constitute unfunded mandates requiring reimbursement.

Basis of TMDL-Related Permit Requirements

The following discussion provides the basis for the TMDL-related requirements in Attachment G of this Order.

NORTH COAST REGIONAL WATER BOARD TMDLs

Laguna de Santa Rosa Ammonia & Dissolved Oxygen TMDL

The Laguna de Santa Rosa Ammonia and Dissolved Oxygen TMDL was approved by U.S. EPA as the Waste Reduction Strategy for the Laguna de Santa Rosa, dated March 1, 1995. The Waste Reduction Strategy provided the assumptions and goals used to determine the best option to reduce impacts to the Laguna de Santa Rosa, and attain water quality goals and objectives. The Regional Water Board, however, found the Waste Reduction Strategy to be unenforceable and inadequate to address the declining dissolved oxygen issues in Laguna de Santa Rosa. In 2002, the Regional Water Board determined that dissolved oxygen objectives were being violated and that nutrient loads were on the rise. The Regional Water Board is in the process of developing a TMDL for the Laguna de Santa Rosa for nitrogen, phosphorus, dissolved oxygen, temperature and sediment. Due to the above findings and TMDL development efforts, the State Water Board has removed the Waste Reduction Strategy requirements in this Order.

Shasta River Watershed Temperature & Dissolved Oxygen TMDL

The Shasta River watershed includes all tributaries and Lake Shastina in Siskiyou County. The Shasta River Watershed Temperature and Dissolved Oxygen TMDL and Action Plan was adopted by the North Coast Regional Water Board on June 28, 2006. The Shasta River Watershed Temperature and Dissolved Oxygen TMDL was approved by U.S. EPA and became effective on January 26, 2007. The Shasta River TMDL Action Plan contains the goals and assumptions used to develop the wasteload allocations and conditions to be considered in conducting actions (in this case, storm water management) in the Shasta River watershed.

The North Coast Regional Water Board has determined that the City of Yreka, a Traditional Small MS4 permittee, is a source of “human activity” subject to this TMDL and must comply with the TMDL-requirements of this Order. The TMDL does not specify wasteload allocations for the City of Yreka, but does require the City of Yreka to develop and implement a plan to minimize and control pollutants of concern in urban storm water runoff. That plan was developed and submitted on June 24, 2013, as part of the City’s Notice of Intent for this Order. Attachment G of this Order requires the City to implement this plan no later than January 1, 2019. Therefore, the City will be required to implement the plan immediately. There are no current monitoring requirements for the City related to TMDL implementation.

SAN FRANCISCO BAY REGIONAL WATER BOARD TMDLs

Napa River Sediment TMDL

The Napa River and its tributaries are listed as impaired due to excessive sediment. The river was listed on the Clean Water Act section 303(d) in response to concerns regarding adverse impacts to habitat for steelhead trout, chinook salmon, and other threatened species whose populations have declined substantially in recent decades. The Napa River Sediment TMDL and Habitat Enhancement Plan identify pollutant sources of concern, and specify actions to restore a healthy fishery in the watershed.

The Napa River Sediment TMDL identifies urban storm water runoff, specifically storm water runoff from State highways, and industrial and construction sites as a source of impairment. The Napa River Sediment TMDL names parties that should implement measures to control and/or prevent sediment discharges associated with urban storm water runoff (hereinafter

referred to as Implementing Parties). Attachment G of this Order assigns requirements to the Traditional Small MS4 designees identified as Implementing Parties within the Napa River Sediment TMDL.

Wasteload Allocations (WLA): The Napa River Sediment TMDL includes a WLA of 800 metric tons/year for storm water runoff discharges from stream crossings and storm water runoff discharges associated with operation of public and private roads, paved and unpaved within the watershed not otherwise covered by NPDES permits issued to Napa County and municipalities including the City of Napa, Town of Yountville, City of St. Helena, City of Calistoga, and City of American Canyon.

Load Allocations (LA): The Napa River Sediment TMDL also includes an LA of 27,000 metric tons/year that applies to a roads and streams crossings source category that Napa County and the City of Napa, Town of Yountville, City of St. Helena, City of Calistoga, and City of American Canyon share with Caltrans. Caltrans is responsible for runoff from State highways and associated construction activities. Discharges from State highways are regulated by the State Water Board's statewide municipal storm water permit issued to Caltrans; discharges of storm water from construction activities are regulated by the State Water Board's Statewide Storm Water Permit for Discharges Associated with Construction and Land Disturbance Activity.

Deliverables/Actions Required:
The TMDL-related requirements in this Order are based on the TMDL Implementation Plan. To implement the roads and stream crossings allocation, the TMDL Implementation Plan establishes a performance standard for roads as follows: road-related sediment delivery to channels should be ≤ 500 cubic yards per mile per 20 year period. The TMDL Implementation Plan also calls on entities responsible for paved roads to conduct a survey of stream-crossings associated with paved public roadways and develop a prioritized implementation plan for repair and/or replacement of high priority crossings/culverts to reduce road related erosion and protect stream-riparian habitat conditions. Napa County was timely in submitting an implementation plan by October 2014.

Attainment of water quality objectives will be evaluated at the confluence of Napa River with Soda Creek, which includes the downstream boundary of freshwater habitat for salmon and steelhead. Attainment of the water quality objectives will be evaluated over a 5-to-10-year averaging period.

Sonoma Creek Sediment TMDL
The Sonoma Creek Sediment TMDL includes a wasteload allocation that applies to storm water runoff discharges from stream crossings and public and private roads (paved and unpaved) within the watershed that are not otherwise covered by a Phase 1 NPDES MS4 permit issued to the County and/or City of Sonoma.

The Sonoma County Water Agency has been a voluntary participant with proactive storm water control efforts, including enrollment under the previous 2003 Small MS4 permit (Order 2003-0005-DWQ). The Sonoma County Water Agency owns and operates approximately 2,000 linear feet of stream channel within the Sonoma Creek watershed. Therefore, the Agency is subject to the TMDL, as expressed by the requirements in Attachment G.

Phase II Entities:
The Sonoma Creek Sediment TMDL identifies urban storm water runoff from Phase II entities, State highways, and industrial and construction storm water discharges, as a source of

impairment. The TMDL names parties that should implement measures to control and/or prevent sediment discharges associated with urban storm water runoff (hereinafter referred to as Implementing Parties). Attachment G of this Order assigns requirements to the designees identified as Implementing Parties within the TMDL.

Wasteload and Load Allocations:

The Sonoma Creek sediment TMDL assigns a wasteload allocation to municipal storm water and a load allocation for the roads source category. The sediment wasteload allocation is 600 tons/year and applies to storm water runoff discharges from Phase II permittees. The load allocation of 2,100 tons/year of sediment is for the road and stream crossings category and applies to stream crossings and storm water runoff discharges associated with operation of public and private roads (paved and unpaved) within the watershed not otherwise covered by an NPDES storm water permit.

Municipalities share the wasteload allocation with another entity (i.e., Caltrans). Caltrans is responsible for runoff from State highways and associated construction activities. Discharges from State highways are regulated by the State Water Board statewide municipal storm water permit issued to Caltrans; discharges of storm water from construction activities are regulated by the State Water Board Statewide Storm Water Permit for Discharges Associated with Construction and Land Disturbance Activity.

Deliverables/Actions Required:

The TMDL-related requirements in this Order are based on the TMDL Implementation Plan. To implement the roads and stream crossings allocation, the TMDL Implementation Plan establishes a performance standard for the design, construction, and maintenance of rural roads to minimize road-related sediment delivery to streams. The Implementation Plan also requires entities responsible for paved roads, such as the City and County of Sonoma, to: (1) adopt and implement best management practices for maintenance of unimproved (dirt/gravel) roads, (2) conduct a survey of stream-crossings associated with paved public roadways, (3) develop a prioritized implementation plan for repair and/or replacement of high priority crossings/culverts to reduce road related erosion, and (4) protect stream-riparian habitat conditions.

TMDL compliance, and water body attainment with the sediment water quality objectives, will be evaluated at the limit of tidal influence in the Sonoma Creek watershed, which approximates the downstream boundary of freshwater habitat for steelhead. Sonoma Creek has several tributaries that join the main stem below the tidal limit; therefore, several locations will be used to evaluate water body attainment. These locations are: (1) the main stem Sonoma Creek immediately downstream of the Fowler/Carriger Creek confluence, and (2) the freshwater portions (above tidal influence) of Schell, Ramos, Carneros, and Merazo Creeks. Attainment of the sediment water quality objectives will be evaluated over a 5-to-10-year averaging period.

This Order does not directly require the preparation and implementation of Storm Water Management Plans as required in the previous 2003 Storm Water Permit (Order 2003-0005-DWQ). However, the specific implementation actions for attenuation of peak flows and durations from new and redevelopment projects that were proposed by Permittees in the Storm Water Management Plans approved under the previous 2003 Storm Water Permit are incorporated herein by reference. The municipalities identified in this TMDL section shall continue to implement those specific actions to attenuate peak flows and durations from new

and redevelopment projects as stated in Attachment G. Municipalities may propose amendments to those actions by submitting an updated proposal for attenuation of peak flows and durations to the San Francisco Bay Regional Water Board.

Napa River Pathogens TMDL

The Napa River Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The San Francisco Water Board has determined that the Cities of American Canyon, Calistoga, St. Helena and Napa, the Town of Yountville and the County of Napa, Traditional Small MS4s, are sources of "municipal runoff" subject to this Order and are responsible for implementing the requirements of this TMDL.

Load Allocations:

The Napa River pathogens TMDL assigns a load allocation to municipal storm water as follows:

[All are in units of CFU per 100 milliliters]

E.coli Geometric Mean	*E.coli* 90th percentile	Fecal coliform Geometric Mean	Fecal coliform 90th percentile	Total coliform Median	Total coliform Single Sample Max
<113	<368	<180	<360	<216	9,000

These allocations are applicable year-round and apply to any sources (existing or future) subject to regulation by NPDES permit.

Deliverables/Actions Required:

The TMDL-related requirements in this Order are derived from the TMDL Implementation Plan that was adopted with the TMDL. The Implementation Plan for the pathogen TMDL requires parties responsible for municipal runoff (i.e., Napa County and municipalities including the City of Napa, Town of Yountville, City of St. Helena, City of Calistoga, and City of American Canyon) to comply with storm water management plans previously developed. The municipalities' management plans must be updated and/or amended as necessary to include actions that will lead to compliance with the requirements of this Order. The management plans must address:(1) public participation and outreach, (2) pet waste management, (3) illicit sewage discharge detection and elimination to reduce and eliminate fecal coliform discharges to Sonoma Creek, and (4) pollution prevention strategies. The Implementation Plan also requires these municipalities to participate in evaluation of E. coli concentration trends in the Napa River and its tributaries and to report annually on water quality monitoring results and progress made on implementation of human and animal runoff reduction measures. The implementation actions are expected to build on existing programs. The Permittee must report on its implementation actions in the Annual Report.

Sonoma Creek Pathogens TMDL

The Sonoma Creek Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

The Sonoma County Water Agency has been a voluntary participant with early storm water control efforts, including enrollment under the previous Small MS4 permit (Order 2003-0005-DWQ). The Sonoma County Water Agency owns and operates approximately 2,000 linear feet of stream channel within its service area. The Agency is also enrolled under this Order and, as such, is subject to the TMDL, expressed as requirements in Attachment G.

Phase II Entities:
The San Francisco Water Board has determined that the City of Sonoma, the County of Sonoma, and the Sonoma County Water Agency, Traditional Small MS4 permittees, are sources of "municipal runoff" subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations:
The Sonoma Creek pathogens TMDL assigns a wasteload allocation to municipal storm water as follows:

[Units: CFU/100 milliliters]

E.coli Geometric Mean	*E.coli* 90th percentile	Fecal coliform Geometric Mean	Fecal coliform 90th percentile	Total coliform Median	Total coliform Single Sample Max
<113	<368	<180	<360	<216	9,000

These allocations are applicable year-round and apply to any sources (existing or future) subject to regulation by NPDES permit.

Deliverables/Actions Required:
The TMDL-related requirements in this Order are derived from the TMDL Implementation Plan that was adopted with the TMDL. The Implementation Plan for the pathogen TMDL requires parties responsible for municipal runoff (i.e., City and County of Sonoma) to comply with storm water management plans previously developed. The municipalities' management plans must be updated and/or amended as necessary to include actions that will lead to compliance with the requirements of this Order. The management plans must address: (1) public participation and outreach, (2) pet waste management, (3) illicit sewage discharge detection and elimination to reduce and eliminate fecal coliform discharges to Sonoma Creek, and (4) pollution prevention strategies. The Implementation Plan also requires the City and County of Sonoma to participate in evaluation of E. coli concentration trends in Sonoma Creek and its tributaries and to report annually on water quality monitoring results and progress made on implementation of human and animal runoff reduction measures. The implementation actions are expected to build on existing programs. The Permittee must report on its implementation actions in the Annual Report.

For the Sonoma County Water Agency, the TMDL implementation requirements of this Order are incorporated by reference to the Storm Water Management Plan approved under the previous 2003 Storm Water Permit (Order 2003-0005-DWQ). The Sonoma County Water Agency must comply with the compliance dates established in its previously approved Storm Water Management Plans.

Tomales Bay Pathogens TMDL

The Tomales Bay Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The San Francisco Water Board has determined that the County of Marin is a source of municipal runoff subject to this Order and that the County is responsible for implementing the requirements of this TMDL.

Wasteload Allocations:

The Tomales Bay Pathogens TMDL assigns a wasteload allocation to municipal storm water as follows:

Note a: These allocations are applicable year-round and apply to any sources (existing or future) subject to regulation by NPDES permit.

Note b: Based on a minimum of five consecutive samples equally spaced over a 30-day period.

Note c: No more than 10% of total samples during any 30-day period may exceed this number.

Fecal Coliform [Note a] (Most Probable Number per 100 milliliters)

For Direct Discharges to Tomales Bay

Median [Note b]: <14

90th percentile [Note c]: <43

For Discharges to Major Tomales Bay Tributaries

Log Mean [Note b]: <200

Deliverables/Actions Required:

The TMDL-related requirements in this Order are derived from the TMDL Implementation Plan that was adopted with the TMDL. The Implementation Plan for the Pathogen TMDL requires parties responsible for municipal runoff (i.e., Marin County) to comply with storm water management plans previously developed. The municipalities' management plans must be updated and/or amended as necessary to include actions that will lead to compliance with the requirements of this Order. The management plans must address:(1) public participation and outreach, (2) pet waste management, (3) illicit sewage discharge detection and elimination to reduce and eliminate fecal coliform discharges to Tomales Bay and its tributaries including Olema, Lagunitas, and Walker Creeks, and (4) pollution prevention strategies. The Implementation Plan also requires these municipalities to participate in evaluation of E. coli concentration trends in Tomales Bay and its tributaries and to report annually on water quality monitoring results and progress made on implementation of human and animal runoff reduction measures. The Implementation Plan anticipates that dischargers (including Marin County) and stakeholders, in collaboration with the Water Board will conduct water quality monitoring to evaluate fecal coliform concentration trends in Tomales Bay and its tributaries.

The implementation actions are expected to build on existing local storm water management programs and ongoing efforts to reduce pathogen loads to Tomales Bay and its tributaries. The Permittee must report on its implementation actions in the Annual Report.

Richardson Bay Pathogens TMDL

The Richardson Bay Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The San Francisco Water Board has determined that the Cities of Belvedere, Mill Valley, Sausalito, Tiburon and the County of Marin, Traditional Small MS4s, are a source of "municipal runoff" subject to this TMDL and must comply with the requirements of the Richardson Bay Pathogens TMDL in this Order.

Wasteload Allocations:

The Richardson Bay Pathogens TMDL assigns a wasteload allocation to municipal storm water as follows:

Note a: These allocations are applicable year-round.
Note b: Based on a minimum of five consecutive samples equally spaced over a 30-day period.
Note c: No more than 10% of total samples during any 30-day period may exceed this number.

Fecal Coliform note a, (Most Probable Number per 100 milliliters)

Median note b: <14

90th percentile note c: <43

Deliverables/Actions Required:

The requirements in this Order are derived from the TMDL Implementation Plan that was adopted with the TMDL. The Implementation Plan for the pathogen TMDL requires parties responsible for municipal runoff (i.e., Marin County, City of Mill Valley, City of Tiburon, City of Belvedere, and City of Sausalito) to comply with storm water management plans previously developed. The municipalities' management plans must be updated and/or amended as necessary, to include actions that will lead to compliance with the requirements of this Order. The management plans must address: (1) public participation and outreach, (2) pet waste management, (3) illicit sewage discharge detection and elimination to reduce and eliminate fecal coliform discharges to Sonoma Creek, and (4) pollution prevention strategies. The Implementation Plan also requires these parties responsible for municipal runoff to report annually on progress made on implementation of human and animal runoff reduction measures.

The implementation actions are expected to build on existing local storm water management programs. The Permittee must report on its implementation actions in the Annual Report.

Urban Creeks Diazinon and Pesticide Toxicity TMDL

The Urban Creeks Diazinon and Pesticide TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below. This provision implements requirements of the TMDL for Diazinon and pesticide-related toxicity for Urban Creeks in the San Francisco Bay Region. Pesticides of concern include: organophosphorus pesticides (chlorpyrifos, diazinon, and malathion); pyrethroids (bifenthrin, cyfluthrin, beta-cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin, and tralomethrin); carbamates (e.g., carbaryl); and fipronil.

Phase II Entities:
The San Francisco Water Board has determined that the following municipalities are a source of "urban runoff" subject to this TMDL and must comply with the TMDL-related requirements of this Order: (1) the Cities of Belvedere, Larkspur, Mill Valley, Novato, Petaluma, San Rafael, Sausalito, and Sonoma, (2) the Towns of Corte Madera, Fairfax, Ross, San Anselmo, and Tiburon, and (3) the Counties of Marin and Sonoma, Traditional Small MS4 permittees.

Wasteload Allocations:

Diazinon: 100 nanograms/liter (ng/l) (one-hour average)
Toxicity: 1.0 Acute Toxicity Unit (TUa) and 1.0 Chronic Toxicity Unit (TUc)

Deliverables/Actions Required:
The requirements in this Order are derived from the TMDL Implementation Plan that was adopted with the TMDL. The Implementation Plan for the Urban Creeks and Diazinon and Pesticide Toxicity TMDL requires parties responsible for municipal runoff (i.e., Marin County, City of Belvedere, Town of Corte Madera, Town of Fairfax, City of Larkspur, City of Mill Valley, City of Novato, Town of Ross, Town of San Anselmo, City of San Rafael, City of Sausalito, Town of Tiburon, County of Sonoma, City of Sonoma, and City of Petaluma) to adopt an Integrated Pest Management Policy (IPM) or ordinance, as the basis of a Pesticide-Related Toxicity Program. Implementation actions of the Pesticide-Related Toxicity Program must include: a) training of all municipal employees who use or apply pesticides in the IPM practices and policy/ordinance, b) requiring contractors to implement IPM, c) keeping County Agricultural Commissioners informed of water quality issues related to pesticides, d) conducting outreach to residents and pest control applicators on less toxic methods for pest control, e) keeping records on pesticide use, and f) monitoring water and sediment for pesticides and associated toxicity in urban creeks via an individual or regional monitoring program.

The term "integrated pest management," as used for the purpose of this Order, refers to a process that includes setting action thresholds, monitoring and identifying pests, preventing pests, and controlling pests when necessary. Integrated pest management meets the following conditions:

- Pest control practices that focus on long-term pest prevention through a combination of techniques, such as biological control, habitat manipulation, and modification of cultural practices;
- Pesticides are used in response to monitoring indicating that pesticides are needed; Pesticide applications with the goal of removing only the target pest; and
- Pesticides are selected to minimize risks to human health, beneficial and non-target organisms, and the environment, including risks to aquatic habitats.

The term "less toxic pest control," as used for the purpose of this Order, refers to the use of pest control strategies selected to minimize the potential for pesticide-related toxicity in water and sediment.

Permittees are required to reduce discharges of pollutants, including pesticides, to the maximum extent practicable as required by this Order.

For All TMDLs Requiring Wasteload Allocation Attainment Programs

For TMDLs that identify municipal storm water as a contributor to water body impairment, MS4s must reduce their wasteload discharges in accordance with TMDLs. The Central Coast Regional Water Board requires MS4s to develop Wasteload Allocation Attainment Programs to achieve compliance with the TMDL. The TMDLs set forth the expectation that the MS4s achieve their wasteload allocations within specified timeframes. The Wasteload Allocation Attainment Program approach differs from the typical regulatory requirements applied to municipal storm water (BMP implementation per an iterative process of continual improvement for achieving water quality standards). The MS4s' contribution to the impairment of water bodies, combined with the TMDL expectation that municipalities achieve their wasteload allocations within specified timeframes, necessitates a systematic approach to program implementation as it relates to the discharge of pollutants associated with impairments.

Federal regulations indicate that such an approach is appropriate. The Preamble to the Phase II federal storm water regulations states: "Small MS4 permittees should modify their programs if and when available information indicates that water quality considerations warrant greater attention or prescriptiveness in specific components of the municipal program."[41]

The Central Coast Water Board developed the Wasteload Allocation Attainment Program approach as a means to systematically guide municipalities towards attainment of their wasteload allocations. Without a systematic approach of this type, attainment of wasteload allocations within an identified time period is unlikely. Local municipal storm water management programs typically include basic or minimum BMPs to be implemented to attain water quality objectives. While some BMPs provide effective treatment and management of urban runoff, the connection between BMP effectiveness and attainment of wasteload reductions is unclear. Municipalities have implemented BMPs, yet water body impairment continue due to the inability for BMPs implemented by MS4s to address all the water quality issues identified in TMDLs. The demonstration of BMP implementation in a non-systematic approach failing to address impairments indicates that a systematic approach, as represented by the Wasteload Allocation Attainment Programs, is warranted.

On a broader scale, existing storm water programs often do not provide and/or exhibit the rationale used for BMP selection, or draw connections between those BMPs selected and attainment of wasteload allocations. Without a programmatic level of planning and design, attainment of wasteload allocations within specified timeframes may not take place. The Wasteload Allocation Attainment Program requirements are expressly designed to ensure adequate planning is conducted so that MS4s' TMDL implementation efforts are effective to achieve regulatory compliance. Wasteload Allocation Attainment Program development and implementation include the following items on a TMDL-specific basis: (1) An implementation and assessment strategy; (2) source identification and prioritization; (3) BMP identification, prioritization, implementation (including schedule), analysis[42], and assessment; (4) monitoring

[41] 64 FR 68753

[42] This analysis must be a quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation achieved the MS4's wasteload allocation. This analysis will most likely incorporate modeling efforts.

program development and implementation (including schedule); (5) reporting and evaluation of progress towards complying with wasteload allocations; and (6) coordination with stakeholders. The United States Environmental Protection Agency (U.S. EPA) forwards similar approaches for TMDL implementation in its Draft TMDLs to Storm Water Permits Handbook, which discusses BMP review and selection, establishing linkages between BMP implementation and load reductions, effectiveness assessment, and BMP/outfall/receiving water monitoring.[43]

Ultimately, the Wasteload Allocation Attainment Programs place the responsibility for program development, assessment, improvement, and success on the municipalities since municipal storm water has been identified as contributing to the water quality impairment. The Regional Water Board will collectively assess the progress of the various pollutant sources towards achieving receiving water quality standards as part of its triennial Basin Planning review, but each source must be responsible for assessing its own progress towards achieving its wasteload allocation. The process of planning, assessment, and refinement outlined by the Wasteload Allocation Attainment Programs helps ensure continual improvement and ultimate attainment of water quality standards at impaired receiving waters.

This Order implements TMDLs that have either a past-due or upcoming attainment date. In such instances, the Regional Water Board may determine, based upon past and proposed future actions, that the method for a permittee to attain the wasteload allocations will include further assessment and improvement upon implementation of the Wasteload Allocation Attainment Plans. The Permittee may request a Time Schedule Order from its Regional Water Board to allow additional time for compliance with the TMDL requirements.

View Central Coast TMDLs online at:
http://www.waterboards.ca.gov/centralcoast/water_issues/programs/tmdl/303d_and_tmdl_projects.shtml

Morro Bay and Chorro and Los Osos Creeks Pathogens TMDL

The Morro Bay and Chorro and Los Osos Creeks Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below. Pennington Creek and Warden Creek are tributaries of Los Osos Creek, and are therefore included in the TMDL.

Although several waterbodies were named in the Attachment G of this Order, as adopted by the State Water Board on February 5, 2013, three waterbodies (San Bernardo, San Luisito, and Walters Creeks) have been removed (by this amendment) due to these waterbodies (and their watersheds) being outside the permitting boundary areas of the Phase II entities below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the City of Morro Bay and the County of San Luis Obispo, Traditional Small MS4 permittees, are a source of “urban runoff” subject to this TMDL, and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:

The City of Morro Bay and County of San Luis Obispo are assigned the following wasteload allocations:

[43] U.S. EPA. 2008. Draft TMDLs to Stormwater Permits Handbook. Chapters 5 and 6.

For discharges to Los Osos Creek, Chorro Creek, and their tributaries:

1) The fecal coliform geometric mean concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed 200 Most Probable Number/100 milliliters, and

2) The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number/100 milliliters.

For discharges to Morro Bay:

1) The fecal coliform geometric mean concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed 14 Most Probable Number/100 milliliters, and

2) The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 43 Most Probable Number/100 milliliters.[44]

Deliverables/Actions Required:

The numeric targets approved in the TMDL are expressed in terms of receiving water indicators, e.g. fecal coliform density measurements. Compliance with this TMDL is achieved through development and implementation of a Wasteload Allocation Attainment Program, per the requirements in Attachment G of this Order. By February 5, 2014 the City of Morro Bay and County of San Luis Obispo were required to develop, submit, and begin implementation of a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. Therefore, effective immediately, the MS4 shall implement the Wasteload Allocation Attainment Program.

The TMDL specifies that all wasteload allocations must be achieved by November 19, 2013. Since the deadline is past, the wasteload allocations are effective immediately. The Permittee may request a Time Schedule Order from its Regional Water Board to allow additional time for compliance with the TMDL requirements.

Watsonville Slough Pathogens TMDL

The Watsonville Slough Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the City of Watsonville and the County of Santa Cruz, Traditional Small MS4 permittees, are a source of “urban storm water” subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:

The City of Watsonville and the County of Santa Cruz are assigned the following concentration-based wasteload allocations:

[44] For all Central Coast Water Board fecal indicator bacteria and pathogens TMDLs, E. coli concentrations may be used as a surrogate for fecal coliform concentrations.

1) The fecal coliform log mean concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed 200 Most Probable Number/100 milliliters, and
2) The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number/100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The City of Watsonville is assigned the above wasteload allocations in the following water bodies: Watsonville, Struve, Harkins, Gallighan and Hanson Sloughs.

The County of Santa Cruz is assigned the above wasteload allocation in the following water bodies: Watsonville, Struve and Harkins Sloughs.

Deliverables/Actions Required:
Compliance with this TMDL is achieved through development and implementation of a Wasteload Allocation Attainment Program, as required in Attachment G of this Order.

The TMDL specifies that all allocation must be achieved by November 20, 2016. The Permittee may request a Time Schedule Order from its Regional Water Board to allow additional time for compliance with the TMDL requirements.

Pajaro River, San Benito River, Llagas Creek, Tequesquita Slough, San Juan Creek, Carnadero/Uvas Creek, Bird Creek, Pescadero Creek, Tres Pinos Creek, Furlong (Jones) Creek, Santa Ana Creek, and Pachecho Creek Fecal Coliform TMDL

The above-named Fecal Coliform TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the Cities of Gilroy, Hollister, Morgan Hill, Watsonville, and the Counties of Monterey, Santa Clara, and Santa Cruz, Traditional MS4 permittees, are a source of “MS4 discharges” subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:
The Cities of Hollister, Morgan Hill, Gilroy and Watsonville and the Counties of Monterey, Santa Clara and Santa Cruz are assigned the following concentration based wasteload allocations:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharges shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The Cities of Hollister, Morgan Hill, Gilroy and Watsonville and the Counties of Santa Cruz, Santa Clara and Monterey are assigned the above wasteload allocations in the following water bodies: Pajaro River, San Benito River, Llagas Creek and Tequesquita Slough.

Deliverables/Actions Required:
Compliance with this TMDL is achieved through development and implementation of a Wasteload Allocation Attainment Program, as required in Attachment G of this Order. The TMDL specifies that all allocations must be achieved by July 12, 2023.

Morro Bay Sediment TMDL
The Morro Bay Sediment TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Although San Bernardo and San Luisito Creeks were named in Attachment G of this Order as adopted by the State Water Board on February 5, 2013, the requirements of this Order are not applicable to these water bodies because the water bodies (and their watersheds) are outside the permit boundary areas of the Phase II entities, below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the County of San Luis Obispo, a Traditional MS4 permittee, is a source of “urban land use” subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:
The numeric targets approved in the TMDL are expressed in terms of receiving water indicators, e.g. pool residual volume, median diameter of spawning gravel, etc. The TMDL also expressed the sediment assimilative capacity and allocations required to achieve the numeric targets. The allocations require a 50% reduction of current loading (estimated in 2003) to achieve the numeric targets. The wasteload allocations assigned to the responsible parties in this permit represent a 50% reduction from 2003 loading estimates.

The County of San Luis Obispo is assigned a wasteload allocation of 5,137 tons/year of sediment. The aggregated sediment discharge from all storm water outfalls into Morro Bay, or any tributary that has the potential to discharge sediment to Morro Bay, shall not exceed the allocation.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The County of San Luis Obispo is assigned allocations in the following water bodies: Morro Bay, Los Osos Creek, Chorro Creek, Dairy Creek, Pennington Creek, and Warden Creek.

Deliverables/Actions Required:
Compliance with this TMDL is achieved through development and implementation of a Wasteload Allocation Attainment Program, laid out in detail in Attachment G of this Order.

The allocations shall be achieved by December 3, 2053.

San Lorenzo River Sediment TMDL
The San Lorenzo River Sediment TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the Cities of Santa Cruz, Scotts Valley and the County of Santa Cruz, Traditional MS4 permittees, are a source of "Other Urban and Rural Land" and "Public and Private Roads" subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:
The numeric targets approved in the TMDL are expressed in terms of receiving water indicators, e.g. pool residual volume, median diameter of spawning gravel, etc. The TMDL also expressed the sediment assimilative capacity and allocations required to achieve the numeric targets. The allocations require reductions of 24-27 percent of current sediment loading (estimated in 2002) to achieve the numeric targets. The wasteload allocations assigned to the responsible parties in this permit represent a 24-27 percent reduction from the 2003 loading estimates.

The County of Santa Cruz, City of Santa Cruz, and City of Scotts Valley are assigned the following wasteload allocations:

- The sediment discharge loading from public roads to the San Lorenzo River shall be reduced by 27%,
- The sediment discharge loading from public roads to Lompico Creek shall be reduced by 24%,
- The sediment discharge loading from public roads to Carbonera Creek shall be reduced by 27%,
- The sediment discharge loading from public roads to Shingle Mill Creek shall be reduced by 27%.

Deliverables/Actions Required:
Compliance with this TMDL is achieved through development and implementation of a Wasteload Allocation Attainment Program as required in Attachment G of this Order. The allocations shall be achieved by December 18, 2028.

Pajaro River (including Llagas Creek, Rider Creek and San Benito River) Sediment TMDL

The Pajaro River (including Llagas Creek, Rider Creek and San Benito River) Sediment TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below. The TMDL names "urban lands within NPDES Phase II urban boundaries" as a Land Use Source Category of sediment loading to the Corralitos Creek subbasin and assigns a wasteload allocation to this category.

Phase II Entities:
The Central Coast Water Board has determined that the Cities of Gilroy, Hollister, Morgan Hill and Watsonville, Traditional MS4 permittees, are sources of "municipal runoff" and must comply with the TMDL-related requirements of this Order.

The Santa Cruz County Fairgrounds is located within the Corralitos Creek subbasin (subbasin number 4) and constitutes "urban lands within NPDES Phase II urban boundaries." The Central Coast Water Board has additionally determined that the Santa Cruz County

Fairgrounds, a Non-Traditional MS4 permittee, must incorporate provisions for complying with the wasteload allocations described in the TMDL as part of its compliance with this Order.

Wasteload Allocations:
The numeric targets approved in the TMDL are expressed in terms of receiving water indicators, e.g. pool residual volume, median diameter of spawning gravel, etc. The TMDL also provides the sediment assimilative capacity and allocations required to achieve the numeric targets. The allocations require reductions of 90 percent from current sediment loading (estimated in 2005) to achieve the numeric targets. The wasteload allocations assigned to the responsible parties in this permit represent a 90 percent reduction of the 2005 loading estimate.

The City of Morgan Hill, City of Gilroy, City of Hollister, Santa Cruz County Fairgrounds, and the City of Watsonville shall not discharge sediment to the following water bodies in excess of the values shown:

Major Subwatershed	Metric tons per year
Tres Pinos	1
San Benito River	100
Llagas Creek	787
Uvas Creek	139
Upper Pajaro River	161
Corralitos (including Rider Creek)	284
Mouth of Pajaro River	191

Deliverables/Actions Required:
The Central Coast Water Board has determined that compliance with Phase II MS4 permit requirements tailored to focus on reduction of sediment discharges to the affected waterbodies is sufficient to achieve the wasteload allocations. The allocations shall be achieved by November 27, 2051.

San Luis Obispo Creek Pathogens TMDL
The San Luis Obispo Creek Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the City of San Luis Obispo and the County of San Luis Obispo, Traditional MS4 permittees, and the California Polytechnic (Cal Poly) State University, a Non-Traditional MS4 permittee, are a source of “Urban” and “Human” sources subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:
The City of San Luis Obispo, the County of San Luis Obispo, and the Cal Poly State University-San Luis Obispo, are assigned the following concentration-based wasteload allocation for fecal coliform:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The City of San Luis Obispo is assigned these allocations in San Luis Obispo Creek and Stenner Creek.

The County of San Luis Obispo is assigned these allocations in the San Luis Obispo Creek.

Cal Poly State University-San Luis Obispo is assigned these allocations in Stenner Creek and Brizziola Creek.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

Deliverables/Actions Required:
Compliance with this TMDL is achieved through development and implementation of a Wasteload Allocation Attainment Program per requirements in Attachment G of this Order. The TMDL specifies that all allocations must be achieved no later than July 25, 2015. The allocations are therefore effective immediately. A permittee with a past deadline may request a Time Schedule Order from the applicable Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the permittee to comply with the TMDL requirements that will supersede the deadlines referenced in this Order.

San Luis Obispo Creek Nitrate-Nitrogen TMDL
The San Luis Obispo Creek Nitrate-Nitrogen TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the City of San Luis Obispo and the County of San Luis Obispo, Traditional MS4 permittees, and Cal Poly State University, a Non-Traditional MS4 permittee, are a source of "Residential areas" subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:
Urban storm water from the City of San Luis Obispo, County of San Luis Obispo, and Cal Poly State University shall not cause an increase in the receiving water nitrate concentration greater than the increase in nitrate concentration resulting from their discharge in 2006 (when the TMDL became effective). In 2006, the nitrate concentration of storm water discharge was 0.3 mg/L-N.

The City of San Luis Obispo, County of San Luis Obispo, and Cal Poly State University were achieving their allocations at the time the TMDL became effective; these municipalities shall implement measures to assure continued attainment of their allocations.

Deliverables/Actions Required:
The Central Coast Water Board has determined that compliance with the requirements of this Phase II MS4 permit, tailored to focus on reduction of nutrient discharges to the affected water bodies, is sufficient to achieve the wasteload allocations.

The TMDL specifies that the target date to achieve the TMDL is during or before year 2012. The allocations are therefore effective immediately. A permittee is not in need of a Time Schedule Order from the applicable Regional Water Board since these permittees were achieving their allocations at the time the TMDL became effective, and are expected to continue implementing measures to assure continued attainment of their allocations.

Corralitos and Salsipuedes Creeks Fecal Coliform TMDL
The Corralitos and Salsipuedes Creeks Fecal Coliform TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below. The TMDL also names "Owners of private sewer laterals (Private sewer laterals connected to municipal sanitary sewer collection system)" as a responsible party and assigns a wasteload allocation.

Phase II Entities:
The Central Coast Regional Water Board has determined that the City of Watsonville and the County of Santa Cruz, Traditional MS4 permittees, and the Santa Cruz County Fairgrounds, a Non-Traditional MS4 permittee, are a source of "Storm drain discharges" subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:
The County of Santa Cruz and the City of Watsonville, and the Santa Cruz County Fairgrounds are assigned the following concentration-based wasteload allocation:

> The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and
>
> The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The County of Santa Cruz and the City of Watsonville and the Santa Cruz County Fairgrounds, are assigned the above allocations in the following water bodies: Corralitos Creek and Salsipuedes Creek.

Deliverables/Actions Required:
Compliance with this TMDL is dependent on developing and implementing a Wasteload Allocation Attainment Program, discussed in detail in Attachment G of this Order. All allocations shall be achieved no later than September 8, 2024.

Lower Salinas River Watershed Fecal Coliform TMDL
The Lower Salinas River Watershed Fecal Coliform TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the County of Monterey, a Traditional MS4 permittee, is a source of "Discharges from MS4s" subject to this TMDL and must comply with the TMDL-related requirements of this Order.

The County of Monterey is assigned allocations in the following water bodies:

The Lower Salinas River, the Old Salinas River Estuary, the Tembladero Slough, the Salinas Reclamation Canal, the Alisal Creek, the Gabilan Creek, the Salinas River Lagoon (North), and the Santa Rita Creek.

Wasteload Allocations:
The County of Monterey is assigned the following concentration based wasteload allocation for fecal coliform:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

Deliverables/Actions Required:
Compliance with this TMDL is dependent on developing and implementing a Wasteload Allocation Attainment Program per the requirements in Attachment G of this Order. All allocations shall be achieved no later than December 20, 2024.

San Lorenzo River Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek and Lompico Creek Pathogens TMDL

The San Lorenzo River Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek and Lompico Creek Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the Cities of Santa Cruz and Scotts Valley and the County of Santa Cruz, Traditional MS4 permittees, are a source of "Discharges from MS4s" subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations:
The City of Santa Cruz, County of Santa Cruz and the City of Scotts Valley are assigned the following concentration based wasteload allocation for fecal coliform:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The City of Santa Cruz is assigned the above allocations in the San Lorenzo River Estuary, the San Lorenzo River, the Branciforte Creek, and the Carbonera Creek.

The County of Santa Cruz is assigned the above allocations in the San Lorenzo River, the Branciforte Creek, the Lompico Creek, and the Carbonera Creek,

The City of Scotts Valley is assigned above allocations in the Camp Evers Creek and the Carbonera Creek.

Deliverables/Actions Required:
Compliance with this TMDL is dependent on developing and implementing a Wasteload Allocation Attainment Program as required in detail in Attachment G of this Order. All allocations shall be achieved no later than June 8, 2024.

Soquel Lagoon, Soquel Creek and Noble Gulch Pathogens TMDL
The Soquel Lagoon, Soquel Creek and Noble Gulch Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the City of Capitola and the County of Santa Cruz, Traditional MS4 permittees, are a source of “Discharges from MS4s” subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations:
The City of Capitola and the County of Santa Cruz are assigned the following concentration-based wasteload allocation for fecal coliform:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The City of Capitola is assigned the above allocations in Soquel Lagoon.

The County of Santa Cruz is assigned the above allocations in Soquel Creek and Noble Gulch.

Deliverables/Actions Required:
Compliance with this TMDL is dependent on developing and implementing a Wasteload Allocation Attainment Program per the requirements in Attachment G of this Order. All allocations shall be achieved by September 15, 2023.

Aptos Creek, Valencia Creek and Trout Gulch Pathogens TMDL

The Aptos Creek, Valencia Creek and Trout Gulch Pathogens TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Coast Regional Water Board has determined that the County of Santa Cruz, a Traditional MS4 permittee, is a source of "Discharges from MS4s" subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:

The County of Santa Cruz is assigned the following concentration based wasteload allocation for fecal coliform:

The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The County of Santa Cruz is assigned the above allocations in Aptos Creek, Valencia Creek, and Trout Gulch.

Deliverables/Actions Required:

Compliance with this TMDL is dependent on developing and implementing a Wasteload Allocation Attainment Program per the requirements in Attachment G of this Order. All allocations shall be achieved October 29, 2023.

Santa Maria River Watershed Fecal Indicator Bacteria TMDL

The Santa Maria River Watershed Fecal Indicator Bacteria TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Cities of Guadalupe and Santa Maria and the Counties of Santa Barbara and San Luis Obispo, Traditional MS4 permittees, and the Santa Maria Fairpark, a Non-Traditional MS4 permittee, are sources of "Discharges from MS4s" subject to this TMDL and must comply with the TMDL-related requirements in this Order. The Santa Maria Fairpark is assigned wasteload allocation in the Main Street Canal; however the Central Coast Water Board has determined that the Santa Maria Fairpark's BMPs and monitoring effectively implement a Wasteload Allocation Attainment Program; therefore no further TMDL-related requirements in this Order are needed for the Santa Maria Fairpark.

Wasteload Allocations:

The Central Coast Water Board has determined that the City of Santa Maria, the City of Guadalupe, the County of Santa Barbara, and the County of San Luis Obispo are assigned the following concentration-based wasteload allocation:

(1) The fecal coliform concentration in the receiving water (based on a minimum of five samples) for any consecutive 30-day period shall not exceed a log mean of 200 Most Probable Number per 100 milliliters, and

The fecal coliform concentration (of each individual sample) of more than ten percent of the total samples collected during the same 30-day period, as above, shall not exceed 400 Most Probable Number per 100 milliliters.

(2) Based on a statistically sufficient number of samples (generally not less than five samples equally spaced over a 30-day period), the geometric mean of E. coli densities shall not exceed 126 Most Probable Number per 100 milliliters, and no sample shall exceed a one-sided confidence limit (C.L.) for contact recreation (90% C.L.) = 409 Most Probable Number per 100 milliliters.

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The City of Santa Maria is assigned the above wasteload allocations in the following water bodies: the Santa Maria River, the Main Street Canal, the Blosser Channel, and the Bradley Channel.

The County of Santa Barbara is assigned the above wasteload allocations in Orcutt Creek.

The County of San Luis Obispo is assigned the above wasteload allocations in Nipomo Creek.

The City of Guadalupe is assigned the above wasteload allocations in the Santa Maria River and Estuary.

Deliverables/Actions Required:
Compliance with this TMDL is dependent on the development and implementation of a Wasteload Allocation Attainment Program, or other integrated plan, per the requirements in Attachment G of this Order.

These wasteload allocations are receiving water allocations that must be attained by February 21, 2028 in accordance with a Wasteload Allocation Attainment Plan or other integrated plan. All wasteload allocations shall be achieved by February 21, 2028.

Lower Santa Maria River Watershed and Tributaries to Oso Flaco Lake Nitrogen Compounds and Orthophosphate TMDL

The Lower Santa Maria River Watershed and Tributaries to Oso Flaco Lake Nitrogen Compounds and Orthophosphate TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the Cities of Guadalupe and Santa Maria, and the Counties of Santa Barbara and San Luis Obispo, Traditional MS4 permittees, are sources of “Urban runoff” subject to this TMDL and must comply with the TMDL-related requirements of this TMDL.

Wasteload Allocations:
The City of Santa Maria, County of Santa Barbara, County of San Luis Obispo, and City of Guadalupe are assigned the following concentration-based wasteload allocations:

(Continued on Next Page)

Lower Santa Maria River Watershed Final Wasteload Allocations (WLAs) Table

Waterbody the Responsible Party is Discharging to 1, 2	Party Responsible for Allocation & NPDES/WDR number	Receiving Water Nitrate as N WLA (mg/L)	Receiving Water Orthophosphate as P WLA (mg/L)	Receiving Water Unionized Ammonia as N WLA (mg/L)
Santa Maria River (upstream from Highway 1), Blosser Channel, Bradley Channel, Main Street Canal, North Main Street Channel	City of Santa Maria (Storm drain discharges to MS4s) NPDES No. CAS000004 City of Guadalupe (Storm drain discharges to MS4s) (NPDES No. CAS000004)	Allocation-4 (see descriptions of allocations at bottom of this table)	Not Applicable	Allocation-3
Santa Maria River (downstream from Highway 1)	City of Guadalupe (Storm drain discharges to MS4s) (NPDES No. CAS000004)	Allocation-1	Allocation-2	Allocation-3
Nipomo Creek	County of San Luis Obispo (Storm drain discharges to MS4s) (NPDES No. CAS000004)	Allocation-4	Not Applicable	Allocation-3
Orcutt Creek	County of Santa Barbara (Storm drain discharges to MS4s) (NPDES No. CAS000004)	Allocation-1	Allocation-2	Allocation-3

Lower Santa Maria River Watershed Description of Allocations Table

Note A: Federal and State anti-degradation requirements apply to all wasteload and load allocations.

Note B: Achievement of final wasteload and load allocations to be determined on the basis of the number of measured exceedances and/or other criteria set forth in Section 4 of the *Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List* (Listing Policy - State Water Resources Control Board, Resolution No. 2004-0063,

adopted September 2004) or as consistent with any relevant revisions of the Listing Policy promulgated in the future.

Allocation [Note A]	**Compound**	**Concentration (mg/L)** [Note B]
Allocation 1	Nitrate as N	Dry Season (May 1 – Oct. 31): **4.3** Wet Season (Nov 1 – Apr 30): **8.0**
Allocation 2	Orthophosphate as P	Dry Season (May 1 – Oct 31): **0.19** Wet Season (Nov 1 – Apr 30): **0.3**
Allocation 3	Unionized Ammonia as N	Year-round: **0.025**
Allocation 4	Nitrate as N	Year-round: **10**

1 Responsible parties shall meet allocations in all receiving surface waterbodies of the responsible parties' discharges.
2 All reaches and tributaries unless otherwise noted.

Lower Santa Maria River Watershed Interim Wasteload Allocations (WLAs) Table

* Responsible parties shall meet allocations in all receiving surface waterbodies of the responsible parties' discharges.

Waterbody the Responsible Party is Discharging to	**Party Responsible for Allocation (Source)**	**First Interim WLA**	**Second Interim WLA**
All waterbodies the responsible party is assigned wasteload allocations (WLAs) in Table IX R-1	City of Santa Maria (Storm drain discharges to MS4s) Storm Water Permit NPDES No. CA00049981 City of Guadalupe (Storm drain discharges to MS4s) (NPDES Permit Pending) County of San Luis Obispo (Storm drain discharges to MS4s) (NPDES No. CAS000004) County of Santa Barbara (Storm drain discharges to MS4s) (NPDES No. CAS000004)	Achieve MUN standard-based and Unionized Ammonia objective-based allocations: Allocation-3 Allocation-4 By May 22, 2026	Achieve Wet Season (Nov. 1 to Apr. 30) Biostimulatory target-based TMDL allocations: Allocation-1 Allocation-2 By May 22, 2034

The above wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

The TMDL includes WLAs for Permittees for controllable sources. The TMDL also includes WLAs for non-controllable sources, but are not assigned to Permittees. Therefore, the parties responsible for the allocation to controllable sources are not responsible for the allocation to natural sources. Allocations to non-controllable sources are not included in this Order.

Deliverables/Actions Required:
Compliance with this TMDL is dependent on the development and implementation of a Wasteload Allocation Attainment Program, or other integrated plan, per the requirements in Attachment G of this Order. All wasteload allocations shall be achieved by May 22, 2044.

Lower Salinas River and Reclamation Canal Basin and the Moro Cojo Slough Subwatershed Nitrogen Compounds and Orthophosphate TMDL

The Lower Salinas River and Reclamation Canal Basin and the Moro Cojo Slough Subwatershed Nitrogen Compounds and Orthophosphate TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Coast Regional Water Board has determined that the County of Monterey, a Traditional MS4 permittee, is a source of "Urban runoff" subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations:
The County of Monterey is assigned the following interim and final wasteload allocations:

County of Monterey Final Wasteload Allocations (WLAs) Table

Note A: Lower Salinas River: all reaches from downstream of Spreckels (downstream of monitoring site 309SSP) to the confluence with the Pacific Ocean including Salinas River Lagoon (North)
Note B: Santa Rita Creek: all reaches and tributaries, from the confluence with the Reclamation Canal to the uppermost reach of the waterbody.
Note C: Reclamation Canal: all reaches and tributaries, which includes from confluence with Tembladero Slough, to upstream confluence with Alisal Creek.
Note D: Gabilan Creek: all reaches and tributaries downstream of Crazy Horse Rd.
Note E: Natividad Creek: all reaches and tributaries, from the confluence with Carr Lake to the uppermost reach of the waterbody.
Note F: Alisal Creek: all reaches and tributaries from the confluence with the Reclamation Canal to the uppermost reach of the waterbody.

Waterbody the responsible party is discharging to	Receiving Water Nitrate as N WLA (mg/L)	Receiving Water Orthophosphate as P WLA (mg/L)	Receiving Water Unionized Ammonia as N WLA (mg/L)
Lower Salinas River downstream of Spreckels, CA Note A	Allocation-1 *(see description of allocations below)*	Allocation-2	Allocation-5

Waterbody the responsible party is discharging to	Receiving Water Nitrate as N WLA (mg/L)	Receiving Water Orthophosphate as P WLA (mg/L)	Receiving Water Unionized Ammonia as N WLA (mg/L)
Santa Rita Creek Note B, Reclamation Canal Note C	Allocation-3	Allocation-4	Allocation-5
Gabilan Creek Note D	Allocation-6	Allocation-2	Allocation-5
Natividad Creek Note E Alisal Creek Note F	Allocation-6	Allocation-2	Allocation-5

County of Monterey Description of Allocations Table

Note A: Federal and state anti-degradation requirements apply to all wasteload and load allocations.

Note B: Achievement of final wasteload and load allocations to be determined on the basis of the number of measured exceedances and/or other criteria set forth in Section 4 of the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (Listing Policy - State Water Resources Control Board, Resolution No. 2004-0063, adopted September 2004), or as consistent with any relevant revisions of the Listing Policy promulgated in the future pursuant to Government Code section 11353.

Allocation Note A	Compound	Concentration (milligrams per liter) Note B
Allocation 1	Nitrate as N	Dry Season (May 1 – Oct 31): 1.4 Wet Season (Nov 1 – Apr 30): 8.0
Allocation 2	Orthophosphate as P	Dry Season (May 1 – Oct 31): 0.07 Wet Season (Nov 1 – Apr 30): 0.3
Allocation 3	Nitrate as N	Dry Season (May 1 – Oct 31): 6.4 Wet Season (Nov 1 – Apr 30): 8.0
Allocation 4	Orthophosphate as P	Dry Season (May 1 – Oct 31): 0.13 Wet Season (Nov 1 – Apr 30): 0.3
Allocation 5	Unionized Ammonia as N	Year-round: 0.025
Allocation 6	Nitrate as N	Dry Season (May 1 – Oct 31): 2.0 Wet Season (Nov 1 – Apr 30): 8.0
Allocation 7	Nitrate as N	Dry Season (May 1 – Oct 31): 3.1 Wet Season (Nov 1 – Apr 30): 8.0
Allocation 8	Total Nitrogen as N	Dry Season (May 1 – Oct 31): 1.7 Wet Season (Nov 1 – Apr 30): 8.0
Allocation 9	Nitrate as N	Year-round: 10

County of Monterey Interim Wasteload Allocations (WLAs) Table

Waterbody	First Interim WLA	Second Interim WLA
All waterbodies given wasteload allocations (WLAs) as identified in Final Wasteload Allocations Table	Achieve MUN standard-based and Unionized Ammonia objective-based allocations: Allocation-5; Allocation-9 12 years after effective date of the TMDL (June 7, 2026)	Achieve Wet Season (Nov. 1 to Apr. 30) Biostimulatory target-based TMDL allocations: Wet Season Allocation/Waterbody combinations as identified in Final Wasteload Allocations Table 20 years after effective date of the TMDL (June 7, 2034)

The County of Monterey shall meet the above wasteload allocations in all the receiving surface waterbodies receiving the County's municipal storm water discharges.

The TMDL includes WLAs for Permittees for controllable sources. The TMDL also includes WLAs for non-controllable sources, but are not assigned to Permittees. Therefore, the parties responsible for the allocation to controllable sources are not responsible for the allocation to natural sources. Allocations to non-controllable sources are not included in this Order.

Deliverables/Actions Required:
Compliance with this TMDL is dependent on the development and implementation of a Wasteload Allocation Attainment Program as required in Attachment G of this Order. All wasteload allocations shall be achieved by May 7, 2044.

Santa Maria River Watershed Toxicity and Pesticides TMDL

Municipalities throughout the state are challenged with controlling pesticides in their urban storm water. Urban pesticide use is regulated by the California Department of Pesticide Regulation (DPR) and U.S. EPA. MS4 permittees have minimal to no authority over commercial and residential pesticide applications. The TMDL-related requirements in Attachment G of this Order reflect this constraint.

Phase II Entities:
The Central Coast Regional Water Board has determined that the Cities of Guadalupe and Santa Maria, and the County of Santa Barbara, Traditional MS4 permittees, are sources of "Urban storm water" subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations:
The City of Santa Maria, County of Santa Barbara, and City of Guadalupe are assigned the following wasteload allocations:

Santa Maria River Watershed Wasteload Allocations Table

Responsible Parties	Source	Allocation
City of Santa Maria — NPDES No. CAS000004 County of Santa Barbara — NPDES No. CAS000004 City of Guadalupe	Urban Storm Water	3, 4 & 5

Allocation-3: Additive Toxicity TMDL for Pyrethroid Pesticides:

Pyrethroid pesticides contribute to additive toxicity in aquatic sediments; The numeric target for additive toxicity for pyrethroid pesticides is:

$$\frac{C\ (Pyrethroid\ 1)}{NLC(Pyrethroid\ 1)} + \frac{C\ (Pyrethroid\ 2)}{NLC\ (Pyrethroid\ 2)} = S;\ where\ S\ \leq 1$$

Where:

C = the concentration of a pesticide measured in sediment.
NLC = the numeric LC50 for each pesticide present (Table 1).
S = the sum; a sum exceeding one (1.0) indicates that beneficial uses may be adversely affected.

The additive toxicity numeric target formula shall be applied when pyrethroid pesticides are present in the sediment.

Table 1: Pyrethroid Sediment LC50s[45]

*Median lethal concentration (LC50) for amphipods (Hyalella azteca) organic carbon normalized concentrations (micrograms per gram OC)

Chemical	LC50 ng/g (ppb)	LC50 µg/g OC*(ppm)
Bifenthrin	12.9	0.52
Cyfluthrin	13.7	1.08
Cypermethrin	14.87	0.38
Esfenvalerate	41.8	1.54
Lambda-Cyhalothrin	5.6	0.45
Permethrin	200.7	10.83

Allocation-4: Aquatic Toxicity TMDLs (refer to Table 2)

Table 2: Standard Aquatic Toxicity Tests

Parameter	Test	Biological Endpoint Assessed
Water Column Toxicity	Water Flea – Ceriodaphnia (6-8 day chronic)	Survival and Reproduction
Sediment Toxicity	Hyalella Azteca (10-day chronic)	Survival

[45] LC50 = a measure of toxicity representing the concentration that will kill 50 percent of the sample population of a test species.

Allocation-5: Organochlorine Pesticide TMDLs (refer to Table 3, Table 4, Table 5)

Table 3: DDT Sediment Chemistry TMDLs

Note A: All reaches of all surface waters in the Santa Maria River watershed, including those listed.
Note B: All values are organic carbon normalized concentrations.
[All values are in units of microgram per kilogram]

Waterbodies Assigned TMDLs Note A	DDD, 4,4-(p,p-DDD)	DDE, 4,4-(p,p-DDE)	DDT, 4,4-(p,p-DDT)	Total DDT
Blosser Channel	9.1	5.5	6.5	10
Bradley Channel	9.1	5.5	6.5	10
Greene Valley Creek	9.1	5.5	6.5	10
Little Oso Flaco Creek	9.1	5.5	6.5	10
Main Street Canal	9.1	5.5	6.5	10
Orcutt Creek	9.1	5.5	6.5	10
Oso Flaco Creek	9.1	5.5	6.5	10
Oso Flaco Lake	9.1	5.5	6.5	10
Santa Maria River	9.1	5.5	6.5	10

Table 4: Santa Maria River Watershed Additional Organochlorine Pesticide Sediment Chemistry TMDLs (all units in micrograms per kilogram)

Note A: All reaches of all surface waters in the Santa Maria River watershed, including those listed.
Note B: All organochlorine pesticides by organic carbon normalized concentrations
Note C: Waterbody is currently achieving the TMDL.

Waterbodies Assigned TMDLs Note A	Chlordane	Dieldrin	Endrin	Toxaphene
Oso Flaco Lake	1.7	0.14	550	20
Santa Maria River	1.7	0.14	550	20
Orcutt Creek	1.7	0.14	550	20

Table 5: Santa Maria River Watershed Fish Tissue TMDLs for Organochlorine Pesticides

*ng/g: i.e., nanograms of pollutant per grams of fish tissue (e.g., a fillet).
(ppb stands for parts per billion)

Waterbodies Assigned TMDLs	Chlordane ng/g* (ppb)	DDTs ng/g* (ppb)	Dieldrin ng/g* (ppb)	Toxaphene ng/g* (ppb)
Oso Flaco Lake	5.6	21		
Oso Flaco Creek	5.6	21		
Santa Maria River	5.6	21	0.46	6.1
Orcutt Creek	5.6	21	0.46	6.1

The wasteload allocations are receiving water allocations, and therefore storm water discharge shall not cause or contribute to exceedance of the allocations as measured in receiving water.

Deliverables/Actions Required:
Central Coast Water Board staff recognizes that attainment of the TMDL wasteload allocations will depend on the effectiveness of statewide pesticide programs and regulations by DPR and U.S. EPA to control pesticides. The statewide program described in the California Pesticide Management Plan for Water Quality, February 1997 (California Pesticide Plan) is an implementation plan of the Management Agency Agreement between DPR and the California Water Boards. The Cities of Guadalupe and Santa Maria, and the County of Santa Barbara should describe in the Wasteload Allocation Attainment Program or integrated plan how they plan to support and engage in the statewide efforts. The Cities of Guadalupe and Santa Maria, and the County of Santa Barbara are encouraged to use mitigation measures developed in the DPR surface water regulations as storm water Best Management Practices in the Wasteload Allocation Attainment Program or integrated plan.

The target date to achieve the TMDLs for pyrethroids is November 1, 2029. This estimate is based on the widespread availability of pyrethroids, including consumer usage, and current limited regulatory oversight. The target date to achieve the TMDLs for organochlorine pesticides (DDT, DDD, DDE, chlordane, eldrin, toxaphene, dieldrin) is November 1, 2044.

LOS ANGELES REGIONAL WATER BOARD TMDLs

The Los Angeles Regional Water Board has adopted two Phase I MS4 permits regulating discharges within the coastal watersheds of Los Angeles County, including 85 municipalities, Los Angeles County, and the Los Angeles Flood Control District (Order No. R4-2012-0175 as amended by State Water Board Order No. 2015-0075 and Order No. R4-2014-0024). Additionally, the Los Angeles Regional Water Board is in the process of reissuing the Phase I permit that regulates municipal storm water discharges within the coastal watersheds of Ventura County including 10 municipalities, Ventura County, and the Ventura County Watershed Protection District.

These Phase I MS4 permits regulate all traditional Small MS4 permittees within the Los Angeles Region with the exception of the City of Avalon, located on Catalina Island. The Phase I MS4 permits contain TMDL-related requirements for applicable Small MS4 permittees. Therefore, with the exception of the City of Avalon, the only permittees in the jurisdiction of the Los Angeles Regional Water Board regulated under this Order are Non-traditional MS4 permittees.

To simplify this Order, TMDLs (and corresponding water bodies) that do not have Non-traditional MS4 permittee within the watershed, were removed from Attachment G. These TMDLs include the Upper Santa Clara River Chloride TMDL, the Santa Clara River Nitrogen Compounds TMDL, the Malibu Creek Bacteria TMDL, the Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Bacteria TMDL, the Santa Clara Reach 3 Chloride TMDL, the Malibu Creek Nutrients TMDL, the Ballona Creek Wetlands TMDL, and the Malibu Creek Trash TMDL.

The Los Angeles Regional Water Board has determined that the stormwater and non-stormwater discharges from MS4 permittees, including those from small MS4 permittees listed in the Los Angeles Regional Water Board TMDLs below, contribute to the impairment of the

water bodies subject to the TMDLs. Therefore, the designated entities listed below (and in Appendix G) are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to one of the Los Angeles Region's Phase I MS4 permits.

The Regional Water Board determined that since these TMDL requirements, with the notable exception of the Avalon Beach TMDL, are new to the non-traditional entities, they should be given time to evaluate their programs and be allowed to make the choice of the two options presented. Therefore, a one-year timeframe was proposed to either: 1) develop and start implementing a plan; or 2) to enter into a cooperative agreement.

Avalon Beach Bacteria TMDL

This Order incorporates the MS4-specific requirements established by Cease and Desist Order R4-2012-0077, which includes implementation requirements and timelines for the City of Avalon to comply with the TMDL established for Avalon Beach.

Phase II Entities:

Through the adoption of Cease and Desist Order R4-2012-0077, the Los Angeles Regional Water Board has determined that MS4 discharges from the City of Avalon, a Traditional MS4, are a source of impairment to surface water bodies in its watershed, and must comply with the following wasteload allocations:

Wasteload Allocations:

The following WLAs are receiving water allocations. Geometric mean values shall be calculated based on a minimum of 5 samples during any 30 day period. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean.

Geometric Mean Limits

Total coliform concentration shall not exceed 1,000/100 ml
Fecal coliform density shall not exceed 200/100 ml
Enterococcus density shall not exceed 35/100 ml

Single Sample Limits

Total coliform density shall not exceed 10,000/100 ml
Fecal coliform density shall not exceed 400/100 ml
Enterococcus density shall not exceed 104/100 ml
Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal to total coliform exceeds 0.1

For the Single Sample Limits, TMDL compliance focuses on the number of days that any single sample exceeds the limits set forth above, based on the time of year. This focus is expressed as Single Sample Allowable Exceedances, shown below.

Single Sample Allowable Exceedances

Summer Dry Weather shall not exceed 0 Allowable Exceedance Days*
Winter Dry Weather shall not exceed 9 Allowable Exceedance Days*

Wet Weather shall not exceed 17 Allowable Exceedance Days*

*= The Allowable Exceedance Day is defined as the number of days (per year) a monitoring location is allowed to exceed any of the single sample targets.

A storm year is defined as the period from November 1 through October 31. The geometric mean limits may not be exceeded.

Deliverables/Actions Required:
This Order implements some of the requirements that are stipulated in Cease and Desist Order R4-2012-0077. Cease and Desist Order R4-2012-077 is enforceable through this Order by reference, including timelines for the City of Avalon to achieve compliance with this TMDL. The Los Angeles Regional Water Board has determined that the City of Avalon's compliance with the permit requirements of this Order and compliance with the MS4-specific requirements of Cease and Desist Order R4-2012-0077 is consistent with the assumptions, and will satisfy the requirements, of the MS4-specific provisions of the TMDL.

Santa Monica Bay Beaches Bacteria TMDL
The Santa Monica Bay Beaches Bacteria TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Los Angeles Regional Water Board has determined that the State Department of Parks and Recreation (Point Dume State Beach, Leo Carrillo State Beach, and Robert H Meyer Memorial State Beach), a Non-traditional MS4 permittee, is a source of "Storm water" and "Non-storm water discharges" subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations:
The following WLAs are receiving water allocations. Geometric mean values shall be calculated based on a minimum of 5 samples during any 30 day period. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean.

Geometric Mean Limits

The rolling 30-day geometric mean of the total coliform concentration shall not exceed 1,000/100 ml;

The rolling 30-day geometric mean of the Fecal coliform density shall not exceed 200/100 ml;

The rolling 30-day geometric mean of the Enterococcus density shall not exceed 35/100 ml;

Single Sample Limits

The total coliform density of a single sample shall not exceed 10,000/100 ml;

The fecal coliform concentration of a single sample shall not exceed 400/100 ml;

The enterococcus concentration of a single sample shall not exceed 104/100 ml;

The total coliform concentration of a single sample shall not exceed 1,000/100 ml, if the ratio of fecal to total coliform exceeds 0.1;

For the Single Sample Limits, TMDL compliance focuses on the number of days that any single sample exceeds the limits set forth above, based on the time of year. This focus is expressed as Single Sample Allowable Exceedances, shown below.

Single Sample Allowable Exceedances Wasteload Allocations in the Receiving Water:*

Point Dume State Beach:
Dry weather: 0 days (based on both daily and weekly sampling),
Wet Weather: 3 days (daily sampling) or 1 day (weekly sampling).
Robert H Meyer Memorial State Beach:
Dry weather: 0 days (based on both daily and weekly sampling),
Wet Weather: 3 days (daily sampling) or 1 day (weekly sampling).

*= The Allowable Exceedance Day is defined as the number of days (per year) a monitoring location is allowed to exceed any of the single sample targets.

A storm year is defined as the period from November 1 through October 31. The geometric mean limits may not be exceeded.

Deliverables/Actions Required:
The State Department of Parks and Recreation is required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the target dates to achieve the wasteload allocations are July 15, 2006 (to achieve dry weather WLAs during the summer period from April 1 – October 31); November 1, 2009 (to achieve dry weather WLAs during the winter period from November 1 – March 31); and July 15, 2021 (to achieve the wet weather WLAs). The dry weather allocations are therefore effective immediately. The State Department of Parks and Recreation may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

Los Angeles River Nitrogen and Related Effects TMDL
The Los Angeles River Nitrogen and Related Effects TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Los Angeles Regional Water Board has determined that the California State University Los Angeles and California State University Northridge, Non-traditional MS4 permittees, are dischargers of storm water and non-storm water subject to this TMDL and must comply with the TMDL-related requirements of this Order.

The California State University Los Angeles and California State University Northridge are assigned the following Wasteload Allocations (WLAs):

WLAs for CSU Los Angeles and CSU Northridge Table

[All units are in milligrams per liter]

Waterbodies Assigned TMDLs	Ammonia 1-hr average	Ammonia 30-day average	Nitrate 30-day average	Nitrate 30-day average	Nitrate + Nitrite 30-day average
LA River above Los Angeles-Glendale Water Reclamation Plant (LAG)	4.7	1.6	8.0	1.0	8.0
LA River below LAG	8.7	2.4	8.0	1.0	8.0
LA River Tributaries	10.1	2.3	8.0	1.0	8.0

Deliverables/Actions Required:

The California State University Los Angeles and California State University Northridge are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the target date to achieve the wasteload allocations assigned to MS4 permittees is March 23, 2004. The allocations are therefore effective immediately. The California State University Los Angeles and/or California State University Northridge may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

Los Angeles Harbor (including Cabrillo Beach and Main Shop Channel) Bacteria TMDL

The Los Angeles Harbor (including Cabrillo Beach and Main Shop Channel) Bacteria TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the Federal Correctional Institution Terminal Island and California State University Dominguez Hills, Non-traditional MS4 permittees, are sources of storm water and non-storm water subject to this TMDL and must comply with the TMDL-related requirements of this Order.

Wasteload Allocations (WLAs):

The following WLAs are receiving water allocations. Geometric mean values shall be calculated based on a minimum of 5 samples during any 30 day period. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean.

Rolling 30 day Geometric Mean Limits

Total coliform density shall not exceed 1,000/100 ml

Fecal coliform density shall not exceed 200/100 ml
Enterococcus density shall not exceed 35/100 ml

Single Sample Limits

Total coliform density shall not exceed 10,000/100 ml
Fecal coliform density shall not exceed 400/100 ml
Enterococcus density shall not exceed 104/100 ml
Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal to total coliform exceeds 0.1

For the Single Sample Limits, TMDL compliance focuses on the number of days that any single sample exceeds the limits set forth above, based on the time of year. This focus is expressed as Single Sample Allowable Exceedances, shown below.

Single Sample Allowable Exceedances Wasteload Allocations in the Receiving Water:*

Summer Dry Weather: 0 days (based on both daily and weekly sampling)
Winter Dry Weather: 8 days (daily sampling) or 1 day (weekly sampling)
Wet Weather: 15 days (daily sampling) or 3 days (weekly sampling)

*= The Allowable Exceedance Day is defined as the number of days (per year) a monitoring location is allowed to exceed any of the single sample targets.

A storm year is defined as the period from November 1 through October 31. The geometric mean limits may not be exceeded.

Deliverables/Actions Required:

The Federal Correctional Institution Terminal Island and California State University Dominguez Hills are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the target date to achieve the wasteload allocations is March 10, 2010. The allocations are therefore effective immediately. The Federal Correctional Institution Terminal Island and/or California State University Dominguez Hills may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

Calleguas Creek Watershed Toxicity TMDL

The Calleguas Creek Watershed Toxicity TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the Naval Base Ventura County (Point Mugu), California State University Channel Islands, and Department of Parks and Recreation (Point Mugu State Park), Non-traditional MS4 permittees, are sources of stormwater and non-stormwater discharges subject to this Order and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLA):
The Calleguas Creek Watershed Toxicity TMDL assigns the following WLAs as receiving water allocations.

Toxicity: 1.0 TUc
Chlorpyrifos (Final WLA, µg/L): 0.014
Diazinon (Final WLA, µg/L): 0.10

Deliverables/Actions Required:
The Naval Base Ventura County (including Port Hueneme and Point Mugu), California State University Channel Islands, and Department of Parks and Recreation (Point Mugu State Park) are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs are to be achieved by March 24, 2008. The allocations are therefore effective immediately. The Naval Base Ventura County (including Port Hueneme and Point Mugu), California State University Channel Islands, and/or Department of Parks and Recreation (Point Mugu State Park) may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

Calleguas Creek Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation TMDL

The Calleguas Creek Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:
The Los Angeles Regional Water Board has determined that the Naval Base Ventura County (Point Mugu), California State University Channel Islands, and Department of Parks and Recreation (Point Mugu State Park), Non-traditional MS4 permittees, are sources of storm water and non-storm water discharges subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLA):
The Calleguas Creek Organochlorine Pesticides, Polychlorinated Biphenyls and Siltation TMDL assigns the following interim and final WLAs as receiving water allocations.

Interim WLAs (ng/g), in-stream annual average at base of watershed:

Chlordane:	17.0
4,4-DDD:	66.0
4,4-DDE:	470.0
4,4-DDT:	110.0
Dieldrin:	3.0
PCBs:	3800.0

Toxaphene: 260.0

Final WLAs (ng/g), in-stream annual average at base of watershed:

Chlordane:	3.3
4,4-DDD:	2.0
4,4-DDE:	1.4
4,4-DDT:	0.3
Dieldrin:	0.2
PCBs:	120.0
Toxaphene:	0.6

Siltation WLA: 2,496 tons/year reduction in yield to Mugu Lagoon.

Deliverables/Actions Required:
The Naval Base Ventura County (including Port Hueneme and Point Mugu), California State University Channel Islands, and Department of Parks and Recreation (Point Mugu State Park) are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs are to be achieved 20 years after the effective date of the TMDL (March 24, 2006). Therefore, the final WLAs shall be achieved by March 24, 2026.

Calleguas Creek Metals and Selenium TMDL
The Calleguas Creek Metals and Selenium TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:
The Los Angeles Regional Water Board has determined that the Naval Base Ventura County (Point Mugu), California State University Channel Islands, and Department of Parks and Recreation (Point Mugu State Park), Non-traditional MS4 permittees, are sources of storm water and non-storm water discharges subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLA):
The Calleguas Creek Metals and Selenium TMDL assigns the following interim and final WLAs as receiving water allocations.

Interim WLAs:

Where Dry CMC/Dry CCC/ Wet CMC stands for, respectively:

Dry Weather Criterion Maximum Concentrations (Acute criteria),
Dry Weather Criterion Continuous Concentrations (Chronic criteria), and
Wet Weather Criterion Maximum Concentrations (Acute criteria).

Calleguas and Conejo Creeks (micrograms per liter) Table

Total Recoverable	Dry CMC	Dry CCC	Wet CMC
Copper	23	19	204

Total Recoverable	Dry CMC	Dry CCC	Wet CMC
Nickel	15	13	
Selenium			

Revolon Slough (micrograms per liter) Table

Total Recoverable	Dry CMC	Dry CCC	Wet CMC
Copper	23	19	204
Nickel	15	13	
Selenium	14	13	

Final WLAs:

Where: Q = Daily Storm volume
WER = Water Effects Ratio

Calleguas and Conejo Creeks

Dry Weather; Total Recoverable (pounds per day)

Metal	Low Flow	Average Flow	Elevated Flow
Copper	0.04×WER -0.02	0.12×WER -0.02	0.18×WER -0.03
Nickel	0.100	0.120	0.440
Selenium			

Revolon Slough

Dry Weather; Total Recoverable (pounds per day)

Metal	Low Flow	Average Flow	Elevated Flow
Copper	0.03×WER -0.01	0.06×WER -0.03	0.13×WER -0.02
Nickel	0.050	0.069	0.116
Selenium	0.004	0.003	0.004

Calleguas and Conejo Creeks

Metal	Wet Weather Final WLA; Total Recoverable (lbs/day)
Copper	$(0.00054 \times Q^2 \times 0.032 - 0.17) \times WER - 0.06$
Nickel	$0.014 \times Q^2 + 0.82 \times Q$
Selenium	

Revolon Slough

Metal	Wet Weather Final WLA; Total Recoverable (lbs/day)
Copper	$(0.0002 \times Q^2 \times 0.0005 \times Q) \times WER$
Nickel	$0.027 \times Q^2 + 0.47 \times Q$
Selenium	$0.027 \times Q^2 + 0.47 \times Q$

Interim Limits and Final WLAs for Mercury in Suspended Sediment

Final WLAs are set at 80% reduction of hydrologic simulation program – FORTRAN (HSPF) load estimates. Interim limits for mercury in suspended sediment are set equal to the highest annual load within each flow category, based on HSPF output for the years 1993-2003.

WLAs for Mercury (pounds per year) in Suspended Sediment Table

Flow Range	Calleguas Creek Interim	Calleguas Creek Final	Revolon Slough Interim	Revolon Slough Final
0 – 15,000 million gallons per year (MG/yr)	3.3	0.4	1.7	0.1
15,000 – 25,000 MG/yr	10.5	1.6	4	0.7
Above 25,000 MG/yr	64.6	9.3	10.2	1.8

Deliverables/Actions Required:

The Naval Base Ventura County (including Port Hueneme and Point Mugu), California State University Channel Islands, and Department of Parks and Recreation (Point Mugu State Park) are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs are to be achieved 15 years after the effective date of the TMDL (March 26, 2007). Therefore, the final WLAs shall be achieved by March 26, 2022.

Ballona Creek Bacteria TMDL

The Ballona Creek Bacteria TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the University of California Los Angeles and Veteran Affairs of the Greater Los Angeles Healthcare System, Non-traditional MS4 permittees, are sources of non-storm water and storm water discharges subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLAs):
The following WLAs are receiving water allocations. Geometric mean values shall be calculated based on a minimum of 5 samples during any 30 day period. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean.

Rolling 30-day Geometric Mean Limits

Total coliform density shall not exceed 1,000/100 ml
Fecal coliform density shall not exceed 200/100 ml
Enterococcus density shall not exceed 35/100 ml

Single Sample Limits

Total coliform density shall not exceed 10,000/100 ml
Fecal coliform density shall not exceed 400/100 ml
Enterococcus density shall not exceed 104/100 ml
Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal to total coliform exceeds 0.1

For the Single Sample Limits, TMDL compliance focuses on the number of days that any single sample exceeds the limits set forth above, based on the time of year. This focus is expressed as Single Sample Allowable Exceedances, shown below.

Single Sample Allowable Exceedances Wasteload Allocations in the Receiving Water:*

Dry weather: 5 days (based on daily sampling) or 1 day (based on weekly sampling)
Wet Weather: 15 days (based on daily sampling) or 2 days (based on weekly sampling)

*= The Allowable Exceedance Day is defined as the number of days (per year) a monitoring location is allowed to exceed any of the single sample targets.

A storm year is defined as the period from November 1 through October 31. The geometric mean limits may not be exceeded

Deliverables/Actions Required:
The University of California Los Angeles and Veteran Affairs of the Greater Los Angeles Healthcare System are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs are to be achieved during dry weather by April 27, 2013, while the final WLAs during wet weather are to be achieved by July 15, 2021. Therefore, the final WLAs for dry weather are effective immediately. The University of California Los Angeles and/or Veteran Affairs of the Greater Los Angeles Healthcare System may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

Santa Monica Bay Marine Debris TMDL

The Santa Monica Bay Marine Debris TMDL assigns a load allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the Department of Parks and Recreation (Point Dume State Beach and Robert H. Meyer Memorial State Beach), a Non-traditional MS4 permittee, is a source of storm water and non-storm water discharges subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Load Allocations (LA):

The following LA is a receiving water allocation.

Trash = 0

Zero trash is defined as no trash (debris greater than 5mm in size) discharged into waterbodies within the Santa Monica Bay Watershed Management Area (WMA) and then into Santa Monica Bay or on the shoreline of Santa Monica Bay.

Deliverables/Actions Required:

The Los Angeles Regional Board has determined that dischargers may achieve the Load Allocations by implementing a Minimum Frequency of Assessment and Collection Program (MFAC)/BMP program approved by the Executive Officer. Responsible entities will be deemed in compliance with the LAs if an MFAC/BMP program, approved by the Executive Officer, demonstrates that there is no accumulation of trash, as defined by the LA.

The Department of Parks and Recreation (Point Dume State Beach and Robert H. Meyer Memorial State Beach) shall develop a Trash Monitoring and Reporting Plan (TMRP) for Executive Officer approval that describes the methodologies that will be used to assess and monitor trash in their responsible areas within the Santa Monica Bay WMA or along Santa Monica Bay.

The TMDL specifies that the final LAs are to be achieved 5 years after the effective date of the TMDL (March 20, 2012). Therefore, the final LAs shall be achieved by March 20, 2017. The Department of Parks and Recreation (Point Dume State Beach and Robert H. Meyer Memorial State Beach) may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

Los Angeles and Long Beach Harbors Toxics and Metals TMDL

The Los Angeles and Long Beach Harbors Toxics and Metals TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the Federal Correctional Institution Terminal Island, Community Corrections Management Long Beach, and California State University Dominguez Hills, Non-traditional MS4 permittees, are sources of storm water and non-storm water discharges subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLA):
The Federal Correctional Institution Terminal Island, Community Corrections Management Long Beach, and California State University Dominguez Hills are assigned the following (receiving water) wasteload allocations:

Toxicity WLA: 1 TU_c

Metals WLAs for Dominguez Channel (wet weather only) (grams per day):

Mass-based WLA is shared and divided between MS4 permittees and Caltrans.

Total Copper: 1485.1
Total Lead: 6548.8
Total Zinc: 10685.5

Metals and PAH Compounds WLAs for Greater Harbor Waters Table

TMDL values are in units of kilogram per year

Waterbodies Assigned TMDLs	Total Copper TMDL	Total Lead TMDL	Total Zinc TMDL	Total PAHs TMDL
Dominguez Channel Estuary	22.4	54.2	271.8	0.134
Consolidated Slip	2.73	3.63	28.7	0.0058
Inner Harbor	1.7	34.0	115.9	0.088
Outer Harbor	0.91	26.1	81.5	0.105
Fish Harbor	0.00017	0.54	1.62	0.007
Cabrillo Marina	0.0196	0.289	0.74	0.00016
San Pedro Bay	20.3	54.7	213.1	1.76
LA River Estuary	35.3	65.7	242.0	2.31

Sediment Wasteload Allocations for Dominguez Channel Estuary, Consolidated Slip and Fish Harbor (mg/kg dry sediment):

Cadmium: 1.2
Chromium: 81
Mercury: 0.15

Bioaccumulative Compounds Wasteload Allocations Table

TMDL values are in units of gram per year

Waterbodies Assigned TMDLs	DDT Total TMDL	PCBs Total TMDL
Dominguez Channel Estuary	0.250	0.207
Consolidated Slip	0.009	0.004
Inner Harbor	0.051	0.059
Outer Harbor	0.005	0.020
Fish Harbor	0.0003	0.0019
Cabrillo Marina	0.000028	0.000025
Inner Cabrillo Beach	0.0001	0.0003
San Pedro Bay	0.049	0.44
LA River Estuary	0.100	0.324

Deliverables/Actions Required:
The Federal Correctional Institution Terminal Island, Community Corrections Management Long Beach, and California State University Dominguez Hills are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs are to be achieved 20 years after the effective date of the TMDL (March 23, 2012). Therefore, the final WLAs shall be achieved by March 23, 2032.

Los Angeles River Bacteria TMDL
The Los Angeles Regional Board has determined that the Los Angeles River Bacteria TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:
The Los Angeles Regional Water Board has determined that the California State University Los Angeles and California State University Northridge, Non-traditional MS4 permittees, are sources of storm water and non-storm water discharges subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLA):
The following WLAs are receiving water allocations. Geometric mean values shall be calculated based on a minimum of 5 samples during any 30 day period. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean.

Geometric Mean Limits
E. coli density shall not exceed 126/100 ml

Single Sample Limits
E. coli density shall not exceed 235/100 ml

For the Single Sample Limits, TMDL compliance focuses on the number of days that any single sample exceeds the limits set forth above, based on the time of year. This focus is expressed as Single Sample Allowable Exceedances, shown below.

Single Sample Allowable Exceedances Wasteload Allocations in the Receiving Water:*
Summer Dry Weather: 5 days (based on daily sampling), or 1 day (based on weekly sampling)
Waters not subject to the High Flow Suspension:
Wet Weather: 15 days (daily sampling), or 2 days (weekly sampling)
Waters subject to the High Flow Suspension:
Wet Weather: 10 days (daily sampling), or 2 (weekly sampling)

* = The Allowable Exceedance Day is defined as the number of days (per year) a monitoring location is allowed to exceed any of the single sample targets.

A storm year is defined as the period from November 1 through October 31. The geometric mean limits may not be exceeded

Deliverables/Actions Required:
The California State University Los Angeles and California State University Northridge are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final wet-weather WLAs are to be achieved 25 years after the effective date of the TMDL. Therefore, the final wet weather WLAs are to be achieved by March 23, 2037. The TMDL also specifies several final dry weather achievement dates based upon where in the watershed the discharge(s) occur. Therefore, the final dry weather WLAs are to be achieved according to the table below.

Waterbody Segment	Achieve Final dry weather WLA by:
Segment B (upper and middle Reach 2)	March 23, 2022
Segment B Tributaries (Rio Hondo & Arroyo Seco)	September 23, 2023
Segment A (lower Reach 2 and Reach 1)	March 23, 2024
Segment A Tributaries (Compton Creek)	September 23, 2025
Segment E (Reach 6)	March 23, 2025
Segment E Tributaries (Dry Canyon, McCoy and Bell Creeks, and Aliso Canyon Wash)	March 23, 2029
Segment C (lower Reach 4 and Reach 3)	September 23, 2030
Segment C Tributaries (Tujunga Wash, Burbank Western Channel and Verdugo Wash)	September 23, 2030
Segment D (Reach 5 and upper Reach 4)	September 23, 2030
Segment D Tributaries (Bull Creek)	September 23, 2030

Los Angeles River and Tributaries Metals TMDL
The Los Angeles River and Tributaries Metals TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:
The Los Angeles Regional Water Board has determined that the California State University Los Angeles and California State University Northridge, Non-traditional MS4 permittees, are sources of storm water and non-storm subject to this TMDL and must comply with the TMDL-related requirements in this Order.

Wasteload Allocations (WLA):
Dry-Weather WLAs (total recoverable metals)

Dry-Weather WLAs (Total recoverable metals) Table

All values are in units of micrograms per liter

Waterbodies Assigned TMDLs	Copper TMDL	Lead TMDL	Zinc TMDL	Selenium TMDL
LA River Reach 5,6 and Bell Creek	30	170		5
LA River Reach 4	103	83		

Waterbodies Assigned TMDLs	Copper TMDL	Lead TMDL	Zinc TMDL	Selenium TMDL
Tujunga Wash	166	83		
LA River Reach 3 above LA-Glendale WRP	91	102		
Verdugo Wash	50	102		
LA River Reach 3 below LA-Glendale WRP	103	100		
Burbank Western Channel (above WRP)	124	126		
Burbank Western Channel (below WRP)	90	75		
LA River Reach 2	87	94		
Arroyo Seco	29	94		
LA River Reach 1	91	102		
Compton Creek	64	73		
Rio Hondo Reach 1	126	37	131	
Monrovia Canyon			66	

Wet-Weather WLAs (total recoverable metals) (micrograms per liter)

Cadmium = 3.1
Copper = 67.5
Lead = 94
Zinc = 159

Deliverables/Actions Required:
The California State University Los Angeles and California State University Northridge are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final dry weather WLAs shall be achieved by January 11, 2024, and the final wet weather WLAs shall be achieved by January 11, 2028.

Ballona Creek Metals TMDL
The Ballona Creek Metals TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:
The Los Angeles Regional Water Board has determined that the University of California Los Angeles and the Veteran Affairs of the Greater Los Angeles Healthcare System, Non-traditional MS4s, are sources of storm water and non-storm discharges subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):
Dry-Weather WLAs (total recoverable metals) (shared) (grams per day):

Ballona Creek:	Copper: 1,457.6	Lead: 805.0	Zinc: 18,302.1
Sepulveda Channel:	Copper: 540.6	Lead: 298.7	Zinc: 6,790.8

Wet-Weather WLAs (total recoverable metals) (shared) (grams per day):

Copper:	$1.297 \times 10^{-5} \times L$
Lead:	$7.265 \times 10^{-5} \times L$
Zinc:	$9.917 \times 10^{-5} \times L$

Where L = daily storm volume (liters)

Deliverables/Actions Required:
The University of California Los Angeles and the Veteran Affairs of the Greater Los Angeles Healthcare System are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs during dry weather are to be achieved by January 11, 2016. The final WLAs during wet weather shall be achieved by January 11, 2021. The final WLAs during dry weather are therefore effective immediately. The University of California Los Angeles and/or the Veteran Affairs of the Greater Los Angeles Healthcare System may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

San Gabriel River Metals and Selenium TMDL
The San Gabriel River Metals and Selenium TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Los Angeles Regional Water Board has determined that the California State Polytechnic University, Pomona, a Non-traditional MS4, is a source of urban runoff subject to this Order and is responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):
The San Gabriel River Metals and Selenium TMDL assigns WLAs to urban runoff in Walnut and San Jose Creeks, tributaries to the San Gabriel River for entities within the city of Pomona, which includes California State Polytechnic University, Pomona. Therefore, only WLAs assigned to Walnut and San Jose Creeks will be included in this Order.

Selenium allocation for San Jose Creek Reach 1 and Reach 2 (total recoverable metals):

Point Sources:	Municipal Stormwater
Waste Load Allocation:	5 micrograms per liter

Deliverables/Actions Required:
The California State Polytechnic University, Pomona is required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA; or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an

approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL does not specify a final attainment date.

San Gabriel River Indicator Bacteria TMDL

The San Gabriel River Indicator Bacteria TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the California State Polytechnic University, Pomona, a Non-traditional MS4, is a source of wet- and dry-weather discharges from MS4s subject to this Order and is responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):

The San Gabriel River Indicator Bacteria TMDL assigns WLAs to urban runoff in the San Gabriel River and its tributaries.

The following WLAs are receiving water allocations. Geometric mean values shall be calculated weekly as a rolling geometric mean using a minimum of 5 samples, for six week periods starting all calculation weeks on Sunday. Geometric mean limits may not be exceeded at any time.

Geometric Mean Limits

E. coli density shall not exceed 126/100 ml

Single Sample Limits

E. coli density shall not exceed 235/100 ml

For the Single Sample Limits, TMDL compliance focuses on the number of days that any single sample exceeds the limits set forth above, based on the time of year. This focus is expressed as Single Sample Allowable Exceedances, shown below.

Single Sample Allowable Exceedances Wasteload Allocations in the Receiving Water:*

Summer Dry Weather: 5 days (based on daily sampling), or 1 day (based on weekly sampling)

Waters not subject to the High Flow Suspension:

Wet Weather: 17 days (daily sampling), or 3 days (weekly sampling)

Waters subject to the High Flow Suspension:

Wet Weather: 11 days (daily sampling), or 2 (weekly sampling)

* = The Allowable Exceedance Day is defined as the number of days (per year) a monitoring location is allowed to exceed any of the single sample limits.

A storm year is defined as the period from November 1 through October 31.

Deliverables/Actions Required:

The California State Polytechnic University, Pomona is required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA; or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an

approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs are to be achieved for single sample objectives and during dry weather by June 14, 2026, while the final WLAs during wet weather are to be achieved by June 14, 2036.

Los Cerritos Channel Metals TMDL

The Los Cerritos Channel Metals TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the California State University Long Beach and Long Beach Veterans' Affairs Medical Center, Non-traditional MS4s, are sources of storm water and non-storm water discharges subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):

Dry-Weather WLA (total recoverable metals) (shared) (g/day):

Copper: 67.2

Wet-Weather WLAs (total recoverable metals) (shared) (g/day based on flow of 40 cfs):

Copper: 461.4
Lead: 2,631.5
Zinc: 4,510.7

Deliverables/Actions Required:

The California State University Long Beach and Long Beach Veterans' Affairs Medical Center are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs during dry weather shall be achieved by September 30, 2023. The final WLAs during wet weather shall be achieved by September 30, 2026.

Ballona Creek Estuary Toxic Pollutants TMDL

The Ballona Creek Estuary Toxic Pollutants TMDL assigns wasteload allocations appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the University of California Los Angeles and the Veteran Affairs of the Greater Los Angeles Healthcare System, Non-traditional MS4s, are sources of storm water and non-storm water discharges subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):

WLAs are expressed as shared allocations amongst the MS4 permittees in the Ballona Creek watershed.

Cadmium:	8.0	kg/yr
Copper:	227.3	kg/yr
Lead:	312.3	kg/yr
Silver:	6.69	kg/yr
Zinc:	1003	kg/yr
Chlordane:	8.69	g/yr
DDTs:	12.70	g/yr
Total PCBs:	21.40	g/yr

Deliverables/Actions Required:
The University of California Los Angeles and the Veteran Affairs of the Greater Los Angeles Healthcare System are required to either: 1) develop and implement a program plan, for Regional Water Board Executive Officer approval, to reduce pollutants in its MS4 discharges to meet the WLA(s); or 2) enter into a cooperative agreement with Phase I MS4 Permittees in the watershed or subwatershed that are implementing an approved Watershed Management Program/Enhanced Watershed Management Program pursuant to corresponding Phase I MS4 permit.

The TMDL specifies that the final WLAs shall be achieved by January 11, 2021.

Ballona Creek Trash TMDL
The Ballona Creek Trash TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Los Angeles Regional Water Board has determined that the University of California Los Angeles and the Veteran Affairs of the Greater Los Angeles Healthcare System, Non-traditional MS4s, are sources of storm water discharges subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):
Final WLA is zero trash.

Deliverables/Actions Required:
The Los Angeles Regional Water Board has determined that the contribution by these non-traditional MS4s is significant. In order for the permittees to meet their obligation to ensure that the WLA is met, the permittees will be required to implement either 1) Full Capture Systems, 2) partial capture devices and the application of institutional controls, or 3) a scientifically based alternative attainment approach.

1) A Full Capture System is any device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate (Q) resulting from a one-year, one hour, storm in the subdrainage area. The Rational Equation is used to compute the peak flow rate:

$$Q = C * I * A$$

Where:

Q = design flow rate (cubic foot per second)
C = runoff coefficient
I = design rainfall intensity (inches per hour)
A = subdrainage area (acres)

2) Permittees employing partial capture devices or institutional controls shall use a mass balance approach based on the trash daily generation rate (DGR)[46], to demonstrate compliance.

   The DGR shall be reassessed annually. Permittees may request a less frequent assessment of its DGR when the final WLA has been met (as described below) and the responsible jurisdiction continues to implement at the same level of effort partial capture devices and institutional controls for Executive Officer approval. A return to annual DGR calculation shall be required for a period of years to be determined by the Executive Officer after significant land use changes.

   Permittees employing institutional controls or a combination of full capture systems, partial capture devices, and institutional controls shall be deemed in attainment of the final WLAs when the reduction of trash from the jurisdiction's baseline load, is between 99% and 100% as calculated using a mass balance approach, and the full capture systems and partial capture devices are properly sized, operated, and maintained.

   Alternatively, permittees may request that the Executive Officer make a determination that a 97% to 98% reduction of the baseline load as calculated using a mass balance approach, constitutes full attainment of the final WLA if all of the following criteria are met:

   a. The agency submits to the Regional Board a report for Executive Officer approval, including, two or more consecutive years of data showing that the Permittee's attainment was at or above a 97% reduction in its baseline trash load;

   b. An evaluation of institutional controls in the jurisdiction demonstrating continued effectiveness and any potential enhancements; and

   c. Demonstration that opportunities to implement partial capture devices have been fully exploited.

3) Permittees employing an alternative attainment approach shall conduct studies of institutional controls and partial capture devices for their particular subwatershed(s) or demonstrate that existing studies are representative and transferable to the implementing area for Executive Officer approval. Permittees shall also provide a schedule for periodic, compliance effectiveness demonstration and evaluation. Full capture systems and partial capture devices shall be properly sized, operated, and maintained consistent with sizing, operation, and maintenance schedules used to determine their effectiveness.

The TMDL specifies that the final WLA (0% of the baseload discharged) is to be achieved by September 30, 2015. The WLA is therefore effective immediately.

[46] The DGR is the average amount of trash deposited during a 24-hour period, as measured in a specified drainage area.

Los Angeles River Trash TMDL

The Los Angeles River Trash TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the California State University Los Angeles and California State University Northridge, Non-traditional MS4s, are sources of storm water discharges subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):

Final WLA is zero trash.

Deliverables/Actions Required:

The Los Angeles Regional Water Board has determined that the contribution by these non-traditional MS4s is significant. In order for the permittees to meet their obligation to ensure that the WLA is met, the permittees will be required to implement either 1) Full Capture Systems, 2) partial capture devices and the application of institutional controls, or 3) a scientifically based alternative attainment approach.

1) A Full Capture device is any device that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate (Q) resulting from a one-year, one hour, storm in the subdrainage area. The Rational Equation is used to compute the peak flow rate:

$$Q = C * I * A$$

Where:

Q = design flow rate (cubic foot per second)
C = runoff coefficient
I = design rainfall intensity (inches per hour)
A = subdrainage area (acres)

2) Permittees employing partial capture devices or institutional controls shall use a mass balance approach based on the trash daily generation rate (DGR)[47], to demonstrate compliance.

The DGR shall be reassessed annually. Permittees may request a less frequent assessment of its DGR when the final WLA has been met (as described below) and the responsible jurisdiction continues to implement at the same level of effort partial capture devices and institutional controls for Executive Officer approval. A return to annual DGR calculation shall be required for a period of years to be determined by the Executive Officer after significant land use changes.

Permittees employing institutional controls or a combination of full capture systems, partial capture devices, and institutional controls shall be deemed in attainment of the final WLAs when the reduction of trash from the jurisdiction's baseline load, is between 99% and

[47] The DGR is the average amount of trash deposited during a 24-hour period, as measured in a specified drainage area.

100% as calculated using a mass balance approach, and the full capture systems and partial capture devices are properly sized, operated, and maintained.

Alternatively, permittees may request that the Executive Officer make a determination that a 97% to 98% reduction of the baseline load as calculated using a mass balance approach, constitutes full attainment of the final WLA if all of the following criteria are met:

a. The agency submits to the Regional Board a report for Executive Officer approval, including, two or more consecutive years of data showing that the Permittee's attainment was at or above a 97% reduction in its baseline trash load;

b. An evaluation of institutional controls in the jurisdiction demonstrating continued effectiveness and any potential enhancements; and

c. Demonstration that opportunities to implement partial capture devices have been fully exploited.

3) Permittees employing an alternative attainment approach shall conduct studies of institutional controls and partial capture devices for their particular subwatershed(s) or demonstrate that existing studies are representative and transferable to the implementing area for Executive Officer approval. Permittees shall also provide a schedule for periodic, compliance effectiveness demonstration and evaluation. Full capture systems and partial capture devices shall be properly sized, operated, and maintained consistent with sizing, operation, and maintenance schedules used to determine their effectiveness.

The TMDL specifies that the final WLA (0% of the baseload discharged) is to be achieved by September 30, 2016. The WLA is therefore effective immediately.

Ventura River Estuary Trash TMDL

The Ventura River Estuary Trash TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Los Angeles Regional Water Board has determined that the Ventura County Fairgrounds (Seaside Park and Ventura County Fairgrounds), a Non-traditional MS4, is a source of storm water discharges subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations (WLA):

Final WLA is zero trash.

Deliverables/Actions Required:

The Los Angeles Regional Water Board has determined that the contribution by these non-traditional MS4s is significant. In order for the permittees to meet their obligation to ensure that the WLA is met, the permittees will be required to implement one of two options for the control of trash. The TMDL allows permittees to meet the WLA by either: 1) installing and maintaining Full Capture Systems, or 2) with Regional Water Board Executive Officer approval, implement a program for minimum frequency of assessment and collection (MFAC) in conjunction with BMPs.

1) A Full Capture device is any device that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate (Q) resulting from a

one-year, one hour, storm in the subdrainage area. The Rational Equation is used to compute the peak flow rate:

$$Q = C * I * A$$

Where:

Q = design flow rate (cubic foot per second)
C = runoff coefficient
I = design rainfall intensity (inches per hour)
A = subdrainage area (acres)

2) Attainment of the WLA through the MFAC program in conjunction with BMPs may be proposed to the Regional Water Board's Executive Officer for approval. The MFAC program must include requirements equivalent to those described in the Conditional Waiver set forth in the TMDL. The due date for submittal of the required information to select this option was October 2008. Therefore, this option is no longer available for permittees under this Order and was included only for completeness.

The TMDL specifies that the final WLA is to be achieved by March 6, 2016. The final WLA therefore is effective immediately.

CENTRAL VALLEY REGIONAL WATER BOARD TMDLS

Lower San Joaquin River Diazinon & Chlorpyrifos TMDL

The Lower San Joaquin River Diazinon & Chlorpyrifos TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Valley Regional Water Board has determined that the City of Patterson, a Traditional MS4, is a source of "NPDES permitted discharges" subject to this Order and is responsible for implementing the requirements of this TMDL.

Many of the permittees listed in Attachment G of the permit adopted on February 5, 2013, have been removed. These permittees are not specifically assigned allocations in the TMDL adopted by the Central Valley Regional Water Board. The removed permittees do not discharge directly to the San Joaquin River. An impaired water body segment must have TMDL-specific requirements under the TMDL. Through development of this Amendment the Central Valley Water Board has determined that only the City of Patterson, which discharges directly to the San Joaquin River, is responsible for implementing the requirements of this TMDL.

Wasteload Allocations:

The wasteload allocations for NPDES permitted municipal storm water Permittees shall not exceed the sum (S) of one (1) as defined below:

$$S = \frac{C_D}{WQO_D} + \frac{C_C}{WQO_C} \leq 1.0$$

Where:

C_D = diazinon concentration in micrograms per liter of point source discharge

C_C = chlorpyrifos concentration in micrograms per liter of point source discharge
WQO_D = acute or chronic diazinon water quality objective (0.160 and 0.100 micrograms per liter, respectively)
WQO_C = acute or chronic chlorpyrifos water quality objective. (0.025 and 0.015 micrograms per liter, respectively)

For the purpose of calculating the sum (S) above, non-detectable concentrations are considered to be zero. In determining compliance with the effluent limitations in Section C.1 of this Order related to the attainment of these wasteload allocations, the Central Valley Regional Water Board will consider data or information submitted by the Permittee regarding diazinon and chlorpyrifos inputs from sources that are outside of the jurisdiction of the permitted discharge, and any applicable provisions in this Order requiring the Permittee to reduce the discharge of pollutants to the maximum extent practicable.

Deliverables/Actions Required:
To create a path towards compliance with this TMDL, the permittees are being directed to conduct an assessment of the waterbody. The assessment will be used to ascertain the loads from urban runoff, whether the waterbody is meeting its objectives, whether or not an alternative constituent is the cause of impairment and whether a synergistic effect is present. As an alternative, the permittees may participate in the Bay Delta Regional Monitoring Program, upon the Central Valley Regional Water Board Executive Officer approval.

The deadline for attainment of WLAs was December 1, 2010. Therefore, the WLA is to be achieved immediately.

Sacramento and San Joaquin Delta Diazinon & Chlorpyrifos TMDL
The Sacramento and San Joaquin Delta Diazinon & Chlorpyrifos TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:
The Central Valley Regional Water Board has determined that the Cities of Lathrop, Lodi, Manteca, Rio Vista, Tracy, and West Sacramento and the County of San Joaquin, Traditional MS4s, are sources of “NPDES permitted dischargers” subject to this Order and are responsible for implementing the requirements of this TMDL.

The Cities of Davis, Dixon, French Camp, Morada, Vacaville, and Woodland, listed in the original permit adopted on February 5, 2013, have been removed from this TMDL. These permittees are not specifically assigned allocations in the TMDL adopted by the Central Valley Regional Water Board. The Central Valley Water Board determined that they were erroneously listed since they do not discharge directly to the Sacramento and San Joaquin Delta. The Cities of Lathrop, Lodi, Manteca, Rio Vista, Tracy and West Sacramento and the County of San Joaquin discharge directly to the Sacramento and San Joaquin Delta.

Wasteload Allocations:
The wasteload allocations for NPDES permitted municipal storm water Permittees shall not exceed the sum (S) of one (1) as defined below:

$$S = \frac{C_D}{WQO_D} + \frac{C_C}{WQO_C} \leq 1.0$$

Where:

C_D = diazinon concentration in micrograms per liter of point source discharge

C_C = chlorpyrifos concentration in micrograms per liter of point source discharge

WQO_D = acute or chronic diazinon water quality objective (0.160 and 0.100 micrograms per liter, respectively)

WQO_C = acute or chronic chlorpyrifos water quality objective. (0.025 and 0.015 micrograms per liter, respectively)

For the purpose of calculating the sum (S) above, non-detectable concentrations are considered to be zero. In determining compliance with the effluent limitations in Section C.1 of this Order related to the attainment of these wasteload allocations, the Central Valley Regional Water Board will consider data or information submitted by the Permittee regarding diazinon and chlorpyrifos inputs from sources that are outside of the jurisdiction of the permitted discharge, and any applicable provisions in this Order requiring the Permittee to reduce the discharge of pollutants to the maximum extent practicable.

Deliverables/Actions Required:

To create a path towards compliance with this TMDL, the permittees are being directed to conduct an assessment of the waterbody. The assessment will be used to ascertain the loads from urban runoff, whether the waterbody is meeting its objectives, whether or not an alternative constituent is the cause of impairment and whether a synergistic effect is present. As an alternative, the permittees may participate in the Bay Delta Regional Monitoring Program, upon Executive Officer approval.

The deadline for attainment of WLAs was December 1, 2011. Therefore, the WLA is to be achieved immediately.

Sacramento and Feather Rivers Diazinon & Chlorpyrifos TMDL

The Sacramento and Feather Rivers Diazinon & Chlorpyrifos TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Valley Regional Water Board has determined that the Cities of Anderson, Marysville, Red Bluff, Redding and Yuba City, the Counties of Colusa, Shasta, Sutter and Yuba, Traditional MS4s, are sources of “Urban storm water runoff” subject to this Order and are responsible for implementing the requirements of this TMDL.

The Cities of Chico, Live Oak, Lincoln, Loomis, Roseville and Rocklin and the County of Butte, listed in the original permit adopted on February 5, 2013, have been removed from this TMDL. These permittees are not specifically assigned allocations in the TMDL adopted by the Central Valley Regional Water Board. The Central Valley Water Board determined that they were erroneously listed since they do not discharge directly to the Sacramento and/or Feather rivers. The Cities of Anderson, Colusa, Marysville, Red Bluff, Redding and Yuba City, and the Counties of Colusa, Shasta and Sutter discharge directly to the Sacramento and/or Feather rivers.

Wasteload Allocations:

The wasteload allocations for NPDES permitted municipal storm water Permittees shall not exceed the sum (S) of one (1) as defined below:

$$S = \frac{C_D}{WQO_D} + \frac{C_C}{WQO_C} \leq 1.0$$

Where:

C_D = diazinon concentration in micrograms per liter of point source discharge

C_C = chlorpyrifos concentration in micrograms per liter of point source discharge

WQO_D = acute or chronic diazinon water quality objective (0.160 and 0.100 micrograms per liter, respectively)

WQO_C = acute or chronic chlorpyrifos water quality objective. (0.025 and 0.015 micrograms per liter, respectively)

For the purpose of calculating the sum (S) above, non-detectable concentrations are considered to be zero. In determining compliance with the effluent limitations in Section C.1 of this Order related to the attainment of these wasteload allocations, the Central Valley Regional Water Board will consider data or information submitted by the Permittee regarding diazinon and chlorpyrifos inputs from sources that are outside of the jurisdiction of the permitted discharge, and any applicable provisions in this Order requiring the Permittee to reduce the discharge of pollutants to the maximum extent practicable.

Deliverables/Actions Required:

To create a path towards compliance with this TMDL, the permittees are being directed to conduct an assessment of the waterbody. The assessment will be used to ascertain the loads from urban runoff, whether the waterbody is meeting its objectives, whether or not an alternative constituent is the cause of impairment and whether a synergistic effect is present. As an alternative, the permittees may participate in the Bay Delta Regional Monitoring Program, upon Executive Officer approval.

The deadline for attainment of WLAs was August 11, 2008. Therefore, the WLA is to be achieved immediately. The Cities of Anderson, Marysville, Red Bluff, Redding and Yuba City, the Counties of Colusa, Shasta, Sutter and Yuba may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

Demonstration of Attainment of Diazinon and Chlorpyrifos Wasteload Allocations for ALL Diazinon and Chlorpyrifos TMDLs

Attainment of the diazinon and chlorpyrifos wasteload allocations may be demonstrated by any one of the following methods:

a. Submission of receiving water monitoring and/or other information, as authorized by the Executive Officer, that reasonably demonstrates attainment with the WLA.
b. Attainment of WLAs within the discharge (monitoring representative of the MS4 discharge may be used with Executive Officer approval).
c. Permanent cessation of discharges from the Permittee's MS4 to receiving waters.

For those Permittees that have not demonstrated achievement of WLA by the attainment date (shown above), implementation of BMPs consistent with an Executive Officer-approved Management Plan that outlines BMPs and a schedule to reduce discharges of diazinon and

chlorpyrifos and that are capable of ultimately attaining the WLA is required. Management Plans shall be developed pursuant to the implementation schedules stated in Attachment G.

Lower San Joaquin River, San Joaquin River and Stockton Deep Water Ship Channel (DWSC) Organic Enrichment and Low Dissolved Oxygen TMDL

The Lower San Joaquin River, San Joaquin River and Stockton DWSC Organic Enrichment and Low Dissolved Oxygen TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:[48]

The Central Valley Regional Water Board has determined that the Cities of Atwater, Ceres, Delhi, Hughson, Lathrop, Livingston, Los Banos, Manteca, Merced, Oakdale, Patterson, Ripon, Riverbank and Turlock, the Counties of Merced, San Joaquin and Stanislaus, Traditional MS4s, are sources of "Storm water discharges" subject to this Order and are responsible for implementing the requirements of this TMDL.

The CDPs of French Camp and Winton, listed in the originally adopted permit, have been removed from this TMDL. These permittees were removed because they exist within existing MS4 areas subject to this permit (i.e. the counties they are located in). Therefore, it was determined that these permittees should not have been included in Appendix G under this TMDL and thus have been removed.

Wasteload Allocations:

The San Joaquin River Dissolved Oxygen Control Program set the wasteload allocations for NPDES-permitted discharges of oxygen demanding substances and their precursors as the effluent limitations that were applicable on 28 January 2005. On 28 January 2005, the 2003 Phase II MS4 permit stated the following for effluent limitations in section C.1. Effluent Limitations: Permittees must implement BMPs that reduce pollutants in storm water to the technology-based standard of MEP. This Order applies these limitations to discharges from MS4s maintained by the Phase II Entities listed above. In determining compliance with permit requirements related to attainment of these wasteload allocations, credit will be given for control measures implemented after 12 July 2004.

The San Joaquin River Dissolved Oxygen Control Program defines oxygen demanding substances and their precursors as any substance or substances that consume, have the potential to consume, or contribute to the growth or formation of substances that consume or have the potential to consume oxygen from the water column.

Deliverables/Actions Required:

To comply with the WLAs established in this TMDL, the Phase II entities shall comply with the provisions of this Order. Specific actions taken to comply with this TMDL will be documented in the Annual Report along with a discussion on the effectiveness of the BMPs implemented and actions taken to improve the effectiveness in meeting the WLAs.

The permittees will also conduct monitoring to show compliance with the TMDL based upon a submitted Monitoring Plan. As an alternative, the permittees may participate in the Bay Delta

[48] The Fact Sheet is not consistent with the final amendment adopted by the State Water Board. (See Attachment G) The cities of Escalon and Newman should have been named here and the city of Delhi should have been removed.

Regional Monitoring Program, upon Central Valley Regional Water Board Executive Officer approval.

The deadline for attainment of WLAs was December 31, 2011. Therefore, the WLA is to be achieved immediately. The Cities of Atwater, Ceres, Escalon, Hughson, Lathrop, Livingston, Los Banos, Manteca, Merced, Newman, Oakdale, Patterson, Ripon, Riverbank and Turlock, the Counties of Merced, San Joaquin and Stanislaus may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

Demonstration of Compliance with Effluent Limitations Associated with Wasteload Allocations for Oxygen Demanding Substances and Their Precursors

Compliance with the effluent limitations in Section C.1 of this permit associated with the wasteload allocations for oxygen demanding substances and their precursors may be demonstrated by any one of the following methods:

a. Receiving water monitoring and/or other information, as authorized by the Executive Officer, that reasonably demonstrates attainment with the WLA.
b. Permanent cessation of discharges from the Permittee's MS4 to receiving waters.

For those Permittees that have not demonstrated achievement of WLA by the attainment date (shown above), implementation of BMPs consistent with an Executive Officer-approved Management Plan that outlines BMPs and a schedule to reduce discharges of oxygen demanding substances and their precursors to attain the WLA is required. Management Plans shall be developed within twelve months after adoption of this Attachment G. It is not the intention of the State Water Board or the Central Valley Water Board to take enforcement action against Permittees for violation of Section C.1 effluent limitations related to the WLA while the Plan is being developed and implemented, provided the Permittee develops the Plan in accordance with applicable implementation schedules. The Permittee may also request a time schedule order incorporating the implementation measures and compliance schedule of the Management Plan.

Delta Methylmercury TMDL

On April 22, 2010, the Central Valley Regional Water Board adopted Resolution No. R5-2010-0043 to amend the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan) to include a methylmercury TMDL and an implementation plan for the control of methylmercury and total mercury in the Sacramento-San Joaquin Delta Estuary (Delta Mercury Control Program). The Basin Plan amendment includes the addition of: (1) site-specific numeric fish tissue objectives for methylmercury; (2) the commercial and sport fishing (COMM) beneficial use designation for the Delta and Yolo Bypass; (3) methylmercury load allocations for non-point sources and wasteload allocations for point sources; and (4) an implementation plan that includes adaptive management to address mercury and methylmercury in the Delta and Yolo Bypass.

The Delta TMDL covers the Counties of Alameda, Contra Costa, Sacramento, San Joaquin, Solano and Yolo both within legal Delta boundary defined by California Water Code Section 12220 and the Yolo Bypass, a 73,300-acre floodplain on the west side of the lower Sacramento River.

The Delta is on the Clean Water Act Section 303(d) List of Impaired Water Bodies because of elevated levels of mercury in fish. Beneficial uses of the Delta that are impaired due to the elevated methylmercury levels in fish are wildlife habitat (WILD) and human consumption of aquatic organisms. The Delta provides habitat for warm and cold-water species of fish and their associated aquatic communities. Additionally, the Delta and its riparian areas provide valuable wildlife habitat. There is significant use of the Delta for fishing and collection of aquatic organisms for human consumption. Further, water is diverted from the Delta for statewide municipal (MUN) and agricultural (AGR) use.

Mercury in the Central Valley comes primarily from historic mercury and gold mines and from resuspension of contaminated material in stream beds and banks downstream of the mines, as well as from modern sources such as atmospheric deposition from local and global sources, waste water treatment plants, and urban runoff. Methylmercury, the most toxic form of mercury, forms primarily by sulfate reducing bacteria methylating inorganic mercury. Sources of methylmercury include methylmercury flux from sediment in open water and wetland habitats, urban runoff, irrigated agriculture, and waste water treatment plants. Water management activities, including water storage, conveyance, and flood control, can affect the transport of mercury and the production and transport of methylmercury.

Phase II Entities:

The Delta Mercury Control Program assigns mass-based methylmercury TMDL allocations to all sources of methylmercury in the Delta and Yolo Bypass, including urban runoff from Phase I and Phase II MS4s. In the Delta and Yolo Bypass, the TMDL assigns individual methylmercury wasteload allocations to the following small urban runoff agencies:

City of Lathrop
City of Lodi
City of Rio Vista
County of San Joaquin
City of West Sacramento
County of Yolo
City of Tracy

The County of Solano is being removed from this TMDL. The Delta TMDL was based on information available at the time of its development. The Delta Methylmercury TMDL Staff Report calculated urban runoff methylmercury allocations using the Department of Water Resources' land use designations for urban and other land uses within the legal Delta boundary. A recent review of Solano County's 2003 Storm Water Management Plan, which is relevant because this plan was in effect when the Delta TMDL was developed, revealed a discrepancy between the acreages used to assess urban areas. The County's Storm Water Management Plan indicated that the MS4 permit jurisdiction only applied to the County's urbanized areas defined by the 2000 Census. The County's maps indicate there are no urbanized areas within the legal Delta boundaries.

While methylmercury from urbanized areas covered by the County's Phase II MS4 program does discharge to the Delta, the methylmercury allocations included in the TMDL should have been assigned only to the County's MS4 urbanized areas within the Delta and Yolo Bypass. Based on the 2003 Storm Water Management Plan, the urban acreage is zero and subsequently there should not be an allocation assigned to this area. This discrepancy will be

corrected when the Central Valley Regional Water Board conducts a full review of the TMDL in 2020.

Therefore, at this time the Solano County MS4 program is not subject to the Delta Mercury Control Program requirements, including attainment of the allocations or compliance with mercury exposure reduction program (MERP) requirements.

Wasteload Allocations:
The methylmercury wasteload allocations are as follows:

Methylmercury Wasteload Allocations Table

Municipality	Wasteload Allocations, Methylmercury (grams per year)
City of Lathrop	0.097
City of Lodi	0.053
City of Rio Vista	0.0078
City of Tracy	0.65
City of West Sacramento (Sacramento River subarea)	0.36
City of West Sacramento (Yolo Bypass subarea)	0.28
County of San Joaquin (Central Delta subarea)	0.57
County of San Joaquin (Mokelumne River subarea)	0.016
County of San Joaquin (Sacramento River subarea)	0.11
County of San Joaquin (San Joaquin River subarea)	0.79
County of Yolo (Sacramento River subarea)	0.041
County of Yolo (Yolo Bypass subarea)	0.083

Deliverables/Actions Required:
Mercury is often attached to sediment, and the formation of methylmercury is linked in part to the concentration of mercury concentrations in sediment. Reductions in mercury concentrations will result in methylmercury reductions and subsequently methylmercury levels in fish. To comply with the TMDL, the agencies are required to implement best management practices to control erosion and sediment discharges with the goal of reducing mercury discharges. Methylmercury wasteload allocations for MS4 dischargers in the Delta and Yolo Bypass shall be met as soon as possible, but no later than December 31, 2030, unless the Central Valley Regional Water Board modifies the implementation schedule and final attainment date. Compliance will be determined by the method(s) described further in this document.

Demonstration of Attainment of Methylmercury Wasteload Allocations:
Compliance with the effluent limitations in Section C.1 of this permit associated with methylmercury wasteload allocations may be demonstrated by any one of the following methods:

a. Management Plans shall be developed within one year after the Central Valley Regional Water Board's review of the Delta Mercury Control Program or October 20, 2022, whichever date occurs first. For those MS4 Permittees that have not demonstrated achievement of WLA by December 31, 2030, the MS4s shall implement BMPs consistent with an approved updated Management Plan that shall outline BMPs and schedule to reduce discharges of methylmercury to ultimately attain the WLA.
b. Receiving water monitoring and/or other information, as authorized by the Executive Officer, that reasonably demonstrates attainment with the WLA.
c. Attainment of WLAs within the discharge (monitoring representative of the MS4 discharge may be used with Executive Officer approval).
d. Permanent cessation of discharges from the Permittee's MS4 to receiving waters.

Clear Lake Nutrients TMDL

The Clear Lake Nutrients TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Central Valley Regional Water Board has determined that the Cities of Clearlake and Lakeport, and the County of Lake, Traditional MS4s, are sources of "storm water" subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations:

The County of Lake, City of Clearlake and City of Lakeport have a combined wasteload allocation of 2,000 kg phosphorus/yr, as an average annual load (five year rolling average).

Deliverables/Actions Required:

To comply with the WLAs established in this TMDL, the Phase II entities shall comply with the provisions of this Order. Specific actions taken to comply with this TMDL will be documented in the Annual Report along with a discussion on the effectiveness of the BMPs implemented and actions taken to improve the effectiveness in meeting the WLAs.

The permittees will also conduct monitoring to show compliance with the TMDL based upon a submitted Monitoring Plan. As an alternative, the permittees may participate in a regional monitoring program, upon Executive Officer approval.

The deadline for attainment of WLAs is June 19, 2017. Therefore, the WLA are effective immediately. The Cities of Clearlake and Lakeport, and the County of Lake may request a Time Schedule Order from the Regional Water Board. A Regional Water Board's issuance of a Time Schedule Order will establish an implementation schedule for the Permittee to comply with the TMDL requirements, and will supersede the deadlines referenced in this Order.

Demonstration of Compliance with Effluent Limitations Associated with Phosphorus Wasteload Allocations

Compliance with the effluent limitations in Section C.1 of this permit associated with the phosphorus wasteload allocation may be demonstrated by any one of the following methods:

a. Receiving water monitoring and/or other information, as authorized by the Executive Officer, that reasonably demonstrates attainment with the WLA.
b. Attainment of WLA within the discharge (monitoring representative of the MS4 discharge may be used with Executive Officer approval).
c. Permanent cessation of discharges from the Permittee's MS4 to receiving waters.

d. For those Permittees that have not demonstrated achievement of WLA by the attainment date (shown above), implementation of BMPs consistent with an Executive Officer-approved Management Plan that outlines BMPs and a schedule to reduce discharges of phosphorus to ultimately attain the WLA is required. Management Plans shall be developed by [Hard Date: 12 months from Adoption]. The Central Valley Regional Water Board Executive Officer may require revisions to the Management Plan if the Management Plan is not likely to attain the waste load allocations.

LAHONTAN REGIONAL WATER BOARD TMDLs

Middle Truckee River Watershed and Placer, Nevada and Sierra Counties Sediment TMDL

The Middle Truckee River Watershed and Placer, Nevada and Sierra Counties Sediment TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

Phase II Entities:

The Lahontan Regional Water Board has determined that the City of Truckee and the County of Placer, Traditional MS4s, are sources of “Urban areas” subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations:

The following wasteload allocations are applicable:

Urban Areas Wasteload Allocations:

4,936 tons per year of total suspended sediment load.

Non-urban Wasteload Allocations:

35,392 tons per year of total suspended sediment load.

Deliverables/Actions Required:

To comply with the WLAs of this TMDL, the permittees will be required to track and report on the amount of road sand, used for de-icing, used and recovered. The permittees will also rehabilitate old dirt roads to control erosion and to prevent erosion from legacy sites. They will also implement an Education and Outreach program for ski areas within their jurisdiction for sediment and erosion control. They will also be required to continue implementation of their municipal monitoring program.

Attainment of wasteload allocations will be determined based on a target of 25 milligrams per liter, or less, of suspended sediment. The estimated time frame for meeting the numeric targets and achieving the TMDL is 20 years (i.e. 2028).

SANTA ANA REGIONAL WATER BOARD TMDLs

San Diego Creek, Upper and Lower Newport Bay Organochlorine Compounds TMDL

The Newport Bay watershed is a highly urbanized watershed. The two nontraditional MS4s in this watershed, Orange County Fairgrounds and University of California - Irvine, are both tributary to traditional MS4s that discharge to the Santa Ana Delhi Channel and San Diego Creek Reach 1, respectively. The implementation requirements and wasteload allocations assigned to the traditional MS4s in the TMDLs that have been established for the Newport Bay

watershed, including both Regional Board adopted and USEPA promulgated TMDLs that are still in effect, therefore apply to these two nontraditional MS4s.

Phase II Entities:

The Santa Ana Regional Water Board has determined that the University of California, Irvine and the Orange County Fairgrounds, Non-Traditional MS4s, are sources of "Urban runoff" subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations:

Not Applicable

Deliverables/Actions Required:
The Santa Ana Regional Board has determined that the contribution by these non-traditional MS4s into the MS4 systems currently owned and operated by agencies implementing storm water programs regulated by Phase I permits are minimal in comparison. Therefore, the Santa Ana Regional Water Board has determined that for these non-traditional entities, consultation with Regional Water Board staff is needed to determine proposed actions and evaluations that will satisfy the goals and assumptions of the TMDL.

The TMDL specifies that the final WLAs are to be achieved by December 31, 2020.

Lake Elsinore and Canyon Lake Nutrients TMDL
The former March Air Reserve Base was downsized and became known as March ARB. March ARB is an active military base that covers 2,300 acres. Activities in the base proper includes military activities such as air refueling, air cargo, air reconnaissance, military interceptors, military housing, recreational and dining facilities, commercial air cargo, training facilities, schools, operations centers for troop transport and industrial, including airport operations. Land use activities are under Base commander authority. The Base is currently covered under an individual industrial storm water permit for their industrial operations and is a stakeholder under the Lake Elsinore/Canyon Lake TMDL. In addition to industrial permit monitoring, the Base monitors their compliance with the TMDL. Regional Water Board staff determined that Phase II permit coverage is an appropriate permit to address the pollutants and flows generated from Base operations. Development and redevelopment post construction controls are of particular importance to be incorporated into the base's storm water program through Phase II permit coverage.

Phase II Entities:

The Santa Ana Regional Water Board has determined that the March ARB, a Non-Traditional MS4, is a source of "Urban discharges" subject to this Order and is responsible for implementing the requirements of this TMDL.

Wasteload Allocations: (shared for all Urban discharges)
Final WLA for Total Phosphorus (expressed as 10 year rolling average):
124 kilograms per year

Final WLA for Total Nitrogen (expressed as 10 year rolling average):
349 kilograms per year

Deliverables/Actions Required:
March ARB has already committed to cooperative implementation actions, monitoring actions, special studies and implementation actions jointly with other responsible agencies as an active

paying member of the Lake Elsinore/Canyon Lake TMDL Task Force. Therefore, continuation of this commitment will be required as part of this TMDL.

The TMDL specifies that the final WLAs are to be achieved by December 31, 2020.

Middle Santa Ana River Bacterial Indicator TMDL

The Middle Santa Ana River Bacterial Indicator TMDL assigns a wasteload allocation appropriate for implementation through this Order as specified below.

The University of California, Riverside, the California Institute for Women and the California Institute for Men are nontraditional MS4s that are tributary to traditional MS4s that discharge to the Middle Santa Ana River (MSAR). The Regional Board adopted a Total Maximum Daily Load for bacterial indicators (E. coli) in 2005 that requires the Cities' and Counties' MS4 systems tributary to the MSAR to develop and implement Comprehensive Bacterial Reduction Plans (CBRP) to achieve attainment of the Wasteload allocations contained in the TMDL. A wide variety of entities, from traditional MS4s, to dairies, Caltrans and water and wastewater agencies have formed a stakeholder group that conduct the Regional TMDL compliance monitoring and conduct studies on the effectiveness of the BMPs implemented through the CBRP.

Phase II Entities:

The Santa Ana Regional Water Board has determined that the California State Polytechnic University, Pomona[49], the University of California, Riverside, the California Institute for Men, the California Institute for Women, and the California Rehab Center, Non-Traditional MS4s, are sources of "Urban runoff" subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations:

The following are receiving water allocations. Logarithmic mean values shall be calculated based on a minimum of 5 samples during any 30 day period.

Dry Season (April 1 through October 31) to be achieved by December 31, 2015:

E. coli

5–sample/30–day Logarithmic Mean less than 113 organisms per 100 milliliters, and not more than 10% of the samples exceed 212 organisms per 100 milliliters for any 30–day period.

Wet Season (November 1 through March 31) to be achieved by December 31, 2025:

E. coli

5–sample/30–day Logarithmic Mean less than 113 organisms per 100 milliliters, and not more than 10% of the samples exceed 212 organisms per 100 milliliters for any 30–day period.

Deliverables/Actions Required:

In order to meet the goals and assumptions of this TMDL, Regional Water Board staff has determined that the entities listed may either: 1) develop and implement a facility-specific

[49] The Fact Sheet is not consistent with the final amendment adopted by the State Water Board. (See Attachment G) California State Polytechnic, Pomona should have been removed.

CBRP or 2) participate in an updated watershed-based CBRP. The CBRP will discuss the various BMPs that will be employed and whether or not they are effective in meeting the WLA for both the dry and wet seasons.

The implementation of a Regional Water Board approved facility-specific or watershed-based CBRP will constitute compliance with the TMDL.

SAN DIEGO REGIONAL WATER BOARD TMDLs

Attachment G provides specific provisions for implementing the load allocations (LAs) and wasteload allocations (WLAs) of Total Maximum Daily Loads (TMDLs) adopted by the San Diego Water Board and approved by OAL and USEPA in which Phase II dischargers are identified as responsible for discharges and subject to the requirements of the TMDLs. Each TMDL for which Phase II dischargers are identified as responsible for discharges was publicly noticed as part of the TMDL development and adoption. Additionally, San Diego Water Board staff met with each enrolled Phase II discharger to discuss the requirements of the Phase II permit and their responsibilities for compliance with the TMDLs. Therefore, Phase II dischargers were informed that their responsibilities for compliance with the TMDL will be implemented through their enrollment in the Phase II Permit.

The following requirements for implementing the TMDLs in this Order are based on and consistent with the assumptions and requirements of any available adopted and approved TMDLs that have been incorporated into the San Diego Regional Water Board's Basin Plan.

A modification to a TMDL in the Basin Plan requires a Basin Plan amendment, which includes a separate public process. If and when the TMDLs are modified in the Basin Plan, the San Diego Regional Water Board will notify the State Water Board of the need to revise the requirements of Order 2013-0001-DWQ in accordance with the Basin Plan amendment as soon as possible.

The Chollas Creek Dissolved Metals TMDL was removed from this Order because all named entities in Attachment G, as adopted, were Phase I entities and thus not subject to the requirements of this Order.

Bacteria Project I TMDL – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)

The Bacteria Project I Total Maximum Daily Load (Bacteria I TMDL) addresses the Clean Water Act section 303(d) bacteria impairment listings for 20 impaired water quality limited segments within the following watersheds or portions of watersheds: Laguna/San Joaquin, San Juan, San Clemente, San Luis Rey, San Marcos, San Dieguito River, Miramar Creek, Scripps HA, Tecolate HA, San Diego River, and Chollas Creek.

The greatest causes of waterbody impairments in the San Diego Region in 2002 were elevated bacteria levels and subsequent beach closures. The presence of pathogens and the probability of disease are directly correlated with the presence of human waste sources and currently measured by the density of indicator bacteria (fecal coliform, total coliform, and enterococcus) in waters used for recreation. When the Bacteria I TMDL wasteload allocations (WLAs) are achieved, health risks associated with pathogens are expected to be minimal.

Phase I and Phase II municipal dischargers are the most significant controllable sources of bacteria. With respect to Phase II dischargers, the Bacteria I TMDL is "implemented primarily

by requiring compliance with the existing general WDRs and NPDES requirements that have been issued for Phase II MS4 discharges." Section F.5 of this Order requires dischargers within the impaired water quality segments identified in the Bacteria I TMDL to develop and/or implement a Storm Water Pollution Prevention Plans (SWPPP). This Order also requires enrolled Phase II dischargers to identify all potential bacteria contributions from their site and implement pollutant control strategies and BMPs to reduce bacteria. Non-storm water discharges are not authorized unless they meet the requirements as set forth in section B of this Order.

Because Phase II dischargers are required to develop SWPPPs with BMP implementation strategies to reduce the bacteria loads in accordance with the TMDL implementation schedule, Phase II MS4 dischargers that are enrolled and in compliance with the provisions of this Order are deemed in compliance with the Bacteria I TMDL unless they are identified as a significant source of bacteria as discussed below. The legally responsible parties (LRPs) must demonstrate that the discharges from the Phase II facility do not contribute to the bacteria wet and dry mass load impairments through monitoring data. The Regional Water Boards retain the authority to require Phase II MS4 dischargers to revise their SWPPPs, EPA Reports, or monitoring programs as well as to direct a discharger to obtain an individual NPDES permit if additional controls are necessary.

Phase II Entities:

The Bacteria Project I TMDL identifies responsible dischargers contributing to indicator bacteria exceedances in REC-1 designated receiving waters for 20 listings of beaches and inland water bodies. The specific Phase II entities within the impaired water quality segments identified in the Bacteria I TMDL are: the United States Marine Corps Base Camp Pendleton, the University of California, San Diego, San Diego State University, California State University, San Marcos, the 22nd Agricultural Association, the Marine Corps Air Station Miramar, the North County Transit District and the San Diego Veterans Administration Medical Center, all Non-Traditional MS4s.

Wasteload Allocations:

The Bacteria Project I TMDL basin plan amendment assigned the total WLA for each indicator bacteria for wet and dry mass loading to receiving waters to all identified Phase II dischargers.

The allowable load consists of two parts: 1) the bacteria load that is calculated based on the San Diego Regional Water Board's REC-1 WQOs and, 2) the bacteria load that is associated with the allowable exceedance frequency (i.e. allowable exceedance days). Allowable exceedance days are calculated based on the allowable exceedance frequency and total number of wet days in a year.

Dry Weather WLA

The Bacteria I TMDL assumes no discharge of surface runoff or bacteria from agricultural, open space, and CalTrans land uses. As such, the dry weather WLA was assigned entirely to the Municipal MS4s (Phase I and Phase II). Table, below, excerpts the dry weather WLAs assigned for Municipal MS4s (Phase I and Phase II) within the impaired water quality segments identified in the Bacteria I TMDL.

Wet Weather WLA

The Wet Weather TMDL discharges of surface runoff and bacteria was assigned to all land use allocations. The WLAs for Caltrans, agricultural, and open space were set to the existing

bacteria loads predicted for wet weather. The remainder of the wasteload allocation was assigned to Municipal MS4s (Phase I and Phase II). Table, below, excerpts the wet weather WLAs assigned for Municipal MS4s (Phase I and Phase II) within the impaired water quality segments identified in the Bacteria I TMDL.

Table 1: Excerpts of Wasteload Allocations (WLAs)

[All units are Billion Most Probable Number/year]

Watershed	Fecal Coliform Wet Weather	Fecal Coliform Dry Weather	Enterococcus Wet Weather	Enterococcus Dry Weather	Total Coliform Wet Weather	Total Coliform Dry Weather
San Joaquin Hills /Laguna Beach HSAs (901.11 and 901.12)	37,167	227	66,417	40	880,652	1,134
Aliso HSA (901.13)	477,069	242	735,490	40	8,923,264	1,208
Dana Point HSA (901.14)	152,446	92	219,528	16	3,404,008	462
Lower San Juan HSA (901.27)	1,156,419	1,665	1,385,094	275	16,093,160	8,342
San Clemente HA (901.30)	192,653	192	295,668	33	3,477,739	958
San Luis Rey HU (903.00)	914,026	1,058	1,300,235	185	14,373,954	5,289
San Marcos HA (904.50)	6,558	26	23,771	5	298,430	129
San Dieguito HU (905.50)	798,175	1,293	1,763,603	226	16,660,538	6,468
Miramar Reservoir HA (906.10)	6,703	7	8,109	1	171,436	36
Scripps HA (906.30)	101,253	119	232,035	21	3,447,764	594
Tecolote HA (906.5)	126,806	234	471,211	39	5,136,598	1,171
Mission San Diego/Santee HSAs (907.11 and 907.12)	221,117	1,506	890,617	248	10,790,520	7,529

Watershed	Fecal Coliform Wet Weather	Fecal Coliform Dry Weather	Enterococcus Wet Weather	Enterococcus Dry Weather	Total Coliform Wet Weather	Total Coliform Dry Weather
Chollas HSA (908.22)	252,479	398	802,918	66	9,880,784	1,991

Deliverables/Actions Required:
Implementation actions applicable to Phase II dischargers and the relevant attainment deadlines set forth in the TMDL are provided below.

Bacteria Project I TMDL Actions and Deadlines Table

Note A: Wet: single sample maximum REC-1 WQOs Dry: 30-day geometric mean REC-1 WQOs. The percent reduction for each compliance year applies to the total number of samples taken that comply with Resolution No. R9-2010-0001. The maximum allowable percent exceedance frequency for the single sample maximum (wet weather days only) is 22% (Resolution No. R9-2010-0001, Finding 10). For dry weather days, there is no maximum allowable exceedance and it is set at 0%. The Compliance Year percent reductions are based on the total number of samples taken. For Example: If in Year 5 of the compliance schedule, 100 samples are taken, only 50% of those samples can exceed the single sample maximum for wet weather by 22% of the maximum allowable percent exceedance frequency for the single sample maximum. By Year 10+, no samples can exceed the Exceedance Frequency. Baseline years for wet and dry days shall be as identified in Order No R9 2015-0001 Attachment E for the Bacteria I TMDL.
Note B: Priorities are defined in Resolution No. R9-2010-0001, Attachment A, pg. 63-65.
Note C: Phase II MS4 enrolled under the State General Permit for Small MS4s or issued an individual NPDES permit, are considered a Municipal Discharger along with Phase I MS4s in this Implementation Milestone item.

Implementation Action	Responsible Party	Date
Submit annual progress reports or Update SWPPPs/SWMPS/LRPS in accordance with RB Accepted LRPs	Phase II Permittees	Upon Enrollment in General Permit
Meet Wet and Dry Weather Frequency Exceedance Milestones	Phase II MS4s	
50% Reductions Notes A, C – Priority Note B 1	Phase II MS4s	April 4, 2016
50% Reductions Notes A, C – Priority Note B 2	Phase II MS4s	April 4, 2017
50% Reductions Notes A, C – Priority Note B 3	Phase II MS4s	April 4, 2018
100% Reductions Notes A, C – Priority Note B 1,2,3	Phase II MS4s	April 2, 2021+

The Bacteria I TMDL also requires Phase II dischargers to take other actions to control their risk of bacteria discharges such as monitoring. Because Phase I MS4s often discharge directly into the receiving waters addressed by the TMDL, the Bacteria I TMDL states that Phase I MS4s are primarily responsible for conducting the TMDL compliance monitoring. However, Phase II MS4s are also responsible for monitoring to identify sources that may need additional controls to reduce bacteria loads. Enrollment in this Order satisfies these monitoring obligations because all Phase II MS4 dischargers assigned a WLA in a TMDL are required to conduct the monitoring in Attachment G pursuant to section F.5.i.

The Phase II Entities, listed above, must be in compliance with the final TMDL requirements according to the following attainment dates:

*The Wet Weather TMDL Attainment Date in parenthesis in the table below applies if the applicable Storm Water Pollution Prevention Plan does not include load reduction programs for other constituents (e.g. metals, pesticides, trash, nutrients, sediment, etc.) together with bacteria load reduction requirements of this TMDL.

Constituent	Dry Weather TMDL Attainment Date	Wet Weather TMDL Attainment Date*
Total Coliform; Fecal Coliform; *Enterococcus*	April 4, 2021	April 4, 2031 (April 4, 2021)

A Storm Water Pollution Prevention Plan that includes a bacteria load reduction program is expected to include information similar to what is described in the section called Bacteria Load Reduction Plan Outline in Appendix P of the Final Technical Report to Order No. 2010-0001. A Storm Water Pollution Prevention Plan that includes a load reduction program for multiple constituents together with bacteria load controls is expected to include information similar to what is described in the section called Comprehensive Load Reduction Plan Outline in Appendix P of the Final Technical Report to Order No. 2010-0001. Some of the components described in both outlines may be satisfied through collaboration with the Phase I MS4 dischargers, as their efforts to comply with the Bacteria TMDL include implementing controls, monitoring, and reporting.

Los Peñasquitos Lagoon Sediment TMDL

The Los Peñasquitos watershed area (Hydrologic Unit (HU) 906.00) includes the Los Peñasquitos Lagoon, the Carroll Canyon Creek, Los Peñasquitos Creek, and Carmel Creek. The Los Peñasquitos Lagoon Sediment TMDL addresses the Clean Water Act section 303(d) sediment impairment for the lagoon for impacts resulting from rapid sedimentation and habitat loss.

Sediment is particulate organic and inorganic matter that is mobilized by erosion due to wind, precipitation or anthropogenic causes and carried by water. Sediment is a natural occurrence found in runoff from all locations in the watershed in varying concentrations. Concentrated flow with intensified velocities or volumes has the capability to magnify erosion rates resulting in rill erosion, gully erosion, and channel incision which correlates to an increased sediment supply into the Lagoon. Impacts from sediment in the Lagoon include reduced tidal mixing in lagoon channels, degraded and/or net loss of salt marsh vegetation, increased potential for flooding surrounding areas, increased turbidity, and constricted wildlife corridors.

Reducing erosion and concentrated flows by utilizing Best Management Practices (BMPs) that stabilize loose soil sources and/or retaining storm water onsite will decrease the impacts from excessive and rapid sediment transport into the lagoon.

Phase II Entities:

The San Diego Regional Water Board has determined that the Marine Corps Air Station, Miramar, the North County Transit District, the San Diego Veterans Administration Medical Center and the University of California, San Diego, Non-Traditional MS4s, are “Phase II MS4 permittees” subject to this Order and are responsible for implementing the requirements of this TMDL.

Wasteload Allocations:
The Los Peñasquitos Lagoon TMDL basin plan amendment assigned interim and final WLAs to all identified responsible parties. WLAs are expressed in effluent limitations. Interim effluent limitations are described in **Error! Reference source not found.** with a final effluent limitation of 2,580 tons/year assigned to all identified responsible parties. Responsible parties are jointly responsible for meeting these wasteload reduction allocations. As such, Phase II dischargers within the Los Peñasquitos watershed are required to either reduce site sediment loads to the receiving water body or demonstrating that the site discharges are not causing exceedances of the water quality based effluent limitations in **Error! Reference source not found.** (interim WQBELs) and the final WQBEL of 2,580 tons/year. Phase II dischargers are also required to sample for total suspended solids (TSS) concentrations and representative, or estimated, flow rates from discharge locations in addition to quantify contributions of sediment loads from their sites that cause or threaten to cause an exceedance of the effluent limitations in **Error! Reference source not found.** or the final WLA.

Interim WLAs:

Interim Water Quality Based Effluent Sediment Limitations Expressed as a Wet Season Load in MS4 Discharges from the Watershed to Los Peñasquitos Lagoon Table

*Phase I MS4s, Phase II MS4s, Caltrans, and general construction and industrial permit dischargers are jointly responsible for achieving the interim and final effluent limitations.

Interim Effluent Limitation #1	6,691 tons/wet season
Interim Effluent Limitation #2	5,663 tons/wet season
Interim Effluent Limitation #3	4,636 tons/wet season
Interim Effluent Limitation #4	3,608 tons/wet season

Final WLAs:
The final Watershed Wasteload Allocation (Watershed WLA) of 2,580 tons/year is assigned collectively to all of the responsible parties identified in the TMDL and represents all current point and nonpoint sources of sediment from the watershed to the Lagoon. Attainment of the Final Watershed WLA requires a 67% total load reduction of sediment from the watershed.

Deliverables/Actions Required:
The implementation actions applicable to Phase II dischargers and the relevant compliance deadlines set forth in the TMDL are provided below.

Implementation Action	Responsible Party	Date
Revision of SWPPPs	Construction, Industrial, and Phase II Permittees	July 14, 2015

Implementation Action	Responsible Party	Date
Meet Additional Monitoring Requirements: • Provide total suspended solids (TSS) concentrations and estimate of a representative flow rate from their facility discharge points during each wet season for one storm event of 0.5 inches or greater	Phase II MS4s, and general construction and industrial NPDES enrollees, and other WDR and NPDES permittees in the watershed.	July 14, 2015
Meet Additional Reporting Requirements: • Submit TSS concentrations and the representative flow estimate as a PDF attachment to SMARTS entitled *Los Peñasquitos Lagoon Sediment TMDL Monitoring* annually on July 14	All Phase II MS4s, general construction and industrial NPDES enrollees, and other WDR and NPDES permittees in the watershed.	July 14, 2015
Meet Interim Milestones: • 6,691 tons/wet season • 5,663 tons/wet season • 4,636 tons/wet season • 3,608 tons/wet season	All Phase I, Phase II MS4s, Caltrans, and general construction and industrial NPDES enrollees, and other WDR and NPDES permittees in the watershed.	December 31, 2019 December 31, 2023 December 31, 2027 December 31, 2029
Meet Final Milestone: • 2,580 tons/wet season	All Phase I, Phase II MS4s, Caltrans, and general construction and industrial NPDES enrollees, and other WDR and NPDES permittees in the watershed.	July 14, 2034

The Los Peñasquitos Lagoon Sediment TMDL requires all responsible parties to submit a Load Reduction Plan. All enrolled dischargers must identify all potential sediment contributions from their site, implement BMPs to reduce sediment and erosion, and sample discharges for flow rate and total suspended solids (TSS) to assess the facility's effect on the receiving water body and to inform the Phase I Watershed Management Area Water Quality Improvement Plan. A discharger's development or an update of a SWPPP in accordance with section F.5.f.4 satisfies the TMDL requirement to prepare a Load Reduction Plan because this Order requires enrolled dischargers to take actions to control their risk of sediment discharges. Additionally, non-storm water discharges are not authorized unless they meet the requirements as set forth in section B of this Order.

In addition to the monitoring requirements in sections E.13 (b) and E.15 (d) of the Order, Phase II dischargers are required to provide TSS concentrations and an estimate of a representative flow rate from their facility during each wet season for one storm event of 0.5 inches or greater. The Phase II discharger shall submit the TSS concentrations and representative flow estimates as a PDF attachment to SMARTS entitled Los Peñasquitos Lagoon Sediment TMDL Monitoring annually on July 14.

Monitoring and Reporting

The Los Peñasquitos Lagoon Sediment TMDL requires all Responsible Parties to contribute information regarding the amount of sediment discharged from their facilities[50]. This monitoring must address, at a minimum, representative flow rates and TSS concentrations whenever long-term discharges[51] occur. The monitoring program set forth in sections E.13 (b) and E.15 (d) of the General Permit only partially meets these requirements because the General Permit does not require dischargers to monitor for representative flow rates. Therefore, dischargers must conduct additional monitoring to that required in sections E.13 (b) and E.15 (d) of the General Permit to be in compliance with the Los Peñasquitos Lagoon Sediment TMDL.

Representative flow rate can be determined by using one of the following methods: 1) flow meter or 2) the float method. The float method is a field calculated estimate in accordance with the US EPA's NPDES Storm Water Sampling Guidance Document[52] for estimating flow rates[53]. To conduct the float method, the Discharger determines the cross sectional area of the representative discharge by estimating the flow depth and flow width in feet. The flow path must be a minimum of five feet in length. For ponded or no flow, a discharger shall record a flow rate of zero. The velocity[54] is estimated by measuring the time it takes the float (e.g. a floatable object, such as an orange peel or similar object), to float between point A and point B[55]. The flow rate shall be estimated for two 15 minute intervals.

The purpose of determining the flow rate is to calculate[56] the amount (i.e. load) of sediment being discharged from the site and informing a discharger as to whether their discharge is in compliance with the watershed WQBEL. Determination of the TSS concentrations and flow rate shall be conducted at a discharger's site during the wet season (October 1 through April 30) during one storm event of 0.5 inches or greater. Regardless of the method used to

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[50] Resolution No. R9-2012-0033, Technical Report, p. A-9

[51] The TMDL does not define the duration of a rainfall event that would result in a "long term discharge" that is required to be monitored. Based on the TMDL's findings and source identification, increased flow and sedimentation impact the lagoon primarily during wet weather rainfall events. The San Diego Water Board has determined that the definition of "a long term discharge" is equivalent to a storm event that is 0.5 inches or greater because this size of a rain event is likely to result in the type of discharge that impacts the lagoon.

[52] USEPA. NPDES Storm Water Sampling Guidance Document, http://www3.epa.gov/npdes/pubs/owm0093.pdf, EPA 833-8-92-001, July 1992, pp.49-50, sections 3.2.2 - 3.2.4, Estimating Total Flow Volumes for the Sampled Rain Event, exhibits 3-8,3-9, Estimating Flow Rates – Float Method

[53] Flow rate (cubic foot per second) = velocity (foot per second) x Area (square foot); cubic foot per second = cubic foot per second; Area = flow depth (foot) by flow width (foot).

[54] Velocity = length from point A to point B divided by time of travel

[55] Example: flow length = 5 foot; time of travel from point A to point B = 30 seconds. Flow depth is equal to 0.5 foot. Flow width = 1 foot. V= 5 foot per 30 seconds = 0.17 foot per second. Area=0.5 foot times 1.0 foot = .5 square foot. Flow rate = Q = 0.17 foot per second x 0.5 square foot = 0.085 cubic foot per second

[56] Load, or mass of a pollutant, is calculated by multiplying flow (Q) cubic foot per second times pollutant concentration (milligram per liter); US EPA NPDES Permit Writer's Manual, pp. 6.24 -6.25

determine a representative flow rate, flow rates shall be completed concurrently with the TMDL's required TSS sampling.

Dischargers shall report results of all required monitoring annually as part of their Annual Report. Specifically, flow and TSS data shall be reported as a PDF attachment to SMARTS with the Annual Report entitled Los Peñasquitos Lagoon Sediment TMDL Monitoring. Pursuant to section E.16, as amended, of this General Permit, Annual Reports are due on or before October 15. Submittal of the General Permit Annual Report meets the TMDL requirement to inform the Phase I MS4s in the Los Peñasquitos Watershed Management Area their efforts to achieve attainment of the watershed WLA and support restoration of the Lagoon salt marsh.

Compliance Determination

The Los Peñasquitos Lagoon Sediment TMDL includes interim attainment milestones for Phase II dischargers, in addition to the final attainment milestone date of July 14, 2034. The Los Peñasquitos Lagoon TMDL staff report states that "it is the responsibility of the Phase I MS4 Copermittees to assume the lead role in coordinating and carrying out the necessary actions, compliance monitoring requirements, and successful implementation of the adaptive management framework required as part of this TMDL." Therefore, Phase II MS4 dischargers in the Los Peñasquitos watershed "are assumed to be in compliance with the TMDL and their contribution to the total WLA if they:

1) Are enrolled in this Order; and
2) Have updated their SWPPP to include the BMPS to be implemented with monitoring required to assess the facility or property effects on the WLA; and
3) Are in compliance with this Order, and
4) Are conducting facility and monitoring assessments as required by this Order and that monitoring shows the Phase II MS4 responsible party discharges are not contributing to the sediment impairment in the Lagoon.

Phase II dischargers are encouraged to coordinate with Phase I Copermittees to meet the applicable TMDL load reduction requirements in Attachment G using an adaptive framework approach. Phase I Copermittees described the adaptive framework approach for each Watershed Management Area in the San Diego Region in a watershed specific Water Quality Improvement Plan. Coordinated efforts by both Phase I and Phase II dischargers will accomplish the wasteload reductions required in the TMDLs faster and achieve the ultimate goal of improving water quality as soon as possible.

Moreover, the San Diego Regional Water Board retains the authority to require Phase II dischargers within the Los Peñasquitos watershed to revise their SWPPPs, ERA Reports, or monitoring programs as well as to direct a discharger to obtain an individual NPDES permit if additional controls are necessary to meet the requirements of this TMDL.

XIV. STORM WATER MANAGEMENT PROGRAM FOR NON-TRADITIONAL MS4

Differences between Traditional and Non-traditional MS4s

Because of the differences between Traditional and Non-traditional MS4s this Order includes Section F to address their specific management structure.

Non-Traditional Small MS4s required to comply with this Order are identified in Attachment B.

Non-traditional MS4s differ from cities and counties, because most potential sources of illicit discharges and storm water pollution are associated with activities under their direct operational control.

Some Non-traditional MS4s may also lack the legal authority or employ a different type of enforcement mechanism than a city/county government to implement their storm water program.

Certain Non-traditional Small MS4s such as Department of Defense and Department of Corrections and Rehabilitation Permittees required exemption from certain provisions due to security risks and/or compromised facility security.

Program Management – Applicable to all Non-traditional MS4 Categories Legal Authority: Clean Water Act § 40 CFR 122.26(d)(2)(i) and 40 CFR 122.34(b)(3)(ii)(B), (b)(4)(ii)(A), and (b)(5)(ii)(B).
MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001; MS4 Program Evaluation Guidance, U.S. EPA, EPA-833-R-07-003

Program Management
Program Management is essential to ensure that all elements of the storm water program are implemented on schedule and consistent with the Order requirements.

See Online Annual Reporting for further discussion later in this section.

Legal Authority
Legal authority to control discharges into a Permittee's storm sewer system is critical for compliance. Most Non-traditional MS4s lack the legal authority or employ a different type of enforcement mechanism than a city or county government to implement its storm water program. To the extent allowable under State and federal law, this Order requires each Non-traditional MS4 to operate with sufficient legal authority to control discharges into and from its MS4. The legal authority may be demonstrated by a combination of statutes, permits, contracts, orders, and interagency agreements. Non- traditional MS4 Permittees also do not generally have the authority to impose a monetary penalty. Although these differences exist, just like Traditional MS4s, Non- traditional MS4s must have the legal authority to develop, implement, and enforce the program.

Coordination
This Order allows Non-traditional MS4s to coordinate their storm water programs with other entities within or adjacent to their MS4 and allows the concept of a Separate Implementing Entity. A Separate Implementing Entity allows Permittees to leverage resources and skills. Additional information regarding SIEs is discussed later in this section.

Education and Outreach Program
Legal Authority: Clean Water Act § 40 CFR 122.34(b)(1).

MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001

Because the population served by most Non-traditional MS4s will generally be served by the public education and outreach efforts of the local jurisdiction, the most useful supplement to those education and outreach efforts would be to label the Non-traditional MS4 catch basins. However, some Non-traditional MS4s such as universities have tenants and residents that may not be as effectively served by the local jurisdiction's public education and outreach program,

therefore a separate education and outreach program may be needed. Where the local jurisdiction's public education and outreach efforts do effectively target and reach these tenant and resident populations, the Non- traditional MS4s are not expected to duplicate those efforts.

Some Non-traditional MS4s are well suited for regional education and outreach. For example, school districts often have several schools located with a watershed or regional boundary. This Order allows Non-traditional MS4s to comply with the Education and Outreach provisions through a regional collaborative effort.

Regional outreach and collaboration requires the Permittees to define a uniform and consistent message, deciding how best to communicate the message, and how to facilitate behavioral changes.

Public Involvement and Participation
Legal Authority: Clean Water Act § 40 CFR 122.34(b)(2)).

MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001

Non-traditional MS4s have the same responsibilities as Traditional MS4s to ensure the storm water program is publicized and must involve the population they serve in the development of the program. However, the most effective BMP for Non-traditional MS4s is to provide up-to-date information about the storm water program online if the Non-traditional MS4 maintains a website, or the Non-traditional MS4 Permittee may choose to post information about their program on the local jurisdiction's website.

Illicit Discharge Detection and Elimination Program
Legal Authority: Clean Water Act § 40 CFR 122.26(d)(2)(iv)(B)

MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001

The federal Phase II regulations require all MS4s to develop a process to trace the source of illicit discharges and eliminate them. The regulations also state that appropriate enforcement procedures and actions must be included in this process.

Unlike Traditional MS4s, Non-traditional MS4s have direct control of their own staff and contractors. Therefore, the enforcement provisions identified in the Illicit Discharge Detection and Elimination program are often not applicable to Non-traditional MS4 Permittees. Non-traditional MS4 Permittees should address illicit non-storm water discharges through the implementation of a Spill Response Plan However, Non- traditional MS4 Permittees often comply with existing state/federal regulations that required a Spill Response Plan or Hazardous Materials plan that identifies notification procedures for other operators or local agencies and includes details that are similar if not the same as a Spill Response Plan. Therefore, to leverage resources and maximize efficiencies the requirements in this Order recommend utilizing existing documents if that document contains the same information.

Construction Site Storm Water Runoff Control and Outreach Program
The purpose of this program component is to prevent sediment and other pollutants from entering the Non-traditional MS4 during the construction phase of development projects. In general, Non-traditional MS4 Permittees will obtain coverage under, and comply with, the CGP for their own construction projects. To the extent that they have the legal authority, Non-traditional MS4s must also require other entities discharging to their MS4 to obtain coverage under and comply with the CGP during the construction phase of their projects.

This Order relieves Non-traditional MS4 Permittees from development and implementation of a complete construction storm water runoff control program. This Order does require education and outreach to staff, construction site operators and contractors on how to control construction storm water runoff.

The CGP is inherently a robust permit with stringent reporting requirement for any construction project disturbing one acre or more in California. Often, Non-traditional MS4s have a few construction projects occurring at once such as those in a City or County. There are, however, very few Non-traditional MS4s that have dozens of active construction sites. Further, Non-traditional MS4 Permittees are often both the owner and contractor of a construction project. Finally, municipal governments must review and approve erosion and sediment control plans prior to the issuance of grading permits. Most all Non-traditional MS4s do not require approval from local municipalities prior to construction activity. Conditioning of a construction project is usually conducted in-house by Non-traditional MS4 Permittee staff. If contractors are brought in to conduct construction activity, this Order requires Non-traditional MS4 Permittees to include “bullet proof” contract language ensuring construction operators or contractors comply with the CGP and implement appropriate BMPs.

Pollution Prevention and Good Housekeeping Program
Legal Authority: Clean Water Act § 40 CFR 122.34(b)(6)

MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001

Non-traditional MS4s have the same responsibilities as Traditional MS4s to prevent or reduce storm water pollution generated by their own operations, to train employees about pollution prevention/good housekeeping practices, and to identify appropriate measures to prevent or reduce the amount of storm water generated by their operations.

Post-Construction Storm Water Management Program
Legal Authority: Clean Water Act § 402(p)(3)(b); 40 C.F.R. § 122.34(b)(5).

MS4 Permit Improvement Guide, U.S. EPA, April 2010, EPA 833-R-10-001; U.S. EPA Incorporating Environmentally Sensitive Development into Municipal Stormwater Programs, EPA 833-F-07-011

This Order has specific site design and LID requirements for all projects. The LID requirements emphasize landscape-based site design features that are already required elsewhere (e.g., the California Water Efficient Landscape Ordinance). The goal during this permit term is to develop runoff retention and hydromodification control criteria that are keyed to watershed processes. Watershed management zones will be delineated by the State Board during this permit term. The Watershed management zones will be used to identify applicable areas and appropriate criteria for runoff retention and hydromodification control. Regional Boards that have approved watershed process- based criteria for post-construction will be permitted to continue requiring Permittees to implement these criteria.

Total Maximum Daily Load (TMDL)
The Order includes Attachment G, which identifies only those approved TMDLs in which storm water or urban run-off is listed as a source. In addition, Attachment G identifies Permittees subject to TMDLs or assigned waste load allocation. If Non-traditional MS4 Permittees have been identified in Attachment G, they must implement the specific TMDL permit requirements.

Program Effectiveness Assessment
Non-traditional MS4s have the same responsibilities as Traditional MS4s to conduct quantitative evaluation of their storm water program.

Online Annual Reporting
Non-traditional MS4s have the same responsibilities as Traditional MS4s to submit online Annual Reports via SMARTS.

Separate Implementing Entity
Legal Authority: Clean Water Act § 40 CFR 122.35

This Order allows a Regulated MS4s to rely on a Separate Implementing Entity to meet permit requirements, as allowed by U.S. EPA in the Phase II regulations. Reliance on Separate Implementing Entity may be particularly beneficial for Non-Traditional MS4s. An example is a community service district that is charged with creating and implementing a municipal storm water program.

Co-application and cooperative implementation of the storm water program by any Permittee with another Permittee can maximize efficiency and reduce overall costs. Non-traditional MS4s are encouraged to co-apply with local jurisdictions and utilize shared resources to implement the storm water program. Additionally, co-application and cooperative storm water program implementation can achieve watershed-wide consistency.

A Permittee may rely on a Separate Implementing Entity to implement one or more program elements, if the Separate Implementing Entity can appropriately and adequately address the storm water issues of the Permittee. To do this, both entities must agree to the arrangement, and the Permittee must comply with the applicable parts of the Separate Implementing Entity's program.

In accordance with 40 Code of Federal Regulations, section 122.35(a)(3), the Permittee remains responsible for compliance with its permit obligations if the Separate Implementing Entity fails to implement the control measure(s) or any component thereof. Therefore, the entities are encouraged to enter into a legally binding agreement to minimize any uncertainty about compliance with the permit.

If the Non-traditional MS4 Permittee relies on a Separate Implementing Entity to implement all program elements and the Separate Implementing Entity also has a storm water permit, the Permittee relying on Separate Implementing Entity must still file an NOI via SMARTS, submit the appropriate fee and file online Annual Reports. Both parties must also submit to the appropriate Regional Water Board a certification of the arrangement. The arrangement is subject to the approval of the Regional Water Board Executive Officer prior to filing an electronic NOI via SMARTS.

School districts present an example of where a Separate Implementing Entity arrangement may be appropriate, either by forming an agreement with a city or with an umbrella agency, such as the County Office of Education. Because schools provide a large audience for storm water education the two entities may coordinate an education program. An individual school or a school district may agree to provide a one-hour slot for all second and fifth grade classes during which the city would make its own storm water presentation. Alternatively, the school could agree to teach a lesson in conjunction with an outdoor education science project, which may also incorporate a public involvement component. Additionally, the school and the city or

Office of Education may arrange to have the school's maintenance staff attend the other entity's training sessions.

XV. RELATIONSHIP BETWEEN THE ORDER AND THE STATEWIDE GENERAL PERMIT FOR DISCHARGES OF STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITY

In some cases, certain Non-traditional MS4s will be subject to both this Order and the IGP. The intent of both of these permits is to reduce pollutants in storm water, but neither permit's requirements totally encompass the other. This Order requires that Non- traditional MS4 operators address storm water program elements, while the IGP requires the development and implementation of a SWPPP for certain "industrial" activities as well as requiring specific visual and chemical monitoring.

In the Preamble to the Phase II regulations, U.S. EPA notes that for a combination permit to be acceptable, it must contain all of the requirements for each permit. Further, "when viewed in its entirety, a combination permit, which by necessity would need to contain all elements of otherwise separate industrial and MS4 permit requirements, and require NOI information for each separate industrial activity, may have few advantages when compared to obtaining separate MS4 and industrial general permit coverage." (64 Fed. Reg. 68781.) Where the permits do overlap, one program may reference the other. More specifically, the Good Housekeeping for Permittee Operations program element requires evaluation of Permittee operations, some of which may be covered under the IGP. The development and implementation of the SWPPP under the IGP will likely satisfy the Good Housekeeping requirements for those industrial activities. The Non-traditional MS4 storm water program may incorporate by reference the appropriate SWPPP.

There may be instances where a Non-traditional MS4 has, under the IGP, obtained coverage for the entire facility (rather than only those areas where industrial activities occur) and has developed a SWPPP that addresses all the program elements required by this Order. In these instances, the Non-traditional MS4 is not required to obtain coverage under this Order. The entity should, in such cases, provide to the appropriate Regional Water Board documentation that its SWPPP addresses all program elements.

XVI. USE OF PARTNERSHIPS IN MS4 PERMITS

Since the Phase II Rule applies to all small MS4s within an urbanized area regardless of political boundaries it is very likely that multiple governments and agencies within a single geographic area are subject to NPDES permitting requirements. For example, a city government that operates a small MS4 within an urbanized area may obtain permit coverage under this Order while other MS4s in the same vicinity (such as a County, other cities, public university, or military facility) may also be covered under this Order. All MS4s are responsible for permit compliance within their jurisdiction.

Given the potential for overlapping activities in close proximity, the State Water Board encourages MS4s in a geographic area to establish cooperative agreements in implementing their storm water programs, especially with receiving water monitoring. Partnerships and agreements between Permittees and/or other agencies can minimize unnecessary duplication of effort and result in efficient use of available resources.

Sharing resources can allow MS4s to focus their efforts on high priority program components. By forming partnerships, water quality can be examined and improved on a consolidated, efficient, watershed-wide scale rather than on a piece-meal, site-by-site basis.

XVII. REGIONAL BOARD DESIGNATIONS

Designation of additional Small MS4s outside of Urbanized Areas as Regulated Small MS4s may be made by the Regional Water Boards on a case by case basis. Case by case determinations of designation are based on the potential of a Small MS4's discharges to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts. The tables below includes designations recommend by the Regional Water Boards prior to adoption of this Order. The Regional Water Boards may continue to make case by case determinations of designation during the permit term by notification to the discharger (which shall include a statement of reasons for the designation) and following an opportunity for public review and comment.

Traditional Small MS4s

Place name	County	Regional Board	Justification
Crescent City	Del Norte	1	7500 population and in urbanized area
Bayview CDP	Humboldt	1	Adjacent to, but outside of Eureka city limits located in southern Humboldt Bay, in unincorporated Humboldt County. Designation of these areas is needed to address pollutant sources of urbanized and urbanizing areas within 303(d) listed watersheds
Cutten CDP	Humboldt	1	Adjacent to, but outside of Eureka city limits located in southern Humboldt Bay, in unincorporated Humboldt County. Designation of this area is needed to address pollutant sources of urbanized and urbanizing areas within 303(d) listed watersheds
Humboldt Hill CDP	Humboldt	1	Adjacent to, but outside of Eureka city limits located in southern Humboldt Bay, in unincorporated Humboldt County. Designation of this area is needed to address pollutant sources of urbanized and urbanizing areas within 303(d) listed watersheds
Myrtletown CDP	Humboldt	1	Adjacent to, but outside of Eureka city limits located in southern Humboldt Bay, in unincorporated Humboldt County. Designation of this area is needed to address pollutant sources of urbanized and urbanizing areas within 303(d) listed watersheds
Pine Hills CDP	Humboldt	1	Adjacent to, but outside of Eureka city limits located in southern Humboldt Bay, in unincorporated Humboldt County. Designation of this area is needed to address pollutant sources of urbanized and urbanizing areas within 303(d) listed watersheds
Ridgewood Heights USSA	Humboldt	1	Adjacent to, but outside of Eureka city limits located in southern Humboldt Bay, in unincorporated Humboldt County. Designation of these areas is needed to address pollutant sources of urbanized and urbanizing areas within 303(d) listed watersheds
Rosewood USSA	Humboldt	1	Adjacent to, but outside of Eureka city limits located in southern Humboldt Bay, in unincorporated Humboldt County. Designation of this area is needed to address pollutant sources of urbanized and urbanizing areas within 303(d) listed watersheds

Place name	County	Regional Board	Justification
Cloverdale CDP	Sonoma	1	There are urbanized areas within the County of Sonoma not covered under the Phase I Permit. These areas are located within the Russian River watershed, a 303(d) listed watershed. Currently, there is only limited storm water management in these areas, allowing the discharge of pollutants to the impacted water body. Storm water management is needed in these areas to reduce the pollutant loads and for early TMDL implementation
Forestville CDP	Sonoma	1	There are urbanized areas within the County of Sonoma not covered under the Phase I Permit. These areas are located within the Russian River watershed, a 303(d) listed watershed. Currently, there is only limited storm water management in these areas, allowing the discharge of pollutants to the impacted water body. Storm water management is needed in these areas to reduce the pollutant loads and for early TMDL implementation
Guerneville CDP	Sonoma	1	There are urbanized areas within the County of Sonoma not covered under the Phase I Permit. These areas are located within the Russian River watershed, a 303(d) listed watershed. Currently, there is only limited storm water management in these areas, allowing the discharge of pollutants to the impacted water body. Storm water management is needed in these areas to reduce the pollutant loads and for early TMDL implementation
Monte Rio	Sonoma	1	There are urbanized areas within the County of Sonoma not covered under the Phase I Permit. These areas are located within the Russian River watershed, a 303(d) listed watershed. Currently, there is only limited storm water management in these areas, allowing the discharge of pollutants to the impacted water body. Storm water management is needed in these areas to reduce the pollutant loads and for early TMDL implementation
Occidental CDP	Sonoma	1	There are urbanized areas within the County of Sonoma not covered under the Phase I Permit. These areas are located within the Russian River watershed, a 303(d) listed watershed. Currently, there is only limited storm water management in these areas, allowing the discharge of pollutants to the impacted water body. Storm water management is needed in these areas to reduce the pollutant loads and for early TMDL implementation
Yreka City	Siskiyou	1	Discharges to a TMDL listed waterbody and identified on Attachment G
Gonzalez City	Monterey	3	Greater than 5,000 population

Place name	County	Regional Board	Justification
Moss Landing CDP	Monterey	3	Proximity to ocean areas (Monterey Bay National Marine Sanctuary, including Elkhorn slough)
Blacklake CDP	San Luis Obispo	3	Proximity to urbanized area (Oceano, Arroyo Grande, Grover Beach and Nipomo)
Cayucos CDP	San Luis Obispo	3	Greater than 2,000 population and proximity to Pacific Ocean
Lake Nacimiento CDP	San Luis Obispo	3	Greater than 2,000 population and proximity to Lake Nacimiento (drinking water source)
San Miguel	San Luis Obispo	3	Greater than 2,000 population High Growth Rate (16.8%)
Shandon CDP	San Luis Obispo	3	High Growth Rate (31.3%)
Guadalupe City	Santa Barbara	3	Incorporated area exceeding 5,000 population
Hope Ranch CDP	Santa Barbara	3	Proximity to urbanized area
Mission Canyon CDP	Santa Barbara	3	Proximity to urbanized area
Mission Hills CDP	Santa Barbara	3	Proximity to urbanized area
Toro Canyon CDP	Santa Barbara	3	Proximity to urbanized area
Live Oak CDP	Santa Cruz	3	Greater than 5,000 population Discharges to a TMDL listed waterbody and identified on Attachment G
City of Avalon	Los Angeles	4	Proximity to sensitive water body
Colusa County	Colusa	5S	Discharges to a TMDL listed waterbody and identified on Attachment G

Place name	County	Regional Board	Justification
Amador County	Amador	5S	Currently, there is only limited storm water management in this area, allowing discharge of pollutants to waters of the State already impacted with multiple constituents and parameters. Storm water management is needed in these areas to reduce the pollutant loads prior to adoption of any TMDLs, which are typically not estimated to be completed until 2020 or thereafter in many cases. Additionally, several waterbodies or waterbody segments within or bounding Amador County are 303(d) listed for invasive species (Cosumnes River, above Michigan Bar), mercury (Pardee Reservoir, Camanche Reservoir), pH - High (Amador Lake, Bear River from Allen to Upper Bear River Reservoir), copper (Camanche Reservoir), and zinc (Camanche Reservoir) according to the 2010 CWA 303(d) list. Camanche Reservoir drains to Lower Mokelumne River. The Lower Mokelumne River (in Delta Waterways, eastern portion) is 303(d) listed for chlorpyrifos, copper, mercury, dissolved oxygen, unknown toxicity, and zinc. Both the Cosumnes and Mokelumne Rivers drain to the San Joaquin River, which is 303(d) listed for these same constituents and parameters. Many of these constituents are known to bind to various size sediment particles migrating into surface waters.

Non-Traditional Small MS4s

Place name	Category	Regional Board	Justification
Petaluma Coast Guard Training Center	Defense, Department of	1	Activities that could impact water quality, fueling, maintenance. Personnel that should be educated on how their activities effect water quality.
Alameda-Contra Costa Transit District (AC Transit)	Special District	2	The Alameda-Contra Costa Transit District (AC Transit) is a large special transit district like the Valley Transit Authority (VTA) and BART which are both already designated. In order to fully regulate both large bus storage and maintenance facilities and new development related to bus stops and plazas they need to be fully regulated under the Phase II stormwater permit, as they do not fall under the local city regulatory jurisdiction for all aspects of their operations.
AMTRAK	Special District	2	Within urbanized area
Bay Area Rapid Transit	Special District	2	Within urbanized area
CalTrain	Special District	2	Within urbanized area
Golden Gate Bridge, Highway and Transportation District	Special District	2	Within urbanized area
Valley Transit Authority	Special District	2	Within urbanized area
Port of Oakland	Port	2	Within urbanized area
Port of Redwood City	Port	2	Within urbanized area
San Jose Airport	Airport	2	Within urbanized area
Oceano Community Services District	Community Services District	3	Within urbanized area
Fort Ord Reuse Authority	Local Agency	3	Adjacent to urbanized area, Planned annexation into urbanized area
Fort Hunter Ligget, Army Garrison	Defense, Department of	3	Within urbanized area

Place name	Category	Regional Board	Justification
March Air Reserve Base	Defense, Department of	8	The former March Air Reserve Base was downsized and became known as March ARB. March ARB is an active military base that covers 2,300 acres. Activities in the base proper includes military activities such as air refueling, air cargo, air reconnaissance, military interceptors, military housing, recreational and dining facilities, commercial air cargo, training facilities, schools, operations centers for troop transport and industrial, including airport operations. Land use activities are under Base commander authority. The base is currently covered under an individual industrial storm water permit for their industrial operations and is a stakeholder under the Lake Elsinore/Canyon Lake TMDL. In addition to industrial permit monitoring, the Base monitors their compliance with the TMDL. We believe Phase II permit coverage is an appropriate permit to address the pollutants and flows generated from Base operations. Development and redevelopment post construction controls are of particular importance to be incorporated into the base's storm water program through Phase II permit coverage.

Place name	Category	Regional Board	Justification
March Joint Powers Authority[1]	March Joint Powers Commission	8	The March JPA is a federally recognized reuse authority for the former March Air Force base. It encompasses most of the 6, 500 acres of the former active duty March Air Force Base area and approximately 450 acres adjacent to the base in the industrial area of the City of Moreno Valley. March JPA also assumed the following authorities: 1 - Land Use Authority - Land use authority was transferred to March JPA from the County of Riverside, City of Riverside, and City of Moreno Valley. The March JPA has adopted development and building codes and standards. The March JPA General Plan has been developed by the March JPA in accordance with state statutes, as well as the associated Master Environmental Impact Report. The March JPA General Plan is designed to implement the March Final Reuse Plan and related activities. 2 - Airport Authority - March Inland Port Airport Authority (MIPAA), is a governing body under the governance umbrella of the March JPA. MIPAA is responsible for the development and operation of the March Inland Port (MIP), a joint use aviation facility targeted for air cargo operations. The developments approved by the March JPA to date included residential, commercial and industrial sources of pollutants. About 1/8th of the area has been developed. March JPA has the authority to develop its own MS4s within their jurisdiction and connect to MS4s owned/operated by Phase 1 permittees. Many of the functions resemble that of a local agency. Therefore, March JPA should be subject to the Phase II (or they can join our Phase 1).

[1] Note: This discharger was not designated in the final version of Attachment B of the Order adopted by the Board on February 5, 2013.

Place name	Category	Regional Board	Justification
Miramar Marine Corps Air Station	Defense, Department of	9	Within urbanized area
General Services Administration Facilities (GSA)[2]	Federal Facility	9	The site is the General Services Administration Facilities (GSA), located at 801 E. San Ysidro Blvd., San Ysidro, CA 92173 and is a federal facility. They are the owner and operator of a series of lateral drains which tie into a main open- trunk running and discharging along the border fence. They are responsible for the storm drains, including the new trunk slated for construction, and the entire system acts as a MS4. Additionally, GSA is the landlord of the world's busiest Land Port of Entry (LPOE). Located between San Diego and Tijuana, the San Ysidro LPOE supports 24 northbound vehicle lanes into the United States and six southbound lanes into Mexico. Every day, this land port serves over 50,000 northbound vehicles and 25,000 northbound pedestrians. GSA maintains border crossing services, as well as increasing efficiency, security, and safety for federal agencies and the traveling public. Looking to the future, the San Ysidro LPOE is undergoing a major expansion that will include a new northbound inspection facility, primary vehicle inspection booths, secondary inspection area, administration space, and a pedestrian processing facility. A new southbound inspection facility will also be developed, and Interstate 5 will be shifted to the west to align with Mexico's planned use of a reconstructed entry facility at the vacant Virginia Avenue/El Chaparral commercial facility.

[2] Note: This discharger was not designated in the final version of Attachment B of the Order adopted by the Board on February 5, 2013.

Place name	Category	Regional Board	Justification
Metropolitan Transit System (MTS)	Transportation Agency	9	The Metropolitan Transit Development Board (MTDB) was created in 1975 by the passage of California Senate Bill 101 and came into existence on January 1, 1976. In 2005, MTDB changed its name to the Metropolitan Transit System (MTS). MTS licenses and regulates taxicabs, jitneys, and other private for-hire passenger transportation services by contract with the cities of San Diego, El Cajon, Imperial Beach, La Mesa, Lemon Grove, Poway, and Santee.MTS provides bus and rail services directly or by contract with public or private operators. MTS determines the routing, stops, frequency of service, and hours of operation for its existing services. MTS does a significant amount of their vehicles' maintenance.
North County Transit District (NCTD)	Transportation Agency	9	North county Transit district (NCTD) owns and operates the Sprinter Rail located along 22 miles of the rail corridor (see attached file) and adjacent staging areas within the Cities of Oceanside, Vista, San Marcos and Escondido and within the County of San Diego. The project's totaldisturbed acreage is approximately 280 acres. Storm water runoff from the project discharges directly into Waters of the State, the Municipal Separate Storm Sewer System (MS4) and, ultimately discharging to Loma Alta Creek, Buena Vista Creek, Buena Creek, San Marcos Creek, Escondido Creek and unmanned tributaries. Beginning October 2007, during construction, the San Diego Water Board hadidentified significant violations of the Stormwater Permit (99-08- DWQ). NCTD threatens to continue to discharge waste (e.g. sediment and sediment-laden water) in violation of the Basin Plan Prohibitions.

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Attachment A

*Additional monitoring may be required if permittee discharges to a 303(d) listed waterbody
**The list of Regulated MS4s may be amended by the Executive Director consistent with the designation criteria list in the Order
***CDPs located within an existing NPDES permit area within an urbanized area are not required to file for separate coverage and pay separate fees
Monitoring Types: Ω = Water Quality Monitoring Options, λ = TMDL Attachment G Requirements, Δ = ASBS Special Protections

Place Name	County	RB	Permittee Type	Population 2010	Monitoring Type	Urbanized Area/ Urban Cluster Name	Designation Criteria
Amador County	Amador	5S	New				Regional Board Designation
Butte County	Butte	5R	Renewal		λ		Renewal
Chico City	Butte	5R	Renewal	86,187	λ	Chico, CA Urbanized Area	Renewal
Oroville City	Butte	5R	New	15,546		Oroville, CA Urban Cluster	High Population/Density
Paradise Town	Butte		New	26,218		Paradise, CA Urban Cluster	High Population/Density
Calaveras County	Calaveras	5S	Renewal				Renewal
Colusa County	Colusa	5S	New		λ		TMDL
Crescent City	Del Norte	1	New	7,643		Crescent City, CA Urban Cluster	Regional Board Designation
Cameron Park CDP	El Dorado	5S	New	18,228		Sacramento, CA Urbanized Area	Within Urbanized Area
Diamond Springs CDP	El Dorado	5S	New	11,037		Sacramento, CA Urbanized Area	Within Urbanized Area
El Dorado County	El Dorado	5S	Renewal				Renewal

Place Name	County	RB	Permittee Type	Population 2010	Monitoring Type	Urbanized Area/ Urban Cluster Name	Designation Criteria
El Dorado Hills CDP	El Dorado	5S	Renewal	42,108		Sacramento, CA Urbanized Area	Renewal
Placerville City	El Dorado	5S	Renewal	10,389		Placerville--Diamond Springs, CA Urban Cluster	Renewal
Kingsburg City	Fresno	5F	Renewal	11,382		Selma, CA Urban Cluster	Renewal
Reedley City	Fresno	5F	Renewal	24,194		Reedley--Dinuba, CA Urban Cluster	Renewal
Selma City	Fresno	5F	Renewal	23,219		Selma, CA Urban Cluster	Renewal
Coalinga City	Fresno	5F	New	13,380		Coalinga, CA Urban Cluster	High Population/Density
Mendota City	Fresno	5F	New	11,014		Mendota, CA Urban Cluster	High Population/Density
Parlier City	Fresno	5F	New	14,494		Parlier, CA Urban Cluster	High Population/Density
Sanger City	Fresno	5F	New	24,270		Sanger, CA Urban Cluster	High Population/Density
Arcata City	Humboldt	1	Renewal	17,231		Arcata-McKinleyville, CA Urban Cluster	Renewal
Bayview CDP	Humboldt	1	New	2,510		Eureka, CA Urban Cluster	Regional Board Designation
Cutten CDP	Humboldt	1	New	3,108		Eureka, CA Urban Cluster	Regional Board Designation
Eureka City	Humboldt	1	Renewal	27,191		Eureka, CA Urban Cluster	Renewal
Fortuna City	Humboldt	1	Renewal	11,926		Fortuna, CA Urban Cluster	Renewal
Humboldt Hill CDP	Humboldt	1	New	3,414		Eureka, CA Urban Cluster	Regional Board Designation

Place Name	County	RB	Permittee Type	Population 2010	Monitoring Type	Urbanized Area/ Urban Cluster Name	Designation Criteria
Humboldt County	Humboldt	1	New		Δ		ASBS
McKinleyville CDP	Humboldt	1	Renewal	15,177		Arcata-McKinleyville, CA Urban Cluster	Renewal
Myrtletown CDP	Humboldt	1	New	4,675		Eureka, CA Urban Cluster	Regional Board Designation
Pine Hills CDP	Humboldt	1	New	3,108		Eureka, CA Urban Cluster	Regional Board Designation
Ridgewood Heights USSA	Humboldt	1	New				Regional Board Designation
Rosewood USSA	Humboldt	1	New				Regional Board Designation
Trinidad City	Humboldt	1	New	367	Δ		ASBS
Brawley City	Imperial	7	Renewal	24,953		Brawley, CA Urban Cluster	Renewal
Calexico City	Imperial	7	Renewal	38,572		El Centro--Calexico, CA Urbanized Area	Renewal
El Centro City	Imperial	7	Renewal	42,598		El Centro--Calexico, CA Urbanized Area	Renewal
Imperial City	Imperial	7	Renewal	14,758		El Centro--Calexico, CA Urbanized Area	Renewal
Imperial County	Imperial	7	Renewal				Renewal
Delano City	Kern	5F	New	38,824		Delano, CA Urbanized Area	Within Urbanized Area
Tehachapi City	Kern	5F	New	14,414		Tehachapi--Golden Hills, CA Urban Cluster	High Population/Density
Wasco City	Kern	5F	New	25,545		Wasco, CA Urban Cluster	High Population/Density
Hanford City	Kings	5F	Renewal	53,967	Ω	Hanford, CA Urbanized Area	Renewal

Place Name	County	RB	Permittee Type	Population 2010	Monitoring Type	Urbanized Area/ Urban Cluster Name	Designation Criteria
Kings County	Kings	5F	Renewal				Renewal
Lemoore City	Kings	5F	Renewal	24,531		Hanford, CA Urbanized Area	Renewal
Clearlake City	Lake	5S	Renewal	15,250	λ	Clearlake, CA Urban Cluster	Renewal
Lakeport City	Lake	5S	Renewal	4,753		Clearlake, CA Urban Cluster	Renewal
Lake County	Lake	5S	Renewal		λ		Renewal
Susanville City	Lassen	6SLT	New	17,947		Susanville, CA Urban Cluster	High Population/Density
Avalon City	Los Angeles	4	New	3,728		Avalon, CA Urban Cluster	Regional Board Designation
Bonadelle Ranchos-Madera Ranchos CDP	Madera	5F	New	8,569	λ	Bonadelle Ranchos-Madera Ranchos, CA Urban Cluster	Within Urbanized Area
Madera Acres CDP	Madera	5F	New	9,163		Madera, CA Urbanized Area	Within Urbanized Area
Madera City	Madera	5F	Renewal	61,416	λ	Madera, CA Urbanized Area	Renewal
Madera County	Madera	5F	Renewal		λ		Renewal
Chowchilla City	Madera	5F	New	18,720		Chowchilla, CA Urban Cluster	High Population/Density
Belvedere City	Marin	2	Renewal	2,068	λ	San Francisco--Oakland, CA Urbanized Area	Renewal
Black Point-Green Point CDP	Marin	2	Renewal	1,306		San Francisco--Oakland, CA Urbanized Area	Renewal

Place Name	County	RB	Permittee Type	Population 2010	Monitoring Type	Urbanized Area/ Urban Cluster Name	Designation Criteria
Corte Madera Town	Marin	2	Renewal	9,253		San Francisco--Oakland, CA Urbanized Area	Renewal
Fairfax Town	Marin	2	Renewal	7,441		San Francisco--Oakland, CA Urbanized Area	Renewal
Kentfield CDP	Marin	2	New	6,485		San Francisco--Oakland, CA Urbanized Area	Within Urbanized Area
Larkspur City	Marin	2	Renewal	11,926		San Francisco--Oakland, CA Urbanized Area	Renewal
Lucas Valley-Marinwood CDP	Marin	2	Renewal	6,094		San Francisco--Oakland, CA Urbanized Area	Renewal
Marin County	Marin	2	Renewal		Δ λ		Renewal
Mill Valley City	Marin	2	Renewal	13,903	λ	San Francisco--Oakland, CA Urbanized Area	Renewal
Novato City	Marin	2	Renewal	51,904	λ	San Francisco--Oakland, CA Urbanized Area	Renewal
Ross Town	Marin	2	Renewal	2,415		San Francisco--Oakland, CA Urbanized Area	Renewal
San Anselmo Town	Marin	2	Renewal	12,336		San Francisco--Oakland, CA Urbanized Area	Renewal
San Rafael City	Marin	2	Renewal	57,713	λ	San Francisco--Oakland, CA Urbanized Area	Renewal

Place Name	County	RB	Permittee Type	Population 2010	Monitoring Type	Urbanized Area/ Urban Cluster Name	Designation Criteria
Sausalito City	Marin	2	Renewal	7,061	λ	San Francisco--Oakland, CA Urbanized Area	Renewal
Strawberry CDP	Marin	2	New	5,393		San Francisco--Oakland, CA Urbanized Area	Within Urbanized Area
Tamalpais-Homestead Valley CDP	Marin	2	Renewal	10,735		San Francisco--Oakland, CA Urbanized Area	Renewal
Tiburon Town	Marin	2	Renewal	8,962	λ	San Francisco--Oakland, CA Urbanized Area	Renewal
Woodacre CDP	Marin	2	Renewal	1,348		San Francisco--Oakland, CA Urbanized Area	Renewal
Fort Bragg City	Mendocino	1	Renewal	7,273		Fort Bragg, CA Urban Cluster	Renewal
Mendocino County	Mendocino	1	Renewal				Renewal
Atwater City	Merced	5F	Renewal	28,168	λ	Merced, CA Urbanized Area	Renewal
Delhi CDP	Merced	5F	Renewal	10,755	λ	Turlock, CA Urbanized Area	Renewal
Franklin CDP	Merced	5F	New	6,149		Merced, CA Urbanized Area	Within Urbanized Area
Livingston City	Merced	5F	Renewal	13,058	λ	Turlock, CA Urbanized Area	Renewal
Los Banos City	Merced	5F	Renewal	35,972	λ	Los Banos, CA Urban Cluster	Renewal
Merced City	Merced	5F	Renewal	78,958	λ	Merced, CA Urbanized Area	Renewal

Place Name	County	RB	Permittee Type	Population 2010	Monitoring Type	Urbanized Area/ Urban Cluster Name	Designation Criteria
Merced County	Merced	5F	Renewal		λ		Renewal
Winton CDP	Merced	5F	Renewal	10,613	λ	Merced, CA Urbanized Area	Renewal
Carmel Valley Village CDP	Monterey	3	Renewal	4,407		Carmel Valley Village, CA Urban Cluster	Renewal
Carmel-by-the-Sea City	Monterey	3	Renewal	3,722	Δ	Seaside--Monterey, CA Urbanized Area	Renewal
Castroville CDP	Monterey	3	Renewal	6,481		Salinas, CA Urbanized Area	Renewal
Del Rey Oaks City	Monterey	3	Renewal	1,624		Seaside--Monterey, CA Urbanized Area	Renewal
Elkhorn CDP	Monterey	3	New	12,723		Salinas, CA Urbanized Area	Within Urbanized Area
Gonzalez City	Monterey	3	New	8,187			Regional Board Designation
King City City	Monterey	3	Renewal	12,874		King City, CA Urban Cluster	Renewal
Las Lomas CDP	Monterey	3	Renewal	3,024		Watsonville, CA Urbanized Area	Renewal
Marina City	Monterey	3	Renewal	19,718		Seaside--Monterey, CA Urbanized Area	Renewal
Monterey City	Monterey	3	Renewal	27,810	Δ	Seaside--Monterey, CA Urbanized Area	Renewal
Monterey County	Monterey	3	Renewal		Δλ		Renewal
Moss Landing CDP	Monterey	3	Renewal	204			Regional Board Designation
Pacific Grove City	Monterey	3	Renewal	15,041	Δ	Seaside--Monterey, CA Urbanized Area	Renewal
Pajaro CDP	Monterey	3	Renewal	3,070		Watsonville, CA Urbanized Area	Renewal

Place Name	County	RB	Permittee Type	Population 2010	Monitoring Type	Urbanized Area/ Urban Cluster Name	Designation Criteria
Prunedale CDP	Monterey	3	Renewal	17,560		Salinas, CA Urbanized Area	Renewal
Sand City City	Monterey	3	Renewal	334		Seaside--Monterey, CA Urbanized Area	Renewal
Seaside City	Monterey	3	Renewal	33,025		Seaside--Monterey, CA Urbanized Area	Renewal
Soledad City	Monterey	3	Renewal	25,738		Soledad, CA Urban Cluster	Renewal
Greenfield City	Monterey	3	New	16,330		Greenfield, CA Urban Cluster	High Population/Density
American Canyon City	Napa	2	Renewal	19,454	λ	Vallejo, CA Urbanized Area	Renewal
Calistoga City	Napa	2	Renewal	5,155	λ	Calistoga, CA Urban Cluster	Renewal
Napa City	Napa	2	Renewal	76,915	λ	Napa, CA Urbanized Area	Renewal
Napa County	Napa	2	Renewal		λ		Renewal
St. Helena City	Napa	2	Renewal	5,814	λ	St. Helena, CA Urban Cluster	Renewal
Yountville City	Napa	2	Renewal	2,933	λ	Yountville, CA Urban Cluster	Renewal
Grass Valley City	Nevada	5S	Renewal	12,860		Grass Valley, CA Urban Cluster	Renewal
Truckee Town	Nevada	5S	Renewal	16,180	λ	Truckee, CA Urban Cluster	Renewal
Placer County (Region 6)	Placer	6	Renewal		λ		Renewal
Auburn City	Placer	5S	Renewal	13,330		Auburn--North Auburn, CA Urban Cluster	Renewal

Place Name	County	RB	Permittee Type	Population 2010	Monitoring Type	Urbanized Area/ Urban Cluster Name	Designation Criteria
Granite Bay CDP	Placer	5S	Renewal	20,402		Sacramento, CA Urbanized Area	Renewal
Lincoln City	Placer	5S	Renewal	42,819	λ	Sacramento, CA Urbanized Area	Renewal
Loomis Town	Placer	5S	Renewal	6,430	λ	Sacramento, CA Urbanized Area	Renewal
North Auburn CDP	Placer	5S	Renewal	13,022		Auburn--North Auburn, CA Urban Cluster	Renewal
Placer County (Region 5S)	Placer	5S	Renewal				Renewal
Rocklin City	Placer	5S	Renewal	56,974	λ	Sacramento, CA Urbanized Area	Renewal
Roseville City	Placer	5S	Renewal	118,788	λ	Sacramento, CA Urbanized Area	Renewal
Hollister City	San Benito	3	Renewal	34,928	λ	Hollister, CA Urban Cluster	Renewal
Apple Valley Town	San Bernardino	6V	Renewal	69,135	Ω	Victorville--Hesperia, CA Urbanized Area	Renewal
Barstow City	San Bernardino	6V	New	22, 639		Riverside--San Bernardino, CA Urbanized Area	Within Urbanized Area
Hesperia City	San Bernardino	6V	Renewal	90,173		Victorville--Hesperia, CA Urbanized Area	Renewal
Oak Hills CDP	San Bernardino	6V	New	8,879		Victorville--Hesperia, CA Urbanized Area	Within Urbanized Area
Phelan CDP	San Bernardino	6V	New	14,304		Victorville--Hesperia, CA Urbanized Area	Within Urbanized Area
Spring Valley Lake CDP	San Bernardino	6V	New	8,220		Victorville--Hesperia, CA Urbanized Area	Within Urbanized Area
Victorville City	San Bernardino	6V	Renewal	115,903	Ω	Victorville--Hesperia, CA Urbanized Area	Renewal

Place Name	County	RB	Permittee Type	Population 2010	Monitoring Type	Urbanized Area/ Urban Cluster Name	Designation Criteria
San Bernardino County	San Bernardino	6V	Renewal				Renewal
San Francisco City (San Francisco Public Utilities Commission)	San Francisco	2	Renewal			San Francisco--Oakland, CA Urbanized Area	Renewal
San Francisco City (Port of San Francisco)	San Francisco	2	Renewal			San Francisco--Oakland, CA Urbanized Area	Renewal
Escalon City	San Joaquin	5S	New	7, 132		Stockton, CA Urbanized Area	New
Lathrop City	San Joaquin	5S	Renewal	18,023	λ	Manteca, CA Urbanized Area	Renewal
Lathrop City	San Joaquin	5S	Renewal	18,023	λ	Stockton, CA Urbanized Area	Renewal
Lodi City	San Joaquin	5S	Renewal	62,134	λ	Lodi, CA Urbanized Area	Renewal
Manteca City	San Joaquin	5S	Renewal	347	λ	Stockton, CA Urbanized Area	Renewal
Manteca City	San Joaquin	5S	Renewal	67,096	Ω	Manteca, CA Urbanized Area	Renewal
Ripon City	San Joaquin	5S	Renewal	14,297	λ	Manteca, CA Urbanized Area	Renewal
San Joaquin County	San Joaquin	5S	Renewal		λ		Renewal
Tracy City	San Joaquin	5S	Renewal	82,922	λ	Tracy, CA Urbanized Area	Renewal
Woodbridge CDP	San Joaquin	5S	Renewal	3,984		Lodi, CA Urbanized Area	Renewal
Arroyo Grande City	San Luis Obispo	3	Renewal	17,252		Arroyo Grande--Grover Beach, CA Urbanized Area	Renewal

Place Name	County	RB	Permittee Type	Population 2010	Monitoring Type	Urbanized Area/ Urban Cluster Name	Designation Criteria
Atascadero City	San Luis Obispo	3	Renewal	28,310		El Paso de Robles (Paso Robles)--Atascadero, CA Urbanized Area	Renewal
Blacklake CDP	San Luis Obispo	3	New	930		Nipomo, CA Urban Cluster	Regional Board Designation
Cambria	San Luis Obispo	3	Renewal	6,032		Cambria, CA Urban Cluster	Renewal
Cayucos CDP	San Luis Obispo	3	New	2,592		Morro Bay--Los Osos, CA Urban Cluster	Regional Board Designation
El Paso de Robles (Paso Robles) City	San Luis Obispo	3	Renewal	29,793		El Paso de Robles (Paso Robles)--Atascadero, CA Urbanized Area	Renewal
Grover Beach City	San Luis Obispo	3	Renewal	13,156		Arroyo Grande--Grover Beach, CA Urbanized Area	Renewal
Lake Nacimiento CDP	San Luis Obispo	3	New	2,411			Regional Board Designation
Morro Bay City	San Luis Obispo	3	Renewal	10,234	λ	Morro Bay--Los Osos, CA Urban Cluster	Renewal
Nipomo CDP	San Luis Obispo	3	Renewal	16,714		Nipomo, CA Urban Cluster	Renewal
Pismo Beach City	San Luis Obispo	3	Renewal	7,655		Arroyo Grande--Grover Beach, CA Urbanized Area	Renewal
San Luis Obispo City	San Luis Obispo	3	Renewal	45,119	λ	San Luis Obispo, CA Urbanized Area	Renewal
San Luis Obispo County	San Luis Obispo	3	Renewal		λ		Renewal
San Miguel	San Luis Obispo	3	New	2,336			Regional Board Designation

Place Name	County	RB	Permittee Type	Population 2010	Monitoring Type	Urbanized Area/ Urban Cluster Name	Designation Criteria
Shandon CDP	San Luis Obispo	3	New	1,295			Regional Board Designation
Buellton City	Santa Barbara	3	Renewal	4,828		Solvang--Buellton--Santa Ynez, CA Urban Cluster	Renewal
Carpinteria City	Santa Barbara	3	New	13,040		Santa Barbara, CA Urbanized Area	Within Urbanized Area
Goleta City	Santa Barbara	3	Renewal	29,888		Santa Barbara, CA Urbanized Area	Renewal
Guadalupe City	Santa Barbara	3	New	7,080		Guadalupe, CA Urban Cluster	Regional Board Designation
Hope Ranch CDP	Santa Barbara	3	New				Regional Board Designation
Isla Vista CDP	Santa Barbara	3	Renewal	23,096		Santa Barbara, CA Urbanized Area	Renewal
Lompoc City	Santa Barbara	3	Renewal	42,434		Lompoc, CA Urbanized Area	Renewal
Los Olivos CDP	Santa Barbara	3	Renewal	1,132		Solvang--Buellton--Santa Ynez, CA Urban Cluster	Renewal
Mission Canyon CDP	Santa Barbara	3	New	2,381			Regional Board Designation
Mission Hills CDP	Santa Barbara	3	New	3,576			Regional Board Designation
Montecito CDP	Santa Barbara	3	New	8,965		Santa Barbara, CA Urbanized Area	Within Urbanized Area
Orcutt CDP	Santa Barbara	3	Renewal	28,905		Santa Maria, CA Urbanized Area	Renewal
Santa Barbara City	Santa Barbara	3	Renewal	88,410	Ω	Santa Barbara, CA Urbanized Area	Renewal

Place Name	County	RB	Permittee Type	Population 2010	Monitoring Type	Urbanized Area/ Urban Cluster Name	Designation Criteria
Santa Barbara County	Santa Barbara	3	Renewal				Renewal
Santa Maria City	Santa Barbara	3	Renewal	99,553	Ω	Santa Maria, CA Urbanized Area	Renewal
Santa Ynez CDP	Santa Barbara	3	Renewal	4,418		Solvang--Buellton--Santa Ynez, CA Urban Cluster	Renewal
Solvang City	Santa Barbara	3	Renewal	5,245		Solvang--Buellton--Santa Ynez, CA Urban Cluster	Renewal
Summerland CDP	Santa Barbara	3	Renewal	1,448		Santa Barbara, CA Urbanized Area	Renewal
Toro Canyon CDP	Santa Barbara	3	New	1,508			Regional Board Designation
Vandenberg Village CDP	Santa Barbara	3	Renewal	6,497		Lompoc, CA Urbanized Area	Renewal
Gilroy City	Santa Clara	3	Renewal	48,821	λ	Gilroy--Morgan Hill, CA Urbanized Area	Renewal
Morgan Hill City	Santa Clara	3	Renewal	37,882	λ	Gilroy--Morgan Hill, CA Urbanized Area	Renewal
San Martin CDP	Santa Clara	3	Renewal	7,027		Gilroy--Morgan Hill, CA Urbanized Area	Renewal
Santa Clara County	Santa Clara	3	Renewal		λ		Renewal
Aptos CDP	Santa Cruz	3	Renewal	6,220		Santa Cruz, CA Urbanized Area	Renewal
Ben Lomond CDP	Santa Cruz	3	New	6,234		Santa Cruz, CA Urbanized Area	Within Urbanized Area
Capitola City	Santa Cruz	3	Renewal	9,918		Santa Cruz, CA Urbanized Area	Renewal
Interlaken CDP	Santa Cruz	3	New	7,321		Watsonville, CA Urbanized Area	Within Urbanized Area

Place Name	County	RB	Permittee Type	Population 2010	Monitoring Type	Urbanized Area/ Urban Cluster Name	Designation Criteria
Live Oak CDP	Santa Cruz	3	New	17,158		Santa Cruz, CA Urbanized Area	Regional Board Designation
Pleasure Point CDP	Santa Cruz	3	New	5846		Santa Cruz, CA Urbanized Area	Within Urbanized Area
Rio del Mar CDP	Santa Cruz	3	New	9,216		Santa Cruz, CA Urbanized Area	Within Urbanized Area
Santa Cruz City	Santa Cruz	3	Renewal	59,946	λ	Santa Cruz, CA Urbanized Area	Renewal
Santa Cruz County	Santa Cruz	3	Renewal		λ		Renewal
Scotts Valley City	Santa Cruz	3	Renewal	11,580	λ	Santa Cruz, CA Urbanized Area	Renewal
Soquel CDP	Santa Cruz	3	New	9,644		Santa Cruz, CA Urbanized Area	Within Urbanized Area
Watsonville City	Santa Cruz	3	Renewal	51,199	λ	Watsonville, CA Urbanized Area	Renewal
Anderson City	Shasta	5R	New	9,932	λ	Redding, CA Urbanized Area	Renewal
Redding City	Shasta	5R	New	89,861	λ	Redding, CA Urbanized Area	Renewal
Shasta County	Shasta	5R	New		λ		Renewal
Shasta Lake City	Shasta	5R	New	10,164		Redding, CA Urbanized Area	Renewal
Yreka City	Siskiyou	1	New	7,765	λ	Yreka, CA Urban Cluster	TMDL
Benicia City	Solano	2	Renewal	26,997		Vallejo, CA Urbanized Area	Renewal
Solano County (Region 2)	Solano	2	Renewal		λ		Renewal
Dixon City	Solano	5S	Renewal	18,351	λ	Dixon, CA Urban Cluster	Renewal

Place Name	County	RB	Permittee Type	Population 2010	Monitoring Type	Urbanized Area/ Urban Cluster Name	Designation Criteria
Rio Vista City	Solano	5S	Renewal	7,360	λ	Rio Vista, CA Urban Cluster	Renewal
Solano County (Region 5S)	Solano	5S	Renewal		λ		Renewal
Vacaville City	Solano	5S	Renewal	92,428	λ	Fairfield, CA Urbanized Area	Renewal
Vacaville City	Solano	5S	Renewal	92,428	Ω	Vacaville, CA Urbanized Area	Renewal
Petaluma City	Sonoma	2	Renewal	57,941	λ	Petaluma, CA Urbanized Area	Renewal
Sonoma City	Sonoma	2	Renewal	10,648	λ	Sonoma, CA Urban Cluster	Renewal
Sonoma County	Sonoma	2	Renewal		λ		Renewal
Sonoma County Water Agency	Sonoma	2	Renewal		λ		Renewal
Bret Harte CDP	Stanislaus	5S	New	5,152		Modesto, CA Urbanized Area	Within Urbanized Area
Ceres City	Stanislaus	5S	Renewal	45,417	λ	Modesto, CA Urbanized Area	Renewal
Empire CDP	Stanislaus	5S	Renewal	4,189	λ	Modesto, CA Urbanized Area	Renewal
Hughson City	Stanislaus	5S	Renewal	6,640	λ	Modesto, CA Urbanized Area	Renewal
Keyes CDP	Stanislaus	5S	Renewal	5,601	λ	Modesto, CA Urbanized Area	Renewal
Oakdale City	Stanislaus	5S	Renewal	20,675	λ	Modesto, CA Urbanized Area	Renewal
Patterson City	Stanislaus	5S	Renewal	20,413	λ	Patterson, CA Urban Cluster	Renewal
Riverbank City	Stanislaus	5S	Renewal	22,678	λ	Modesto, CA Urbanized Area	Renewal

Place Name	County	RB	Permittee Type	Population 2010	Monitoring Type	Urbanized Area/ Urban Cluster Name	Designation Criteria
Salida CDP	Stanislaus	5S	Renewal	13,722	λ	Modesto, CA Urbanized Area	Renewal
Stanislaus County	Stanislaus	5S	Renewal		λ		Renewal
Turlock City	Stanislaus	5S	Renewal	68,549	λ	Turlock, CA Urbanized Area	Renewal
West Modesto CDP	Stanislaus	5S	New	5,682		Modesto, CA Urbanized Area	Within Urbanized Area
Newman City	Stanislaus	5S	New	10,224		Newman, CA Urban Cluster	High Population/Density
Live Oak	Sutter	5S	New	8,392	λ	Live Oak (Sutter County), CA Urban Cluster	TMDL
Sutter County	Sutter	5S	Renewal		λ		Renewal
Yuba City City	Sutter	5S	Renewal	64,925	λ	Yuba City, CA Urbanized Area	Renewal
Red Bluff City	Tehama	5R	New	14,076	λ	Red Bluff, CA Urban Cluster	High Population/Density
East Porterville CDP	Tulare	5F	New	6,767		Porterville, CA Urbanized Area	Within Urbanized Area
Exeter City	Tulare	5F	Renewal	10,334		Visalia, CA Urbanized Area	Renewal
Farmersville City	Tulare	5F	Renewal	10,588		Visalia, CA Urbanized Area	Renewal
Goshen CDP	Tulare	5F	Renewal	3,006		Visalia, CA Urbanized Area	Renewal
Porterville City	Tulare	5F	Renewal	54,165	Ω	Porterville, CA Urbanized Area	Renewal
Strathmore CDP	Tulare	5F	Renewal	2,819		Porterville, CA Urbanized Area	Renewal
Tulare City	Tulare	5F	Renewal	59,278	Ω	Visalia, CA Urbanized Area	Renewal

Place Name	County	RB	Permittee Type	Population 2010	Monitoring Type	Urbanized Area/ Urban Cluster Name	Designation Criteria
Tulare County	Tulare	5F	Renewal		λ		Renewal
Visalia City	Tulare	5F	Renewal	124,442	Ω	Visalia, CA Urbanized Area	Renewal
Dinuba City	Tulare	5F	New	21,453		Reedley--Dinuba, CA Urban Cluster	High Population/Density
Davis City	Yolo	5S	Renewal	65,622	λ	Davis, CA Urbanized Area	Renewal
UC Davis CDP	Yolo	5S	New	5,786		Davis, CA Urbanized Area	Within Urbanized Area
West Sacramento City	Yolo	5S	Renewal	48,744	λ	Sacramento, CA Urbanized Area	Renewal
Woodland City	Yolo	5S	Renewal	55,468	λ	Woodland, CA Urbanized Area	Renewal
Yolo County	Yolo	5S	Renewal		λ		Renewal
Linda CDP	Yuba	5S	Renewal	17,773	λ	Yuba City, CA Urbanized Area	Renewal
Marysville City	Yuba	5S	Renewal	12,072	λ	Yuba City, CA Urbanized Area	Renewal
Olivehurst CDP	Yuba	5S	Renewal	13,656	λ	Yuba City, CA Urbanized Area	Renewal
Yuba County	Yuba	5S	Renewal		λ		Renewal

Attachment B — Non-Traditional Small MS4 Permittees

Monitoring Type: Δ = Areas of Special Biological Significance Special Protections

*The list of Regulated MS4s in this Attachment may be amended by the Executive Director consistent with the designation criteria listed in the Order. Revised 2/19/13 to change Agency to Department of Homeland Security for Petaluma Coast Guard Training Center and Alameda Coast Guard Integrated Support Command, removed VA Northern CA Healthcare Systems and Martinez Center for Rehab and Extended. Amended on September 2, 2015 to remove Tracy Unified School District. Amended on January 24, 2018 to remove Amtrak and to add California High Speed Rail Authority. Amended on March 13, 2018 to add San Diego Metropolitan Transit System and Marine Corps Recruit Depot San Diego.

Region	Permittee Name	Agency	Designation Criteria	Permittee Type	Monitoring Type
North Coast Regional Water Board					
1	Sonoma State University	California State University	Within Urbanized Area	New	
1	Caspar Headlands SB	Parks and Recreation, Dept. of	ASBS	New	Δ
1	Caspar Headlands SR	Parks and Recreation, Dept. of	ASBS	New	Δ
1	Del Norte Coast Redwoods SP	Parks and Recreation, Dept. of	ASBS	New	Δ
1	Humboldt Lagoons SP	Parks and Recreation, Dept. of	ASBS	New	Δ
1	Jug Handle SR	Parks and Recreation, Dept. of	ASBS	New	Δ
1	Mendocino Headlands SP	Parks and Recreation, Dept. of	ASBS	New	Δ
1	Mill Creek Property	Parks and Recreation, Dept. of	ASBS	New	Δ
1	Patrick's Point SP	Parks and Recreation, Dept. of	ASBS	New	Δ
1	Pelican SB	Parks and Recreation, Dept. of	ASBS	New	Δ
1	Point Cabrillo Light Station Property	Parks and Recreation, Dept. of	ASBS	New	Δ
1	Prairie Creek Redwoods SP	Parks and Recreation, Dept. of	ASBS	New	Δ
1	Sinkyone Wilderness SP	Parks and Recreation, Dept. of	ASBS	New	Δ
1	Tolowa Dunes SP	Parks and Recreation, Dept. of	ASBS	New	Δ
1	Trinidad SB	Parks and Recreation, Dept. of	ASBS	New	Δ

Region	Permittee Name	Agency	Designation Criteria	Permittee Type	Monitoring Type
1	Petaluma Coast Guard Training Center	Homeland Security, Department of	Regional Board Designation	New	
San Francisco Regional Water Board					
2	San Jose Airport	Airport	Regional Board Designation	New	
2	FCI Dublin	Bureau of Prisons	Within Urbanized Area	New	
2	California State University Maritime	California State University	Within Urbanized Area	New	
2	California State University East Bay - Hayward Campus	California State University	Within Urbanized Area	New	
2	California State University East Bay - Concord Campus	California State University	Within Urbanized Area	New	
2	San Jose State University	California State University	Within Urbanized Area	New	
2	San Quentin State Prison	Corrections and Rehabilitation, Dept of	Within Urbanized Area	New	
2	Travis Air Force Base	Defense, Department of	Within Urbanized Area	New	
2	Agnews Developmental Center East & West	Developmental Services, Dept of	Within Urbanized Area	New	
2	Sonoma Development Center	Developmental Services, Dept of.	Renewal	Renewal	
2	Sonoma-Marin Fair	District Agricultural Association	Within Urbanized Area	New	
2	Napa County Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
2	Montara SB	Parks and Recreation, Dept. of	ASBS	New	
2	Port of Oakland	Port	Regional Board Designation	New	
2	Port of Redwood City	Port	Regional Board Designation	New	
2	California High Speed Rail Authority	Special District	State Board Designation	New	

Region	Permittee Name	Agency	Designation Criteria	Permittee Type	Monitoring Type
2	Bay Area Rapid Transit	Special District	Regional Board Designation	New	
2	CalTrain	Special District	Regional Board Designation	New	
2	Golden Gate Bridge, Highway and Transportation District	Special District	Regional Board Designation	New	
2	Valley Transit Authority (VTA)	Special District	Regional Board Designation	New	
2	Alameda Coast Guard Integrated Support Command	Homeland Security, Department of	Regional Board Designation	New	
2	University of California Berkeley	University of California	Within Urbanized Area	New	
2	The University of California, San Francisco	University of California	Within Urbanized Area	New	
Central Coast Regional Water Board					
3	USP Lompoc	Bureau of Prisons	Within Urbanized Area	New	
3	FCI Lompoc	Bureau of Prisons	Within Urbanized Area	New	
3	California Polytechnic State University	California State University	Within Urbanized Area	New	
3	California State University Monterey Bay	California State University	Within Urbanized Area	New	
3	Los Osos Community Services District	Community Services District	Renewal	Renewal	
3	Oceano Community Services District	Community Services District	Renewal	Renewal	
3	Templeton Community Services District	Community Services District	Renewal	Renewal	
3	California Men's Colony	Corrections and Rehabilitation, Dept of	Within Urbanized Area	New	

Region	Permittee Name	Agency	Designation Criteria	Permittee Type	Monitoring Type
3	Fort Hunter Ligget, Army Garrison	Defense, Department of	Regional Board Designation	New	
3	US Army Presidio of Monterey; includes Defense Language Institute	Defense, Department of	Within Urbanized Area	New	
3	Vandenberg AFB	Defense, Department of	Renewal	Renewal	
3	Monterey County Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
3	Santa Maria Fairpark	District Agricultural Association	Within Urbanized Area	New	
3	Santa Cruz County Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
3	Earl Warren Showgrounds (National Horse Show)	District Agricultural Association	Within Urbanized Area	New	
3	San Luis Obispo County Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
3	Fort Ord Reuse Authority	Local Agency	Regional Board Designation	New	
3	Ano Nuevo SP	Parks and Recreation, Dept. of	ASBS	New	Δ
3	Ano Nuevo SR	Parks and Recreation, Dept. of	ASBS	New	Δ
3	Carmel River SB	Parks and Recreation, Dept. of	ASBS	New	Δ
3	Julia Pfeiffer Burns SP	Parks and Recreation, Dept. of	ASBS	New	Δ
3	Oceano Dunes SVRA	Parks and Recreation, Dept. of	Within Urbanized Area	New	
3	Pismo SB	Parks and Recreation, Dept. of	Within Urbanized Area	New	
3	Point Lobos SR	Parks and Recreation, Dept. of	ASBS	New	Δ
3	Carpinteria Unified School District	School District, Carpinteria Unified	Renewal	Renewal	
3	University of California, Santa Barbara	University of California	Renewal	Renewal	

Region	Permittee Name	Agency	Designation Criteria	Permittee Type	Monitoring Type
3	University of California, Santa Cruz	University of California	Renewal	Renewal	
Los Angeles Regional Water Board					
4	FCI Terminal Island	Bureau of Prisons	Within Urbanized Area	New	
4	CCM Long Beach	Bureau of Prisons	Within Urbanized Area	New	
4	California State University Los Angeles	California State University	Within Urbanized Area	New	
4	California State University Northridge	California State University	Within Urbanized Area	New	
4	California State University Channel Islands	California State University	Within Urbanized Area	New	
4	California State University Long Beach	California State University	Within Urbanized Area	New	
4	California State Polytechnic University, Pomona	California State University	Within Urbanized Area	New	
4	California State University Dominguez Hills	California State University	Within Urbanized Area	New	
4	Naval Base Ventura County; includes Port Hueneme and Point Mugu	Defense, Department of	Within Urbanized Area	New	
4	Lanterman Developmental Center	Developmental Services, Dept of	Within Urbanized Area	New	
4	Ventura County Fairgrounds (Seaside Park and Ventura County Fairgrounds)	District Agricultural Association	Within Urbanized Area	New	
4	Point Dume SB	Parks and Recreation, Dept. of	ASBS	New	Δ
4	Point Mugu SP	Parks and Recreation, Dept. of	ASBS	New	Δ
4	Robert H. Meyer Memorial SB	Parks and Recreation, Dept. of	ASBS	New	Δ
4	UCLA	University of California	Within Urbanized Area	New	
4	Long Beach VA Medical Center	Veteran Affairs	Within Urbanized Area	New	

Region	Permittee Name	Agency	Designation Criteria	Permittee Type	Monitoring Type
4	VA Greater Los Angeles Healthcare System (GLA)	Veteran Affairs	Within Urbanized Area	New	
Central Valley Regional Water Board					
5F	USP Atwater	Bureau of Prisons	Within Urbanized Area	New	
5F	California State University Bakersfield	California State University	Within Urbanized Area	New	
5F	Porterville Developmental Center	Developmental Services, Dept of	Within Urbanized Area	New	
5F	Madera County Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
5F	Kern County Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
5F	Tulare County Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
5F	Kings County Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
5F	The Big Fresno Fair	District Agricultural Association	Within Urbanized Area	New	
5F	Merced County Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
5F	University of California, Merced	University of California	Within Urbanized Area	New	
5F	Lemoore NAS	Defense, Department of	Within Urbanized Area	New	
5R	California State University Chico	California State University	Within Urbanized Area	New	
5R	Silver Dollar Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
5R	Shasta County Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
5R	Carnegie State Vehicular Recreation Area	Parks and Recreation, Dept. of	Within Urbanized Area	New	
5S	California State University Sacramento	California State University	Renewal	Renewal	

Region	Permittee Name	Agency	Designation Criteria	Permittee Type	Monitoring Type
5S	California State University Stanislaus	California State University	Within Urbanized Area	New	
5S	Rancho Murieta Community Services District	Community Services District	Renewal	Renewal	
5S	Mountain House Community Services District	Community Services District	Renewal	Renewal	
5S	Cosumnes Community Services District	Community Services District	Renewal	Renewal	
5S	CSP, Solano County	Corrections and Rehabilitation, Dept of	Within Urbanized Area	New	
5S	Deuel Vocational Institution	Corrections and Rehabilitation, Dept of	Within Urbanized Area	New	
5S	Folsom State Prison	Corrections and Rehabilitation, Dept of	Within Urbanized Area	New	
5S	CSP, Sacramento	Corrections and Rehabilitation, Dept of	Within Urbanized Area	New	
5S	California Medical Facility	Corrections and Rehabilitation, Dept of	Within Urbanized Area	New	
5S	Contra Costa County Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
5S	Sutter County Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
5S	Yolo County Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
5S	Stanislaus County Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
5S	San Joaquin County Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
5S	California Exposition & State Fair	Exposition & State Fair, California	Renewal	Renewal	
5S	Elk Grove Unified School District	School District, Elk Grove Unified	Renewal	Renewal	

Region	Permittee Name	Agency	Designation Criteria	Permittee Type	Monitoring Type
5S	The University of California, Davis	University of California	Renewal	Renewal	
5S	Sacramento Medical Center at Mather	Veteran Affairs	Within Urbanized Area	New	
Lahontan Regional Water Board					
6V	FCI Victorville	Bureau of Prisons	Within Urbanized Area	New	
6V	San Bernardino County Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
Santa Ana Regional Water Board					
8	Los Alamitos AFRC	California Army National Guard	Within Urbanized Area	New	
8	California State University Fullerton	California State University	Within Urbanized Area	New	
8	California State University San Bernardino	California State University	Within Urbanized Area	New	
8	California Institution for Men	Corrections and Rehabilitation, Dept of	Within Urbanized Area	New	
8	California Institution for Women	Corrections and Rehabilitation, Dept of	Within Urbanized Area	New	
8	California Rehabilitation Center	Corrections and Rehabilitation, Dept of	Within Urbanized Area	New	
8	Fairview Developmental Center	Developmental Services, Dept of.	Within Urbanized Area	New	
8	March Air Force Base	Department of Defense	Regional Board Designation	New	
8	Orange County Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
8	Crystal Cove SP	Parks and Recreation, Dept. of	ASBS	New	Δ
8	University of California, Irvine	University of California	Within Urbanized Area	New	

Region	Permittee Name	Agency	Designation Criteria	Permittee Type	Monitoring Type
8	University of California, Riverside	University of California	Within Urbanized Area	New	
8	Jerry L. Pettis Memorial VA Medical Center	Veteran Affairs	Within Urbanized Area	New	
San Diego Regional Water Board					
9	MCC San Diego	Bureau of Prisons	Within Urbanized Area	New	
9	San Diego State University	California State University	Within Urbanized Area	New	
9	California State University San Marcos	California State University	Within Urbanized Area	New	
9	R J Donovan Correctional Facility at Rock Mountain	Corrections and Rehabilitation, Dept of	Within Urbanized Area	New	
9	Miramar Marine Corps Air Station	Defense, Department of	Regional Board Designation	New	
9	Camp Pendleton	Defense, Department of	Within Urbanized Area	New	
9	Del Mar Fairgrounds	District Agricultural Association	Renewal	Renewal	
9	San Diego County Fairgrounds	District Agricultural Association	Within Urbanized Area	New	
9	North County Transit District (NCTD)	Transportation Agency	Regional Board Designation	New	
9	University of California, San Diego	University of California	Within Urbanized Area	New	
9	VA San Diego Healthcare System	Veteran Affairs	Within Urbanized Area	New	
9	San Diego Metropolitan Transit System	Special District	Regional Board Designation	New	
9	Marine Corps Recruit Depot San Diego	Department of Defense	Regional Board Designation	New	

UNOFFICIAL DRAFT — Not Certified by Clerk

Attachment C

Special Conditions (Specific Provisions) for Traditional and Non-Traditional Small MS4 ASBS Discharges

All Traditional and Non-traditional Small MS4 Permittees that discharge to ASBS as listed in Attachment D have been granted an exception to the Ocean Plan and shall comply with the following Special Protections requirements. Special Protections for Areas of Special Biological Significance, Governing Point Source Discharges of Storm Water and Nonpoint Source Waste Discharges (Attachment B to State Water Board Resolution 2012-0001) (Special Protections).

The Special Protections for Areas of Special Biological Significance require submittal of Compliance Plans to be included in a SWMP. However, SWMPs are no longer required for submittal by this Order. As such, Permittees shall submit a stand-alone Compliance Plan document for ASBS discharges and submit per the Special Conditions compliance schedule, through their online Annual Report.

I. PROVISIONS FOR POINT SOURCE DISCHARGES OF STORM WATER

The following terms, prohibitions, and special conditions (hereafter collectively referred to as special conditions) are established as limitations on point source storm water. These special conditions provide Special Protections for marine aquatic life and natural water quality in Areas of Special Biological Significance (ASBS), as required for State Water Quality Protection Areas pursuant to California Public Resources Code Sections 36700(f) and 36710(f). These Special Protections are adopted by the State Water Board as part of the California Ocean Plan (Ocean Plan) General Exception.

A. PERMITTED POINT SOURCE DISCHARGES OF STORM WATER

1. General Provisions for Permitted Point Source Discharges of Storm Water
   a. Existing storm water discharges into an ASBS are allowed only under the following conditions:
      (1) The discharges are authorized by this Order;
      (2) The discharges comply with all of the applicable terms, prohibitions, and special conditions contained in the Special Protections as laid out in this Attachment; and
      (3) The discharges:
         (i) Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;
         (ii) Are designed to prevent soil erosion;
         (iii) Occur only during wet weather;
         (iv) Are composed of only storm water runoff.
   b. Discharges composed of storm water runoff shall not alter natural ocean water quality in an ASBS.
   c. The discharge of trash is prohibited.

d. Only discharges from existing storm water outfalls are allowed. Any proposed or new storm water runoff discharge shall be routed to existing storm water discharge outfalls and shall not result in any new contribution of waste to an ASBS (i.e., no additional pollutant loading). “Existing storm water outfalls” are those that were constructed or under construction prior to January 1, 2005. “New contribution of waste” is defined as any addition of waste beyond what would have occurred as of January 1, 2005. A change to an existing storm water outfall, in terms of re-location or alteration, in order to comply with these special conditions, is allowed and does not constitute a new discharge.

e. Non-storm water discharges are prohibited except as provided below:

(1) The term “non-storm water discharges” means any waste discharges from a municipal separate storm sewer system (MS4) or other NPDES permitted storm drain system to an ASBS that are not composed entirely of storm water.

(2) The following non-storm water discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability or occur naturally:

(i) Discharges associated with emergency firefighting operations.
(ii) Foundation and footing drains.
(iii) Water from crawl space or basement pumps.
(iv) Hillside dewatering.
(v) Naturally occurring groundwater seepage via a storm drain.
(vi) Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.

(3) Discharges from utility vaults and underground structures to a segment of the MS4 with a direct discharge to an ASBS are permitted if such discharges are authorized by the General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Water, NPDES No. CAG 990002. Other short-duration, intermittent non-storm water discharges related to utilities (e.g. groundwater dewatering, potable water system flushing, hydrotest discharges) to a segment of the MS4 with a direct discharge to an ASBS are permitted if such discharges are authorized by an NPDES permit issued by the relevant Regional Water Board. A Regional Water Board may nonetheless prohibit a specific discharge from a utility vault or underground structure or other specific utility-related discharge if it determines that the discharge is causing the MS4 discharge to the ASBS to alter natural ocean water quality in the ASBS. Additional non-storm water discharges to a segment of the MS4 with a direct discharge to an ASBS are allowed only to the extent the relevant Regional Water Board finds that the discharge does not alter natural ocean water quality in the ASBS.

This provision does not supersede the authority of the MS4 to effectively prohibit a non-storm water discharge that has been found to alter natural ocean water quality in the ASBS.

(4) Authorized non-storm water discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in an ASBS.

2. Compliance Plans for Inclusion in Storm Water Management Plans (SWMP) and Storm Water Pollution Prevention Plans (SWPPP)

   The Permittee shall specifically address the prohibition of non-storm water runoff and the requirement to maintain natural water quality for storm water discharges to an ASBS in an ASBS Compliance Plan to be submitted to the appropriate Regional Water Board. The ASBS Compliance Plan is subject to approval by the Executive Director of the State Water Board.

   a. The Compliance Plan shall include a map of surface drainage of storm water runoff, showing areas of sheet runoff, prioritize discharges, and describe any structural Best Management Practices (BMPs) already employed and/or BMPs to be employed in the future. Priority discharges are those that pose the greatest water quality threat and which are identified to require installation of structural BMPs. The map shall also show the storm water conveyances in relation to other features such as service areas, sewage conveyances and treatment facilities, landslides, areas prone to erosion and waste and hazardous material storage areas, if applicable. The SWMP or SWPPP shall also include a procedure for updating the map and plan when changes are made to the storm water conveyance facilities.
   b. The ASBS Compliance Plan shall describe the measures by which all non-authorized non-storm water runoff (e.g., dry weather flows) has been eliminated, how these measures will be maintained over time, and how these measures are monitored and documented.
   c. The ASBS Compliance Plan shall require minimum inspection frequencies as follows:
      (1) The minimum inspection frequency for construction sites shall be weekly during rainy season;
      (2) The minimum inspection frequency for industrial facilities shall be monthly during the rainy season;
      (3) The minimum inspection frequency for commercial facilities (e.g., restaurants) shall be twice during the rainy season;
      (4) Storm water outfall drains equal to or greater than 18 inches (457 mm) in diameter or width shall be inspected once prior to the beginning of the rainy season and once during the rainy season and maintained to remove trash and other anthropogenic debris.
   d. The ASBS Compliance Plan shall address storm water discharges (wet weather flows) and, in particular, describe how pollutant reductions in storm water runoff, that are necessary to comply with these special conditions, will be achieved through BMPs. Structural BMPs need not be installed if the Permittee can document to the satisfaction of the State Water Board Executive Director that such installation would pose a threat to health or safety. BMPs to control storm water runoff discharges (at the end-of-pipe) during a design storm shall be designed to achieve on average the following target levels:

      (1) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or
      (2) A 90% reduction in pollutant loading during storm events, for the Permittee's total discharges. The baseline for the reduction is the effective date of the Exception.

The baseline for these determinations is the effective date of the Exception, and the reductions must be achieved and documented within six (6) years of the effective date.

e. The ASBS Compliance Plan shall address erosion control and the prevention of anthropogenic sedimentation in ASBS. The natural habitat conditions in the ASBS shall not be altered as a result of anthropogenic sedimentation.
f. The ASBS Compliance Plan shall describe the non-structural BMPs currently employed and planned in the future (including those for construction activities) and include an implementation schedule. The ASBS Compliance Plan shall include non-structural BMPs that address public education and outreach. Education and outreach efforts must adequately inform the public that direct discharges of pollutants from private property not entering an MS4 are prohibited. The ASBS Compliance Plan shall also describe the structural BMPs, including any low impact development (LID) measures, currently employed and planned for higher threat discharges and include an implementation schedule. To control storm water runoff discharges (at the end-of-pipe) during a design storm, permittees must first consider using LID practices to infiltrate, use, or evapotranspire storm water runoff on-site.
g. The BMPs and implementation schedule shall be designed to ensure that natural water quality conditions in the receiving water are achieved and maintained by either reducing flows from impervious surfaces or reducing pollutant loading, or some combination thereof.
h. If the results of the receiving water monitoring described in Section IV. B. below indicate that the storm water runoff is causing or contributing to an alteration of natural ocean water quality in the ASBS, the Permittee shall submit a report to the State Water Board and Regional Water Board within 30 days of receiving the results.
    (1) The report shall identify the constituents in storm water runoff that alter natural ocean water quality and the sources of these constituents.
    (2) The report shall describe BMPs that are currently being implemented, BMPs that are identified in the ASBS Compliance Plan for future implementation, and any additional BMPs that may be added to the ASBS Compliance Plan to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the BMPs.
    (3) Within 30 days of the approval of the report by the State Water Board Executive Director, the Permittee shall revise its ASBS Compliance Plan to incorporate any new or modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required.
    (4) As long as the Permittee has complied with the procedures described above and is implementing the revised ASBS Compliance Plan, the Permittee does not have to repeat the same procedure for continuing or recurring exceedances of natural ocean water quality conditions due to the same constituent.
    (5) Compliance with this section does not excuse violations of any term, prohibition, or condition contained in the Special Protections.

3. Compliance Schedule
    a. On the effective date of the Exception, all non-authorized non-storm water discharges (e.g., dry weather flow) are effectively prohibited.

b. Within 18 months from the effective date of the Exception, the Permittee shall submit a written ASBS Compliance Plan to the State Water Board Executive Director that describes its strategy to comply with these special conditions, including the requirement to maintain natural water quality in the affected ASBS. The ASBS Compliance Plan shall include a time schedule to implement appropriate non-structural and structural controls (implementation schedule) to comply with these special conditions.
c. Within 18 months of the effective date of the Exception, any non-structural controls that are necessary to comply with these special conditions shall be implemented.
d. Within six (6) years of the effective date of the Exception, any structural controls identified in the ASBS Compliance Plan that are necessary to comply with these special conditions shall be operational.
e. Within six (6) years of the effective date of the Exception, all Permittees must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85th percentile threshold of reference water quality data and the pre-storm receiving water levels, then the Permittee must re-sample the receiving water, pre- and post-storm. If after re-sampling the post-storm levels are still higher than the 85th percentile threshold of reference water quality data, and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See attached Flowchart Section C.
f. The Executive Director of the State Water Board may only authorize additional time to comply with the special conditions d. and e., above if good cause exists to do so. Good cause means a physical impossibility or lack of funding.

If a Permittee claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the Permittee first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in d. or e. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Exception. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the Permittee to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The Permittee shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

The Permittee may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. for Traditional Small MS4s, a demonstration of significant hardship to Permittee ratepayers, by showing the relationship of storm water fees to annual household income for residents within the Permittee's jurisdictional area, and the Permittee has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate; or

2. for Non-Traditional Small MS4s, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process.

II. ADDITIONAL REQUIREMENTS FOR PARKS AND RECREATION FACILITIES

In addition to the provisions in Section I (A) a Permittee with parks and recreation facilities shall comply with the following:

A. The Permittee shall include a section in an ASBS Compliance Plan to address storm water runoff from parks and recreation facilities.

1. The Section shall identify all pollutant sources, including sediment sources, which may result in waste entering storm water runoff. Pollutant sources include, but are not limited to, roadside rest areas and vistas, picnic areas, campgrounds, trash receptacles, maintenance facilities, park personnel housing, portable toilets, leach fields, fuel tanks, roads, piers, and boat launch facilities.
2. The Section shall describe BMPs or Management Measures/Practices that will be implemented to control soil erosion (both temporary and permanent erosion controls) and reduce or eliminate pollutants in storm water runoff in order to achieve and maintain natural water quality conditions in the affected ASBS. The plan shall include BMPs or Management Measures/Practices to ensure that trails and culverts are maintained to prevent erosion and minimize waste discharges to ASBS.
3. The Section shall include BMPs or Management Measures/Practices to prevent the discharge of pesticides or other chemicals, including agricultural chemicals, in storm water runoff to the affected ASBS.
4. The Section shall include BMPs or Management Measures/Practices that address public education and outreach. The goal of these BMPs or Management Measures/Practices is to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in in the Special Protections as laid out in this Attachment. The BMPs or Management Measures/Practices shall include signage at camping, picnicking, beach and roadside parking areas, and visitor centers, or other appropriate measures, which notify the public of any applicable requirements of the Special Protections as laid out in this Attachment and identify the ASBS boundaries.
5. The Section shall include BMPs or Management Measures/Practices that address the prohibition against the discharge of trash to ASBS. The BMPs or Management Measures/Practices shall include measures to ensure that adequate trash receptacles are available for public use at visitor facilities, including parking areas, and that the receptacles are adequately maintained to prevent trash discharges into the ASBS. Appropriate measures include covering trash receptacles to prevent trash from being windblown and periodically emptying the receptacles to prevent overflows.
6. The Section shall include BMPs or Management Measures/Practices to address runoff from parking areas and other developed features to ensure that the runoff does not alter natural water quality in the affected ASBS. BMPs or Management Measures/Practices shall include measures to reduce pollutant loading in runoff to the ASBS through installation of natural area buffers (LID), treatment, or other appropriate measures.

B. Maintenance and repair of park and recreation facilities must not result in waste discharges to the ASBS. The practice of road oiling must be minimized or eliminated, and must not result in waste discharges to the ASBS.

III. ADDITIONAL REQUIREMENTS – WATERFRONT AND MARINE OPERATIONS

In addition to the provisions in Section I (A), a Permittee with waterfront and marine operations shall comply with the following:

A. For discharges related to waterfront and marine operations, the Permittee shall develop a Waterfront and Marine Operations Management Section (Waterfront Section) for its ASBS Compliance Plan. The Waterfront Section shall contain appropriate Best Management Practices (BMPs) to address pollutant discharges to the affected ASBS.

1. The Waterfront Section shall contain appropriate BMPs for any waste discharges associated with the operation and maintenance of vessels, moorings, piers, launch ramps, and cleaning stations in order to ensure that beneficial uses are protected and natural water quality is maintained in the affected ASBS.
2. For discharges from marinas and recreational boating activities, the Waterfront Section shall include appropriate Management Measures, described in The Plan for California's Nonpoint Source Pollution Control Program, for marinas and recreational boating, or equivalent practices, to ensure that nonpoint source pollutant discharges do not alter natural water quality in the affected ASBS.
3. The Waterfront Section shall include BMPs to address public education and outreach to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in the Special Protections as laid out in this Attachment. The BMPs shall include appropriate signage, or similar measures, to inform the public of the ASBS restrictions and to identify the ASBS boundaries.
4. The Waterfront Section shall include BMPs to address the prohibition against trash discharges to ASBS. The BMPs shall include the provision of adequate trash receptacles for marine recreation areas, including parking areas, launch ramps, and docks. The plan shall also include appropriate BMPs to ensure that the receptacles are adequately maintained and secured in order to prevent trash discharges into the ASBS. Appropriate BMPs include covering the trash receptacles to prevent trash from being windblown, staking or securing the trash receptacles so they don't tip over, and periodically emptying the receptacles to prevent overflow.
5. The Permittee shall submit the Waterfront Plan to the Executive Director of the State Water Board within six months of the effective date of these special conditions. The Waterfront Plan is subject to approval by the State Water Board Executive Director. The plan must be fully implemented within 18 months of the effective date of the Exception.

B. The discharge of chlorine, soaps, petroleum, other chemical contaminants, trash, fish offal, or human sewage to ASBS is prohibited. Sinks and fish cleaning stations are point source discharges of wastes and are prohibited from discharging into ASBS. Anthropogenic accumulations of discarded fouling organisms on the sea floor must be minimized.

C. Limited-term activities, such as the repair, renovation, or maintenance of waterfront facilities, including, but not limited to, piers, docks, moorings, and breakwaters, are authorized only in accordance with Chapter III.E.2 of the Ocean Plan.

D. If the Permittee anticipates that it will fail to fully implement the approved Waterfront Plan within the 18 month deadline, the Permittee shall submit a technical report as soon as practicable to the State Water Board Executive Director. The technical report shall contain reasons for failing to meet the deadline and propose a revised schedule to fully implement the plan.

E. The State Water Board Executive Director may, for good cause, authorize additional time to comply with the Waterfront Plan. Good cause means a physical impossibility or lack of funding.

If a Permittee claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the Permittee first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in Section III.A.5. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of the Special Protections as laid out in this Attachment. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the Permittee to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The Permittee shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality. The Permittee may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. a demonstration of significant hardship by showing that the Permittee has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate.
2. for governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency’s budgetary process, and a demonstration that funding was unavailable or inadequate.

IV. MONITORING REQUIREMENTS

Monitoring is mandatory for all Permittees to assure compliance with the Ocean Plan. Monitoring requirements include both: (A) core discharge monitoring, and (B) ocean receiving water monitoring. The State and Regional Water Boards must approve sampling site locations and any adjustments to the monitoring programs. All ocean receiving water and reference area monitoring must be comparable with the Water Boards’ Surface Water Ambient Monitoring Program (SWAMP).

Safety concerns: Sample locations and sampling periods must be determined considering safety issues. Sampling may be postponed upon notification to the State and Regional Water Boards if hazardous conditions prevail.

Analytical Chemistry Methods: All constituents must be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, must be analyzed by the approved analytical method with the lowest minimum

detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

A. CORE DISCHARGE MONITORING PROGRAM

1. General sampling requirements for timing and storm size:
   Runoff must be collected during a storm event that is greater than 0.1 inch and generates runoff, and at least 72 hours from the previously measurable storm event. Runoff samples shall be collected when post-storm receiving water is sampled, and analyzed for the same constituents as receiving water and reference site samples (see section IV B) as described below.

2. Runoff flow measurements
   a. For municipal/industrial storm water outfalls in existence as of December 31, 2007, 18 inches (457mm) or greater in diameter/width (including multiple outfall pipes in combination having a width of 18 inches, runoff flows must be measured or calculated, using a method acceptable to and approved by the State and Regional Water Boards.
   b. This will be reported annually for each precipitation season to the State and Regional Water Boards.

3. Runoff samples – storm events
   a. For outfalls equal to or greater than 18 inches (0.46m) in diameter or width:
      (1) samples of storm water runoff shall be analyzed during the same storm as receiving water samples for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination, and
      (2) samples of storm water runoff shall be analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS
      (3) If a Permittee has no outfall greater than 36 inches, then storm water runoff from the Permittee's largest outfall shall be further analyzed during the same storm as receiving water samples for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates).
   b. For outfalls equal to or greater than 36 inches (0.91m) in diameter or width:
      (1) samples of storm water runoff shall be analyzed during the same storm as receiving water samples for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination; and
      (2) samples of storm water runoff shall be further analyzed during the same storm as receiving water samples for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates) and
      (3) samples of storm water runoff shall be analyzed for critical stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.

c. For a Permittee not participating in a regional monitoring program [see below in Section IV (B)] in addition to (a.) and (b.) above, a minimum of the two largest outfalls or 20 percent of the larger outfalls, whichever is greater, shall be sampled (flow weighted composite samples) at least three times annually during wet weather (storm event) and analyzed for all Ocean Plan Table A constituents, Table B constituents for marine aquatic life protection (except for toxicity, only chronic toxicity for three species shall be required), DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, and Ocean Plan indicator bacteria. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one (the largest) such discharge shall be sampled annually in each Region.

4. The Executive Director of the State Water Board may reduce or suspend core monitoring once the storm runoff is fully characterized. This determination may be made at any point after the discharge is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

B. OCEAN RECEIVING WATER AND REFERENCE AREA MONITORING PROGRAM

In addition to performing the Core Discharge Monitoring Program in Section IV.A above, all applicants having authorized discharges must perform ocean receiving water monitoring. In order to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS, Permittees may choose either (1) an individual monitoring program, or (2) participation in a regional integrated monitoring program.

1. Individual Monitoring Program: The requirements listed below are for those Permittees who elect to perform an individual monitoring program to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within the affected ASBS. In addition to Core Discharge Monitoring, the following additional monitoring requirements shall be met:

   a. Three times annually, during wet weather (storm events), the receiving water at the point of discharge from the outfalls described in section (IV)(A)(3)(c) above shall be sampled and analyzed for Ocean Plan Table A constituents, Table B constituents for marine aquatic life, DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, salinity, chronic toxicity (three species), and Ocean Plan indicator bacteria.

      The sample location for the ocean receiving water shall be in the surf zone at the point of discharges; this must be at the same location where storm water runoff is sampled. Receiving water shall be sampled at approximately the same time prior to (pre-storm) and during (or immediately after) the same storm (post storm). Reference water quality shall also be sampled and analyzed for the same constituents pre-storm and post-storm, during the same storms when receiving water is sampled. Reference stations will be determined by the State Water Board's Division of Water Quality and the applicable Regional Water Board(s).

   b. Sediment sampling shall occur at least three times during every five (5) year period. The subtidal sediment (sand or finer, if present) at the discharge shall be sampled and analyzed for Ocean Plan Table B constituents for marine aquatic life, DDT, PCBs,

PAHs, pyrethroids, and OP pesticides. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed.

c. A quantitative survey of intertidal benthic marine life shall be performed at the discharge and at a reference site. The survey shall be performed at least once every five (5) year period. The survey design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The results of the survey shall be completed and submitted to the State Water Board and Regional Water Board at least six months prior to the end of the permit cycle.

d. Once during each five (5) year period, a bioaccumulation study shall be conducted to determine the concentrations of metals and synthetic organic pollutants at representative discharge sites and at representative reference sites. The study design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The bioaccumulation study may include California mussels (*Mytilus californianus*) and/or sand crabs (*Emerita analoga* or *Blepharipoda occidentalis*). Based on the study results, the Regional Water Board and the State Water Board's Division of Water Quality, may adjust the study design in subsequent permits, or add or modify additional test organisms (such as shore crabs or fish), or modify the study design appropriate for the area and best available sensitive measures of contaminant exposure.

e. Marine Debris: Representative quantitative observations for trash by type and source shall be performed along the coast of the ASBS within the influence of the Permittee's outfalls. The design, including locations and frequency, of the marine debris observations is subject to approval by the Regional Water Board and State Water Board's Division of Water Quality.

f. The monitoring requirements of the Individual Monitoring Program in this section are minimum requirements. After a minimum of one (1) year of continuous water quality monitoring of the discharges and ocean receiving waters, the Executive Director of the State Water Board (may require additional monitoring, or adjust, reduce or suspend receiving water and reference station monitoring. This determination may be made at any point after the discharge and receiving water is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

2. Regional Integrated Monitoring Program: Permittees may elect to participate in a regional integrated monitoring program, in lieu of an individual monitoring program, to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS. This regional approach shall characterize natural water quality, pre- and post-storm, in ocean reference areas near the mouths of identified open space watersheds and the effects of the discharges on natural water quality (physical, chemical, and toxicity) in the ASBS receiving waters, and should include benthic marine aquatic life and bioaccumulation components. The design of the ASBS stratum of a regional integrated monitoring program may deviate from the otherwise prescribed individual monitoring approach (in Section IV.B.1) if approved by the State Water Board's Division of Water Quality and the Regional Water Boards.

   a. Ocean reference areas shall be located at the drainages of flowing watersheds with minimal development (in no instance more than 10% development), and shall not be

located in CWA Section 303(d) listed waterbodies or have tributaries that are 303(d) listed. Reference areas shall be free of wastewater discharges and anthropogenic non- storm water runoff. A minimum of low threat storm runoff discharges (e.g. stream highway overpasses and campgrounds) may be allowed on a case-by-case basis. Reference areas shall be located in the same region as the ASBS receiving water monitoring occurs. The reference areas for each Region are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean reference water samples must be collected from each station, each from a separate storm. A minimum of one reference location shall be sampled for each ASBS receiving water site sampled per responsible party. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

b. ASBS ocean receiving water must be sampled in the surf zone at the location where the runoff makes contact with ocean water (i.e. at "point zero"). Ocean receiving water stations must be representative of worst-case discharge conditions (i.e. co-located at a large drain greater than 36 inches, or if drains greater than 36 inches are not present in the ASBS then the largest drain greater than18 inches.) Ocean receiving water stations are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean receiving water samples must be collected during each storm season from each station, each from a separate storm. A minimum of one receiving water location shall be sampled in each ASBS per responsible party in that ASBS. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

c. Reference and receiving water sampling shall commence during the first full storm season following the adoption of these special conditions, and post-storm samples shall be collected when annual storm water runoff is sampled. Sampling shall occur in a minimum of two storm seasons. For those ASBS Permittees that have already participated in the Southern California Bight 2008 ASBS regional monitoring effort, sampling may be limited to only one storm season.

d. Receiving water and reference samples shall be analyzed for the same constituents as storm water runoff samples. At a minimum, constituents to be sampled and analyzed in reference and discharge receiving waters must include oil and grease, total suspended solids, Ocean Plan Table B metals for protection of marine life, Ocean Plan PAHs, pyrethroids, OP pesticides, ammonia, nitrate, phosphates, and critical life stage chronic toxicity for three species. In addition, within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination shall be analyzed.

3. Waterfront and Marine Operations: In addition to the above requirements for ocean receiving water monitoring, additional monitoring must be performed for marinas and boat launch and pier facilities:

   a. For all marina or mooring field operators, in mooring fields with 10 or more occupied moorings, the ocean receiving water must be sampled for Ocean Plan indicator

bacteria, residual chlorine, copper, zinc, grease and oil, methylene blue active substances (MBAS), and ammonia nitrogen.

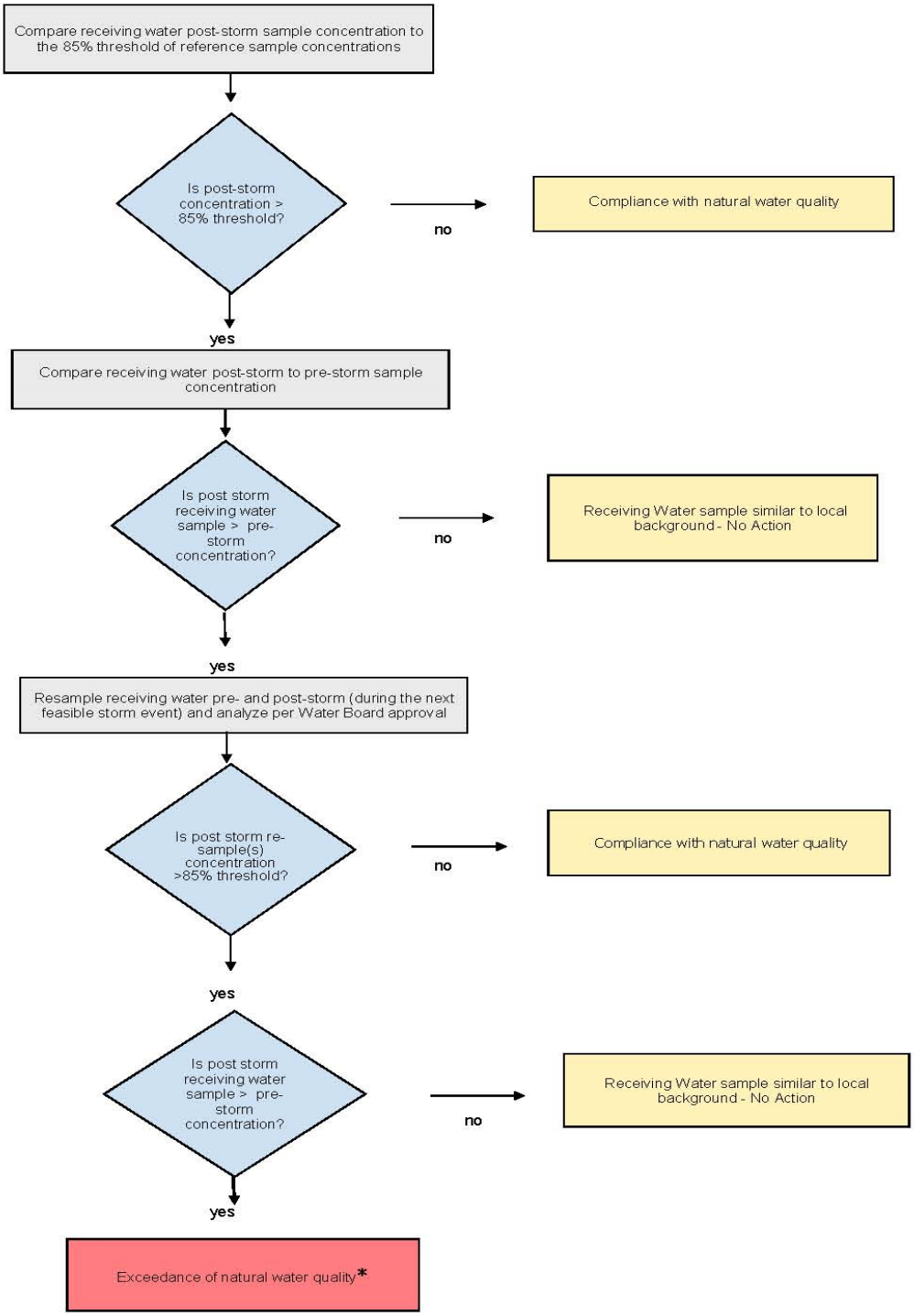
(1) For mooring field operators opting for an individual monitoring program (Section IV.B.1 above), this sampling must occur weekly (on the weekend) from May through October.

(2) For mooring field operators opting to participate in a regional integrated monitoring program (Section IV.B.2 above), this sampling must occur from May through October on a high weekend in each month. The Water Boards may allow a reduction in the frequency of sampling, through the regional monitoring program, after the first year of monitoring.

b. For all mooring field operators, the subtidal sediment (sand or finer, if present) within the mooring fields and below piers shall be sampled and analyzed for Ocean Plan Table B metals (for marine aquatic life beneficial use), acute toxicity, PAHs, and tributyltin. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed. This sampling shall occur at least three times during a five (5) year period. For mooring field operators opting to participate in a regional integrated monitoring program, the Water Boards may allow a reduction in the frequency of sampling after the first sampling effort's results are assessed.

C. ASBS Flow Chart

Figure 2
ASBS Special Protections
Flowchart to Determine Compliance with Natural Water Quality



*** When an exceedance of natural water quality occurs, the Department must comply with section I.A.2.h of the Special Protections as well as the requirements of this Order. Note, when sampling data is available, end-of-pipe effluent concentrations will be considered by the Water Boards in making this determination.**

D. ASBS Monitoring Constituents

Table A: Monitoring Constituent List
(excerpted from California Ocean Plan dated 2009)

Constituent	Units
Grease and Oil	mg/L
Suspended Solids	mg/L
Settleable Solids	mL/L
Turbidity	NTU
pH	

Table B: Monitoring Constituent List
(excerpted from California Ocean Plan dated 2009)

Constituent	Units
Arsenic	ìg/L
Cadmium	ìg/L
Chromium	ìg/L
Copper	ìg/L
Lead	ìg/L
Mercury	ìg/L
Nickel	ìg/L
Selenium	ìg/L
Silver	ìg/L
Zinc	ìg/L
Cyanide	ìg/L
Total Chlorine Residual	ìg/L
Ammonia (as N)	ìg/L
Acute Toxicity	TUa
Chronic Toxicity	TUc
Phenolic Compounds (non-chlorinated)	ìg/L
Chlorinated Phenolics	ìg/L
Endosulfan	ìg/L
Endrin	ìg/L
HCH	µg/L

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Attachment D

Phase II Small MS4 Entities Authorized to Discharge to Areas of Special Biological Significance (ASBS)

Regional Board	Applicant	ASBS
North Coast	City of Trinidad	Trinidad Head
North Coast	County of Humboldt	King Range
North Coast	Humboldt Bay Harbor District	King Range
North Coast	Department of Parks and Recreation	Gerstle Cove
North Coast	Department of Parks and Recreation	Jughandle Cove
North Coast	Department of Parks and Recreation	King Range
North Coast	Department of Parks and Recreation	Trinidad Head
North Coast	Department of Parks and Recreation	Redwoods State and National Park
San Francisco	County of Marin	Duxbury Reef
San Francisco	Defense, Department of (Vandenberg Air Force Base)	James V. Fitzgerald
San Francisco	National Park Service	Point Reyes National Seashore
Central Coast	City of Monterey	Pacific Grove
Central Coast	City of Pacific Grove	Pacific Grove
Central Coast	City of Carmel by The Sea	Carmel Bay
Central Coast	County of Monterey	Carmel Bay
Central Coast	Department of Parks and Recreation	Año Nuevo
Central Coast	Department of Parks and Recreation	Carmel Bay
Central Coast	Department of Parks and Recreation	Julia Pfeiffer Burns
Central Coast	Department of Parks and Recreation	Point Lobos
Los Angeles	Department of Parks and Recreation	Laguna Point to Latigo Point
Santa Ana	Department of Parks and Recreation	Irvine Coast

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Attachment E - Community-Based Social Marketing (CBSM) Education and Outreach Requirements

A. Public Education and Outreach Program

A.1. Compliance Participation Options

Within the first year of the effective date of the permit, all Permittees shall comply with the requirements in this Section by participating in one or more of the following:

(i) Contributing to a countywide storm water program, as determined appropriate by the Permittee members, so that the countywide storm water program conducts education and outreach on behalf of its members; or
(ii) Contributing to a regional education and outreach collaborative effort (a regional outreach and education collaborative effort occurs when all or a majority of the Permittees collaborate to conduct regional outreach and education. Regional education and outreach collaboration includes Permittees defining a uniform and consistent message, deciding how best to communicate the message, and how to facilitate behavioral changes. Then collaboratively apply what is learned through local jurisdiction groups, pooling resources and skills.); or
(iii) Fulfilling education and outreach requirements within their jurisdictional boundaries on their own; or
(iv) A combination of the previous options, so that all requirements are fulfilled.

Reporting – By the first year online Annual Report, the Permittee shall identify which compliance participation option it will use to comply with the public education and outreach requirements in this Section. For each public education and outreach requirement in this Section that the Permittee will comply with through contribution to a countywide storm water program or regional education and outreach collaborative effort, the Permittee shall include in the first year online Annual Report documentation, such as a written agreement, letter or similar document, which confirms the collaboration with other MS4s.

A.2. Public Education and Outreach

A.2.a. Public Education and Outreach

(i) Task Description – Within the second year of the effective date of the permit, the Permittee shall develop and implement a comprehensive storm water public education and outreach program. The public education and outreach program shall be designed to reduce pollutant discharges in storm water runoff and non-storm water discharges to the MS4 through behavior changes in target communities. The Public Education and Outreach Program shall (1) measurably increase the knowledge of targeted communities regarding the municipal storm drain system, impacts of urban runoff and non-storm water discharges on receiving waters, and potential BMP solutions for the target audiences and (2) measurably change the behavior of target audiences, thereby reducing pollutant releases to the MS4 and the environment.

(ii) Implementation Level –The Permittee shall, at a minimum:

(a) Develop and implement a public education strategy that establishes education tasks based on water quality problems, target audiences, and anticipated task effectiveness. The strategy must include identification of who is responsible for implementing specific tasks, a schedule for task implementation, and a budget for implementing the tasks. The strategy must demonstrate how specific high priority storm water quality issues in the community or local pollutants of concern are addressed. The Permittee shall use CBSM[1] strategies or equivalent.

(b) Implement surveys at least twice during the five year permit term to gauge the level of awareness and behavior change in target audiences and effectiveness of education tasks.

(c) Use of CBSM strategies or equivalent. The Public Education strategy shall at a minimum include the following Permittee actions:

(1) Research on barriers to desired behaviors and benefits of desired behaviors (ex. Literature review, observation, focus groups).
(2) Elicit commitment to implement desired behavior from target audience.
(3) Provide prompts reminding target audience of desired behavior.
(4) Use the concept of social norms/modeling of desired behavior.
(5) Use education messages that are specific, easy to remember, from a credible source, and appropriate for the target audience.
(6) Create incentives for the desired behavior.
(7) Remove barriers to the desired behavior.

(d) Development and conveyance of a specific storm water message that focuses on the following:

(1) Local pollutants of concern
(2) Target audience
(3) Behavior of concern
(4) Regional water quality issues

(e) Development and disseminate appropriate educational materials to target audiences and translate into applicable languages when appropriate (e.g. the materials can utilize various media such as printed materials, billboard and mass transit advertisements, signage at select locations, stenciling at storm drain inlets, radio advertisements, television advertisements, and websites);

(f) Utilization of public input (e.g., the opportunity for public comment, or public meetings) in the development of the program;

(g) Distribution of the educational materials, using whichever methods and procedures determined appropriate during development of the public education strategy, in such a way that is designed to convey the program's message to 20% of the target audience each year;

[1] CBSM: A systematic way to change the behavior of communities to reduce their impact on the environment. Realizing that simply providing information is usually not sufficient to initiate behavior change, CBSM uses tools and findings from social psychology to discover the perceived barriers to behavior change and ways of overcoming these barriers.

(h) Coordination with outreach programs for the Water Efficient Landscape Ordinance to explain the benefits of storm water-friendly landscaping;
(i) Technical and financial assistance and implementation guidance related to storm water-friendly landscaping;
(j) Development and conveyance of messages specific to reducing illicit discharges with information about how the public can report incidents to the appropriate authorities;
(k) Development and conveyance of messages specific to proper application of pesticides, herbicides, and fertilizers;
(l) Storm water education for school-age children. The Permittee may use California's Education and Environment Initiative Curriculum or equivalent.
(m) Reducing discharges from charity car washes, mobile cleaning and pressure washing operations, and landscape irrigation.

(iii) Reporting – By the second year online Annual Report and annually thereafter, report on the public education strategy and general program development and progress. By the fifth year online Annual Report, summarize changes in public awareness and behavior resulting from the implementation of the program and any modifications to the public outreach and education program. Report on the public education and CBSM strategies such as pilot programs, survey results, research on barriers to desired behaviors and benefits of desired behaviors, commitments from target audience to implement desired behavior, prompts, implementation of the social norms/modeling, education messages, incentives for desired behaviors, methods for removing barriers to behavior change, development of education materials, methods for educational material distribution, public input, Water Efficient Landscape Ordinance, technical and financial assistance for storm water friendly landscaping, reporting of illicit discharges, proper application of pesticides, herbicides, and fertilizers, elementary school education, reduction of discharges from charity car washes, mobile cleaning and pressure washing operations, and landscape irrigation efforts. Annually report number of trainings, describe the technical and financial program and implementation, and the study and results to date. For each whole five years of the permit life, submit the online Annual Report summarizing the changes in public awareness and behavior.

A.2.b. Construction Education and Outreach Program

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop and implement a construction outreach and education program for construction sites smaller than one acre. The construction outreach and education program shall be designed to reduce pollutant discharges in storm water runoff and non-storm water discharges to the MS4 through behavior changes in target communities. The multi-media program shall (1) measurably increases the knowledge of the construction community regarding the municipal storm drain system, impacts of urban runoff and non-storm water discharges on receiving waters, and potential BMP solutions for the target audiences and (2) measurably changes the behavior of the construction community, thereby reducing pollutant releases to the MS4 and the environment.

(ii) **Implementation Level** –The program shall include, at a minimum:
(a) Development of a watershed-based inventory of the high priority residential and commercial construction sites within the Permittee's jurisdiction.
(b) Development and implementation of a construction outreach and education strategy that establishes measurable goals and prioritizes education tasks based on water quality problems, target audiences, and anticipated task effectiveness. The strategy must include identification of who is responsible for implementing specific tasks and attaining measurable goals, a schedule for task implementation, and a budget for implementing the tasks and meeting the measurable goals. The strategy must include measurable goals designed to demonstrate how specific high priority storm water quality issues in the community or local pollutants of concern are addressed. Establish who is responsible for specific tasks and goals and a budget for meeting the tasks and goals.
(c) Implementation of CBSM to address the MS4's highest priority water quality problems. For each high priority water quality problem, implementation of CBSM shall first be conducted on a pilot project level. CBSM techniques found to be effective at the pilot project level shall be implemented jurisdiction-wide by permit year four. Pilot project and jurisdiction level CBSM shall include the following Permittee actions:

(1) Research on barriers to desired behaviors and benefits of desired behaviors (ex. Literature review, observation, focus groups).
(2) Elicit commitment to implement desired behavior from construction community.
(3) Provide prompts reminding construction community of desired behavior.
(4) Use the concept of social norms/modeling of desired behavior.
(5) Use education messages that are specific, easy to remember, from a credible source, and appropriate for the target audience.
(6) Create incentives for the desired behavior.
(7) Remove barriers to the desired behavior.

(iii) **Reporting** – By the second year online Annual Report and annually thereafter, report program progress and mechanisms used for outreach and education including measurable increases in the knowledge of the construction community and measurable changes in the construction community's behavior. This includes a watershed-based inventory of high priority residential and commercial construction sites, outreach and education strategy and implementation, implementation of CBSM, pilot project, research on barriers to desired behaviors and benefits of desired behaviors, commitments from target audience to implement desired behavior, prompts, implementation of the social norms/modeling, education messages, incentives for desired behaviors, methods for removing barriers to behavior change.

A.3. STAFF AND SITE OPERATOR TRAINING AND EDUCATION

A.3.a. Illicit Discharge Detection and Elimination Training

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and implement a training program for all Permittee staff who, as part of their normal job responsibilities, may be notified of, come into contact with, or otherwise observe an illicit discharge or illegal connection to the storm drain system.

(ii) **Implementation Level** – The training program shall include at a minimum:
(a) Identification of an illicit discharge or illegal connection.
(b) Proper procedures for reporting and responding to the illicit discharge or illegal connection.
(c) Follow-up training shall be provided as needed to address changes in procedures, techniques, or staffing.
(d) The Permittee shall annually perform an assessment of their trained staff's knowledge of illicit discharge response and shall provide refresher training as needed.
(e) New staff that, as part of their normal job responsibilities may be notified of, come into contact with, or otherwise observe an illicit discharge or illegal connection shall be trained no later than six months after the start of employment.
(f) Contact information, including the procedure for reporting an illicit discharge, shall be included in each of the Permittee's fleet vehicles that are used by field staff.
(g) The Permittee shall conduct focused education in identified illicit discharge flow areas based on identified illicit discharge(s).

(iii) **Reporting** - The Permittee shall document and maintain records of the training provided and the staff trained annually in the online Annual Report.

A.3.b. Construction Outreach and Education

1. Permittee Staff Training

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall ensure that all staff implementing the construction storm water program are adequately trained.

(ii) **Implementation Level** – The Permittee may conduct in-house training or contract with consultants. Training shall be provided to the following staff positions of the MS4:

(a) Plan Reviewers and Permitting Staff - Ensure staff and consultants are qualified individuals, knowledgeable in the technical review of local erosion and sediment control plans, and are certified pursuant to a State Water Board sponsored program as a Qualified SWPPP Developer (QSD), or a designated person on staff possesses the QSD credential.
(b) Erosion Sediment Control/Storm Water Inspectors - The Permittee shall ensure inspectors are qualified individuals, knowledgeable in inspection procedures, and are certified pursuant to a State Water Board sponsored program as either (1) a Qualified SWPPP Developer (QSD) (2) a Qualified SWPPP Practitioner (QSP) or (3) a designated person on staff possesses

each credential (QSD to supervise plan review, QSP to supervise inspection operations).

(c) Third-Party Plan Reviewers, Permitting Staff, and Inspectors - If the Permittee utilizes outside parties to conduct inspections and/or review plans, the Permittee shall ensure these staff are trained.

(iii) **Reporting** – By the second year of the permit term and annually thereafter, submit the following information:
(a) Training topics covered.
(b) Dates of training.
(c) Number and percentage of Permittee's staff, as identified in Sections a-c above, attending each training.
(d) Results of any surveys conducted to demonstrate the awareness and potential behavioral changes in the attendees.

2. Construction Site Operator Education

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and distribute educational materials to construction site operators.

(ii) **Implementation Level** – The Permittee shall do the following:
(a) Each year provide information on training opportunities for construction operators on BMP selection, installation, implementation, and maintenance as well as overall program compliance.
(b) Develop or utilize existing outreach tools (i.e. brochures, posters, etc.) aimed at educating construction operators on appropriate selection, installation, implementation, and maintenance of storm water BMPs, as well as overall program compliance.
(c) Distribute appropriate outreach materials to all construction operators who will be disturbing land within the MS4 boundary. The Permittee's contact information and website shall be included in these materials.
(d) Update the existing storm water website to include information on appropriate selection, installation, implementation, and maintenance of BMPs.

(iii) **Reporting** – By the third year online Annual Report and annually thereafter, include the following information:
(a) Training topics covered;
(b) Dates of training;
(c) Number and percentage of Permittee's operators, inspectors, and number of Contractors attending each training;
(d) Results of any surveys conducted to demonstrate the awareness and potential behavioral changes in the attendees.

A.3.c. Pollution Prevention and Good Housekeeping Staff Training

The Permittee shall train employees on how to incorporate pollution prevention/good housekeeping techniques into Permittee operations.

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop a bi-annual employee training program for appropriate employees involved in implementing pollution prevention and good

housekeeping practices in the Pollution Prevention/Good Housekeeping for Permittee Operations sections of this General Permit. The Permittee shall determine the need for interim training during alternate years when training is not conducted, through an evaluation of employee Pollution Prevention/Good Housekeeping knowledge. All new hires whose jobs include implementation of pollution prevention and good housekeeping practices must receive this training within the first year of their hire date.

(ii) **Implementation Level** – The training program shall include the following:
(a) Bi-annual training for all employees implementing this program element. This bi-annual training shall include a general storm water education component, any new technologies, operations, or responsibilities that arise during the year, and the permit requirements that apply to the staff being trained. Employees shall receive clear guidance on appropriate storm water BMPs to use at municipal facilities and during typical O&M activities.
(b) A bi-annual assessment, occurring on alternate years between training, of trained staff's knowledge of pollution prevention and good housekeeping and shall revise the training as needed.
(c) A requirement that any contractors hired by the Permittee to perform O&M activities shall be contractually required to comply with all of the storm water BMPs, good housekeeping practices, and standard operating procedures described above.
(d) The Permittee shall provide oversight of contractor activities to ensure that contractors are using appropriate BMPs, good housekeeping practices and following standard operating procedures.

(iii) **Reporting** – By the second year online Annual Report and annually thereafter, summarize oversight procedures and identify and track all personnel requiring training and assessment and records.

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Attachment F - Standard Provisions

1. General Authority

   Various storm water program components (e.g. IDDE) require enforceable controls on third party activities to ensure successful implementation of the program. Some non-traditional operators, however, may not have the necessary legal or regulatory authority to adopt enforceable controls. As with local governments that lack such authority, NTMS4s shall utilize the authority they do possess and seek cooperative agreements with local municipalities to implement enforceable controls.

2. Duty to Comply

   The Permittee shall comply with all conditions of this Permit. Any Permit noncompliance constitutes a violation of the CWA and the Porter-Cologne Water Quality Control Act, which may be grounds for enforcement action or denial of General Permit coverage. [40 CFR 122.41(a)]
   The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Permit has not yet been modified to incorporate the requirement.
   In the event that the Permittee is removed from coverage under the General Permit, the Permittee will be required to seek coverage under an individual or alternative general permit.

3. General Permit Actions

   This General Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not nullify any General Permit condition.
   If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under §307(a) of CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and Permittee will be so notified.

4. Enforcement

   a. The enforcement provisions contained in this section shall not act as a limitation on the statutory or regulatory authority of the State and Regional Water Board.

   b. Any violation of the permit constitutes violation of the California Water Code and regulations adopted hereunder and the provisions of the Clean Water Act, and is the basis for enforcement, permit termination, permit revocation and reissuance, denial of an application for permit reissuance; or a combination thereof.

   c. The State Water Board has authority to regulate discharges from a MS4 on a system-wide or jurisdiction-wide basis. [CWA Section 402(p) & 40 CFR 122.26(a)(v)]

d. The State and Regional Boards may impose administrative civil liability, may refer a discharger to the State Attorney General to seek civil monetary penalties, may seek injunctive relief or take other appropriate enforcement action as provided in the California Water Code or federal law for violation of Board orders.

e. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this order and permit.

f. Significant penalties may be imposed for violation of this General Permit, pursuant to CWC section 13385 and other State and federal statutes. Court- imposed liability may exceed $25,000 per day, and Regional Water Board's may impose administrative fines exceeding $10,000 per day [40 CFR 122.41(a)(2) & (3)].

g. The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both [40 CFR 122.41(k)(2)].

h. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or both. Higher penalties may be imposed for repeat offenders [40 CFR 122.41(j)(5)].

5. Noncompliance Reporting

   Permittees who cannot certify compliance and/or who have had other instances of noncompliance shall notify the appropriate Regional Water Board within 30 days. Instances of noncompliance resulting in emergencies (i.e., that endanger human health or the environment) shall be reported orally to the Regional Water Board within 24 hours from the time the discharger becomes aware of the circumstance and in writing to the Regional Water Board within five days of the occurrence. The notification shall identify the noncompliance event and an initial assessment of any impact caused by the event, describe the actions necessary to achieve compliance, and include a time schedule indicating when compliance will be achieved. The time schedule and corrective measures are subject to modification by the Regional Water Board Executive Officer.

6. Duty to Mitigate

   The Permittee shall take all responsible steps to minimize or prevent any discharge in violation of this General Permit that has a reasonable likelihood of adversely affecting human health or the environment. [40 CFR 122.41(d)]

7. Proper Operation and Maintenance

   The Permittee shall at all times properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this General Permit and with the requirements of the storm water program. Proper operation and maintenance also includes

adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by the Permittee when necessary to achieve compliance with the conditions of this General Permit. [40 CFR 122.41(e)]

8. Property Rights

   This General Permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor does it authorize any infringement of federal, State, or local laws or regulations.[40 CFR 122.41(g)]

9. Duty to Provide Information

   The Permittee shall furnish Regional Water Boards or U.S. EPA, during normal business hours, any requested information to determine compliance with this General Permit. The Permittee shall also furnish, upon request, copies of records required to be kept by this General Permit. [40 CFR 122.41(h)]

10. Inspection and Entry

    Upon the presentation of credentials and other documents as may be required by law, the Permittee shall allow the State and Regional Water Boards, U.S. EPA, or municipal storm water management agency to enter upon the Permittee premises where a regulated facility or activity is located or conducted or where records are required to be kept under the conditions of this General Permit to [40 CFR 122.41(i)]:

    a. Have access to and copy at reasonable times any records that are required to be kept under the conditions of this Permit;

    b. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment) that are related to or may impact any storm water or non-storm water discharge; and

    c. Conduct monitoring activities at reasonable times to ensure Permit compliance.

    d. Photograph or videotape outdoor areas of the facility to document compliance or non-compliance with this Permit.

11. Signatory Requirements

    All NOIs, certifications, reports, or other information prepared in accordance with this General Permit that are submitted to State or Regional Water Boards shall be signed by either a principal executive officer, ranking elected official, or duly authorized representative. The principal executive officer of a Federal agency includes the chief executive officer of the agency or the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of U.S. EPA). For the military: any military officer or Department of Defense civilian, acting in an equivalent capacity to a military officer, who has been designated.

12. Certification

    Any person signing documents under this General Permit shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete.
I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

13. Anticipated Noncompliance

    The Permittee will give advance notice to the Regional Water Board of any planned changes in the regulated Small MS4 activity that may result in noncompliance with General Permit requirements.

14. Penalties for Falsification of Reports

    Section 309(c)(4) of CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance, shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years or by both.

15. Penalties for Violations of Permit Conditions

    a. Part 309 of CWA provides significant penalties for any person who violates a permit condition implementing Parts 301, 302, 306, 307, 308, 318, or 405 of CWA or any permit condition or limitation implementing any such section in a permit issued under Part 402. Any person who violates any permit condition of this General Permit is subject to a civil penalty not to exceed $27,500 per calendar day of such violation, as well as any other appropriate sanction provided by Part 309 of CWA.

    b. The California Water Code also provides for administrative, civil, and criminal penalties, which in some cases are greater than those under CWA.

16. Oil and Hazardous Substance Liability

    Nothing in this General Permit shall be construed to preclude the institution of any legal action against the Permittee or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject to under Part 311 of CWA.

17. Severability

    The provisions of this General Permit are severable; and, if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

18. Reopener Clause

    This General Permit may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, or otherwise in accordance with 40 CFR sections 122.62, 122.63, 122.64, and 124.5.

19. Availability

    A copy of this General Permit and Annual Reports shall be made available for public review, program evaluation (audit) and inspection.

20. Transfers

    This General Permit is not transferable. A Permittee shall submit written notification to the appropriate Regional Water Board to terminate coverage of this General Permit.

21. Continuation of Expired Permit

    This General Permit expires five years from the date of adoption. This General Permit continues in force and in effect until a new General Permit is issued or the State Water Board rescinds this General Permit. Only those Small MS4s authorized to discharge under the expired General Permit are covered by the continued General Permit.

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ATTACHMENT G - Region-Specific Requirements

Regional Water Board-Approved TMDLs with urban runoff listed as a source

Region 1: North Coast Regional Water Board

Temperature & Dissolved Oxygen

TMDL for Shasta River Watershed – *Temperature & Dissolved Oxygen*

Effective Date: January 26, 2007
BPA: Action Plan for the Shasta River Watershed Temperature and Dissolved Oxygen Total Maximum Daily Loads
Resolution R1-2006-0052
Phase II Entities: City of Yreka
Impaired Water Body: Shasta River

Requirements for Implementing the TMDL

The City of Yreka developed a Plan to minimize, control, and preferably prevent discharges of fine sediment, nutrients and other oxygen-consuming materials, and elevated water temperature waste discharge from affecting waters of the Shasta River and its tributaries. The Regional Water Board Executive Officer approved the City of Yreka's Plan. No later than January 1, 2019, the City of Yreka shall begin implementing the Plan.

The TMDL does not specify a wasteload or load allocation for the City of Yreka.

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Region 2: San Francisco Regional Water Board

Diazinon & Pesticide Toxicity

TMDL for Urban Creeks – *Diazinon & Pesticide Toxicity*

Effective Date: May 16, 2007
BPA: BPA – Chapter 3, Toxicity
Resolution No. R2-2005-0063
Phase II Entities: City of Belvedere, Town of Corte Madera, Town of Fairfax, City of Larkspur, Marin County, City of Mill Valley, City of Novato, City of Petaluma, Town of Ross, Town of San Anselmo, City of San Rafael, City of Sausalito, City of Sonoma, County of Sonoma, Town of Tiburon
Impaired Water Body: Arroyo Corte Madera del Presidio, Corte Madera Creek, Coyote Creek (Marin Co.), Gallinas Creek, Miller Creek, Novato Creek, San Antonio Creek, San Rafael Creek, Petaluma River, Calabazas Creek

Requirements for Implementing the TMDL

Urban runoff management agencies' responsibilities for addressing the allocations set in the TMDL will be satisfied by complying with the requirements set forth below. Permittees identified in this TMDL section may coordinate with the Bay Area Storm Water Management Agencies Association, the Urban Pesticide Pollution Prevention Project, the Urban Pesticide Committee, and other agencies and organizations in carrying out these activities.

A. Implement the Pesticide-Related Toxicity Control Program

To prevent the impairment of urban streams by pesticide-related toxicity, the Phase II entities identified in this TMDL section shall implement an Integrated Pest Management Policy (IPM) or Ordinance, applicable to all the permittees' operations and property, as described in the Fact Sheet of this Order.

Implementation actions shall include:

- Ensure all municipal employees who apply or use pesticides within the scope of their duties are trained in the IPM practices and policy/ordinance.
- Require all contractors to implement the IPM policy/ordinance.
- Keep the County Agricultural Commissioners informed of water quality issues related to pesticides and of violations of pesticides regulations (e.g., illegal handling) associated with storm water management.
- Conduct outreach to residents and pest control applicators on less toxic methods of pest control.
- Keep records of the permittees' own use of pesticides of concern and the pesticide use by the permittees' hired contractors. Report on pesticide use when requested by the Regional Water Board.
- Monitor water and sediment for pesticides and associated toxicity in urban creeks via an individual or regional program designed to answer the following questions:
  - Are the TMDL toxicity targets being met?
  - Is toxicity observed in urban creeks caused by a pesticide?
  - Is urban runoff the source of any observed toxicity in urban creeks?

- How does observed pesticide-related toxicity in urban creeks (or pesticide concentrations contributing to such toxicity) vary in time and magnitude across urban creek watersheds, and what types of pest control practices contribute to such toxicity?
- Are actions already being taken to reduce pesticide discharges sufficient to meet the targets, and if not, what should be done differently?

A final deadline for attainment of the WLA is not specified in the TMDL. Therefore, municipalities identified in this TMDL section shall propose a timeline to meet the WLA in the shortest practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the WLA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii) of this Order.

Pathogens

TMDL for Napa River – *Pathogens*

Effective Date: February 29, 2008
BPA: Chapter 7, Water Quality Attainment Strategies including TMDLs
Resolution No. R2-2006-0079
Phase II Entities: City of American Canyon, City of Calistoga, City of St. Helena, City of Napa, Napa County, Town of Yountville
Impaired Water Body: Napa River

Requirements for Implementing the TMDL

The Phase II entities identified in this TMDL section shall implement the following actions by January 1, 2019:

i. Public Participation and Outreach. Educate the public regarding sources of fecal coliform and associated health risks of fecal coliform in surface waters. Educate the public regarding actions that individuals can take to reduce pathogen loading.
ii. Pet Waste Management. Implement enforceable means of reducing/eliminating fecal coliform loading from pet waste.
iii. Illicit Discharge Detection and Elimination. Implement strategies to detect and eliminate illicit discharges (whether mistaken or deliberate) of sewage to the Napa River.
iv. Pollution Prevention and Good Housekeeping. Implement strategies to reduce/eliminate fecal coliform loading from streets, parking lots, sidewalks, and other urban areas that potentially collect and discharge fecal coliform to the Napa River.
v. As indicated in the TMDL, participate in the Regional Water Board's stakeholder effort to conduct water quality monitoring at baseline monitoring sites.
vi. Conduct baseline water quality monitoring to evaluate E. coli concentration trends in the Napa River and its tributaries. Table 7-g in Chapter 7, Water Quality Attainment Strategies, presents locations and frequency for the required baseline water quality monitoring.
vii. Report yearly, in the Annual Report, (on participation in the stakeholder group and progress made on implementation of human and animal runoff reduction measures.

A final deadline for attainment of the LA is not specified in the TMDL. Therefore, municipalities identified in this TMDL section shall propose a timeline to attain the LA in the shortest

practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the LA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii) of this Order.

TMDL for Richardson Bay – *Pathogens*

Effective Date: December 18, 2009
BPA: Chapter 7, Water Quality Attainment Strategies including TMDLs
Resolution No. R2-2008-0061
Phase II Entities: City of Belvedere, Marin County, City of Mill Valley, City of Sausalito, City of Tiburon
Impaired Water Body: Richardson Bay

Requirements for Implementing the TMDL

The Phase II entities identified in this TMDL section shall implement the following actions by January 1, 2019:

i. Public Participation and Outreach. Educate the public regarding sources of fecal coliform and associated health risks of fecal coliform in surface waters. Educate the public regarding actions that individuals can take to reduce pathogen loading.
ii. Pet Waste Management. Implement enforceable means of reducing/eliminating fecal coliform loading from pet waste.
iii. Illicit Discharge Detection and Elimination. Implement strategies to detect and eliminate illicit discharges (whether mistaken or deliberate) of sewage to Richardson Bay.
iv. Pollution Prevention and Good Housekeeping. Implement strategies to reduce/eliminate fecal coliform loading from streets, parking lots, sidewalks, and other urban areas that potentially collect and discharge fecal coliform to Richardson Bay.
v. Report yearly in the Annual Report on progress made on implementation of pathogen reduction measures.

A final deadline for attainment of the WLA is not specified in the TMDL. Therefore, municipalities identified in this TMDL section shall propose a timeline to attain the WLA in the shortest practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the WLA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii) of this Order.

TMDL for Sonoma Creek – *Pathogens*

Effective Date: February 29, 2008
BPA: Chapter 7, Water Quality Attainment Strategies including TMDLs
Resolution No. R2-2006-0042
Phase II Entities: City of Sonoma, County of Sonoma
Impaired Water Body: Sonoma Creek

Requirements for Implementing the TMDL

The Phase II entities identified in this TMDL section shall implement the following actions by January 1, 2019:

i. Public Participation and Outreach. Educate the public regarding sources of fecal coliform and associated health risks of fecal coliform in surface waters. Educate the public regarding actions that individuals can take to reduce pathogen loading.

ii. Pet Waste Management. Implement enforceable means of reducing/eliminating fecal coliform loading from pet waste.
iii. Illicit Discharge Detection and Elimination. Implement strategies to detect and eliminate illicit discharges (whether mistaken or deliberate) of sewage to Sonoma Creek.
iv. Pollution Prevention and Good Housekeeping. Implement strategies to reduce/eliminate fecal coliform loading from streets, parking lots, sidewalks, and other urban areas that potentially collect and discharge fecal coliform to Sonoma Creek.
v. Conduct baseline water quality monitoring to evaluate E. coli concentration trends in Sonoma Creek and its tributaries. Table 7-n in Chapter 7, Water Quality Attainment Strategies, presents locations and frequency for the required baseline water quality monitoring.
vi. Report yearly in the Annual Report on water quality monitoring results and progress made on implementation of human and animal runoff reduction measures.

A final deadline for attainment of the WLA is not specified in the TMDL. Therefore, municipalities identified in this TMDL section shall propose a timeline to attain the WLA in the shortest practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the WLA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii) of this Order.

TMDL for Sonoma Creek – *Pathogens* (Continued)
Phase II Entities: Sonoma County Water Agency
Impaired Water Body: Sonoma Creek

Requirements for Sonoma County Water Agency for Implementing TMDL

The Sonoma County Water Agency shall:

1. Continue to implement actions as specified in the Storm Water Management Plan approved under the 2003 General Permit (State Water Board Order 2003-0005-DWQ).
2. Review annually and update the TMDL attainment actions, as necessary.
3. Report progress on TMDL implementation measures in the Annual Report.

A final deadline for attainment of the WLA is not specified in the TMDL. Therefore, Sonoma County Water Agency shall propose a timeline to attain the WLA in the shortest practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the WLA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii) of this Order.

TMDL for Tomales Bay – *Pathogens*

Effective Date: February 8, 2007
BPA: Chapter 4, Surface Water Protection and Management, Nonpoint Source Control Resolution No. R2-2005-0046
Phase II Entities: Marin County
Impaired Water Body: Tomales Bay, Lagunitas Creek, Walker Creek, Olema Creek

Requirements for Implementing the TMDL

The Phase II entities identified in this TMDL section shall implement the following actions by January 1, 2019:

i. Public Participation and Outreach. Educate the public regarding sources of fecal coliform and associated health risks of fecal coliform in surface waters. Educate the public regarding actions that individuals can take to reduce pathogen loading.
ii. Pet Waste Management. Implement enforceable means of reducing/eliminating fecal coliform loading from pet waste.
iii. Illicit Discharge Detection and Elimination. Implement strategies to detect and eliminate illicit discharges (whether mistaken or deliberate) of sewage to Tomales Bay.
iv. Pollution Prevention and Good Housekeeping. Implement strategies to reduce/eliminate fecal coliform loading from streets, parking lots, sidewalks, and other urban areas that potentially collect and discharge fecal coliform to Tomales Bay.
v. Report yearly in the Annual Report on water quality monitoring results and progress made on implementation of human and animal runoff reduction measures.

A final deadline for attainment of the WLA is not specified in the TMDL. Therefore, municipalities identified in this TMDL section shall propose a timeline to attain the WLA in the shortest practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the WLA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii) of this Order.

Sediment

TMDL for Napa River – *Sediment*

Effective Date: January 20, 2011
BPA: Chapter 7, Water Quality Attainment Strategies including TMDLs
Resolution R2-2009-0064
Phase II Entities: City of American Canyon, City of Calistoga, City of St. Helens, City of Napa, Napa County, and Town of Yountville
Impaired Water Body: Napa River

Requirements for Implementing the TMDL

A. Implementation of Sediment Wasteload Allocations (WLAs)

i. To attain the wasteload allocation, municipalities identified in this TMDL section shall comply with the requirements in this TMDL section and the Order.

B. Implementation of Sediment Load Allocations (LAs)

i. To attain the shared load allocation of 27,000 metric tons/year, Napa County shall implement measures to repair and/or reconstruct road crossings to minimize road-related sediment delivery (≤500 cubic yards/mile per 20-year period) to stream channels. Specifically, to reduce road-related erosion and protect stream-riparian habitat conditions, Napa County shall by January 1, 2019:

- Update best management practices for maintenance of unimproved (dirt/gravel) roads to ensure that the LA will be met, and implement these best management practices,
- Finalize a survey of stream-crossings associated with paved public roadways, and
- By July 1, 2019 submit a schedule for the maintenance of unpaved roads and implementation of BMPs to ensure attainment of the LA and the repair and/or

replacement of high priority crossings/culverts identified in the survey, to the Regional Water Board Executive Officer for approval.

For paved roads, erosion and sediment control actions shall primarily focus on road crossings to meet the sediment load allocation.

The final deadline for attainment of the WLA and LA is not specified in the TMDL. Therefore, municipalities identified in this TMDL section shall propose a timeline to attain the WLAs and LAs in the shortest practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the WLA and LA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii). of this Order.

TMDL for Sonoma Creek – *Sediment*

Effective Date: September 8, 2010
BPA: Chapter 7, Water Quality Attainment Strategies including TMDLs
Resolution R2-2008-0103
Phase II Entities: City of Sonoma, County of Sonoma
Impaired Water Body: Sonoma Creek

Requirements for Implementing the TMDL

A. Implementation of Sediment Wasteload Allocations

i. To attain the wasteload allocation, Phase II entities identified in this TMDL section shall comply with the construction and maintenance requirements, sections E.10 and E.11, of this Order.

ii. The municipalities identified in this TMDL section shall continue to implement actions proposed in their Storm Water Management Plans approved under the 2003 Permit (State Water Board Order 2003-0005-DWQ) to attenuate peak flows and durations from new and redevelopment projects. Implementation requirements for implementation actions are incorporated herein by reference. Municipalities may propose amendments to those Implementation Actions by submitting an updated Storm Water Management Plan to the Regional Water Board.

B. Implementation of Sediment Load Allocations

i. To attain the shared load allocation of 2,100 tons/year, municipalities identified in this TMDL section shall implement opportunities to retrofit and/or reconstruct road crossings to minimize road-related sediment delivery to stream channels. To reduce road-related erosion and protect stream-riparian habitat conditions, the municipalities shall implement by January 1, 2019 the following actions:

- Continue to Implement best management practices for maintenance of unimproved (dirt/gravel) roads,
- Finalize a survey of stream-crossings associated with paved public roadways, and
- By July 1, 2019, submit a schedule for the retrofit and/or replacement of high priority crossings/culverts to the Regional Water Board Executive Officer for approval.

For paved roads, erosion and sediment control actions shall primarily focus on road crossings to meet the sediment load allocation.

The final deadline for attainment of the wasteload allocations and load allocations is not specified in the TMDL. Therefore, municipalities identified in this TMDL section shall propose a timeline to attain the WLAs and LAs in the shortest practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the WLA and LA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii) of this Order.

Municipalities identified in this section shall attenuate peak flows and durations from new and redevelopment projects by January 1, 2019.

TMDL for Sonoma Creek – *Sediment* (Continued)
Phase II Entities: Sonoma County Water Agency
Impaired Water Body: Sonoma Creek

Requirements for Sonoma County Water Agency for Implementing TMDL

1. The Sonoma County Water Agency shall continue to implement actions as specified in the Storm Water Management Plan approved under the prior 2003 General Permit (State Water Board Order 2003-0005-DWQ). Implementation requirements for implementation actions are incorporated herein by reference. The Sonoma County Water Agency may propose amendments to those Implementation Actions by submitting an updated Storm Water Management Plan to the Regional Water Board.
2. Report progress on TMDL implementation measures in the Annual Report.

The final deadline for attainment of the WLA and LA is not specified in the TMDL. Therefore, Sonoma County Water Agency shall propose a timeline to attain the WLAs and LAs in the shortest practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the WLA and LA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii) of this Order.

Region 3: Central Coast Regional Water Board

Fecal Coliform

TMDL for Corralitos and Salsipuedes Creeks – *Fecal Coliform*

Effective Date: 9/8/2011
BPA: Chapter 4
Resolution No. R3-2009-0009
Phase II Entities: County of Santa Cruz, Santa Cruz County Fairgrounds, City of Watsonville
Impaired Water Bodies: Corralitos Creek, Salsipuedes Creek

Requirements for Implementing the TMDL

By January 1, 2019, the County of Santa Cruz and the City of Watsonville (hereafter referred to in this TMDL section as MS4) shall each implement a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. By January 1, 2019 the Santa Cruz County Fairgrounds (hereafter referred to in this TMDL section as "the MS4") shall develop, submit, and begin implementation of a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their waste load allocations. The Wasteload Allocation Attainment Programs shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once

the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.

8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. At least one interim target and date must occur during the first five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.
10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By September 8, 2024, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDL for the Lower Salinas River Watershed – *Fecal Coliform*

Effective Date: 12/20/2011
BPA: Chapter 4
Resolution No. R3-2010-0017
Phase II Entities: County of Monterey
Impaired Water Body: Lower Salinas River, Old Salinas River Estuary, Tembladero Slough, Salinas Reclamation Canal, Alisal Creek, Gabilan Creek, Salinas River Lagoon (North), Santa Rita Creek

Requirements for Implementing the TMDL

By January 1, 2019, the County of Monterey (hereafter referred to in this TMDL section as "the MS4") shall implement a Wasteload Allocation Attainment Program that identifies the actions it will take to attain its wasteload allocation. The Wasteload Allocation Attainment Program shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. At least one interim target and date must occur during the first five years commencing on

January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.

10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By December 20, 2024, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDL for Pajaro River, San Benito River, Llagas Creek, Tequesquita Slough, San Juan Creek, Carnadero/Uvas Creek, Bird Creek, Pescadero Creek, Tres Pinos Creek, Furlong (Jones) Creek, Santa Ana Creek, Pachecho Creek – *Fecal Coliform*

Effective Date: 07/12/2010
BPA: Chapter 4
Resolution No. RB3-2009-0008
Phase II Entities: City of Gilroy, City of Hollister, County of Monterey, City of Morgan Hill, County of Santa Clara, County of Santa Cruz, City of Watsonville
Impaired Water Body: Pajaro River, San Benito River, Llagas Creek, Tequesquita Slough, San Juan Creek, Carnadero/Uvas Creek, Bird Creek, Pescadero Creek, Tres Pinos Creek, Furlong (Jones) Creek, Santa Ana Creek, Pachecho Creek

Requirements for Implementing the TMDL

By January 1, 2019, the Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as “the MS4”) shall each implement a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4’s jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.

3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. At least one interim target and date must occur during the first five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.
10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.

12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By July 12, 2023, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Fecal Indicator Bacteria

TMDLs for the Santa Maria River Watershed – *Fecal Indicator Bacteria*

Effective Date: 2/21/2013
BPA: Chapter 4
Resolution No. R3-2012-0055
Phase II Entities: City of Guadalupe, County of San Luis Obispo, County of Santa Barbara, City of Santa Maria
Impaired Water Body: Water Bodies in the Santa Maria River Watershed, including: Blosser Channel, Bradley Channel, Main Street Canal, Nipomo Creek, Orcutt Creek, Santa Maria River Estuary, Santa Maria River

Requirements for Implementing the TMDL

By January 1, 2019, the Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as "the MS4") shall each develop, submit, and begin implementation of a Wasteload Allocation Attainment Program, or an integrated plan, that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs or integrated plans shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.

6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocations. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. The MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. At least one interim target and date must occur during the first five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not specify interim targets as described above in its Wasteload Allocation Attainment Program, the interim targets identified in the TMDL apply. If the MS4 does not achieve any interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.
10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 proposes to assess its attainment of interim targets and the final wasteload allocation.
12. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
13. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
14. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program or integrated plan.

15. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment, including public education and participation items identified above.

By February 21, 2028, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Nitrate Nitrogen

TMDL and Implementation Plan for San Luis Obispo Creek – *Nitrate-Nitrogen*

Effective Date: 8/04/2006
BPA: Chapter 4
Resolution No. R3-2005-0106
Phase II Entities: Cal Poly State University, City of San Luis Obispo, County of San Luis Obispo
Impaired Water Body: San Luis Obispo Creek

Requirements for Implementing the TMDL

By January 1, 2019, the Phase II entities identified in this TMDL section shall implement best management practices that specifically address the reduction or elimination of nutrient loading.

The Phase II entities identified in this TMDL section shall submit reports required by this Order and in those reports outline best management practices implemented to assure ongoing attainment of their allocation.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Nitrogen Compounds and Orthophosphate

TMDL for the Lower Salinas River and Reclamation Canal Basin and the Moro Cojo Slough Subwatershed – *Nitrogen Compounds and Orthophosphate*

Effective Date: 6/7/2014
BPA: Chapter 4
Resolution No. R3-2013-0008
Phase II Entities: County of Monterey
Impaired Water Body: Lower Salinas River, Santa Rita Creek, Reclamation Canal, Gabilan Creek, Natividad Creek, Alisal Creek

Requirements for Implementing the TMDL

By January 1, 2019, the County of Monterey (hereafter referred to in this TMDL section as “the MS4”) shall develop, submit, and begin implementation of a Wasteload Allocation Attainment Program that identifies the actions it will take to attain its wasteload allocations. The Wasteload Allocation Attainment Program shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at

abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.

2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocations. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim and final wasteload allocations.
9. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
10. A detailed description of how the MS4 proposes to assess its attainment of interim targets and the final wasteload allocation.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.

13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program or integrated plan.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

The MS4 shall achieve its interim wasteload allocations as specified in the Fact Sheet. If the MS4 does not achieve any interim wasteload allocation by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim or final wasteload allocations.

By May 7, 2044, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDLs for the Lower Santa Maria River Watershed and Tributaries to Oso Flaco Lake – *Nitrogen Compounds and Orthophosphate*

Effective Date: 5/22/2014
BPA: Chapter 4
Resolution No. R3-2013-0013
Phase II Entities: City of Guadalupe, County of San Luis Obispo, County of Santa Barbara, City of Santa Maria
Impaired Water Body: Water Bodies in the Lower Santa Maria River Watershed and Tributaries to Oso Flaco Lake, including: Blosser Channel, Bradley Channel, Greene Valley Creek, Main Street Canal, North Main Street Channel, Orcutt Creek, Nipomo Creek, Santa Maria River, Santa Maria River Estuary

Requirements for Implementing the TMDL

By January 1, 2019, the Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as “the MS4”) shall each develop, submit, and begin implementation of a Wasteload Allocation Attainment Program, or an integrated plan, that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs or integrated plans shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4’s jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4’s jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.

6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocations. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim and final wasteload allocations.
9. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
10. A detailed description of how the MS4 proposes to assess its attainment of interim targets and the final wasteload allocation.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program or integrated plan.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment, including public education and participation items identified above.

Waste load allocations will be achieved through implementation of management practices and strategies to reduce Nitrogen compound and Orthophosphate loading. Implementation can be conducted by MS4s specifically and/or through statewide programs addressing urban water pollution.

The MS4 shall achieve its interim wasteload allocations as specified in the Fact Sheet. If the MS4 does not achieve any interim wasteload allocation by the date specified, the MS4 shall

develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim or final wasteload allocations.

By May 22, 2044, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Pathogens

TMDL for Aptos Creek, Valencia Creek, and Trout Gulch – *Pathogens*

Effective Date: 10/29/2010
BPA: Chapter 4
Resolution No. R3-2009-0025
Phase II Entities: County of Santa Cruz
Impaired Water Body: Aptos Creek, Valencia Creek, Trout Gulch

Requirements for Implementing the TMDL

By January 1, 2019, the County of Santa Cruz (hereafter referred to in this TMDL section as "the MS4") shall implement a Wasteload Allocation Attainment Program that identifies the actions it will take to attain its wasteload allocation. The Wasteload Allocation Attainment Program shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once

the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.

8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. At least one interim target and date must occur during the first five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.
10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By October 29, 2023, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDL and Implementation Plan for Morro Bay and Chorro and Los Osos Creeks – *Pathogens*

Effective Date: 11/19/2003
BPA: Chapter 4
Resolution No. R3-2003-0060
Phase II Entities: City of Morro Bay, County of San Luis Obispo
Impaired Water Body: Morro Bay, Chorro Creek, Los Osos Creek, Pennington Creek, Warden Creek

Requirements for Implementing the TMDL

By January 1, 2019, the Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as "the MS4") shall each implement a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation achieved the MS4's wasteload allocation. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4's wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. Where TMDL attainment schedules have passed, but Wasteload Allocations have not

been achieved by January 1, 2019, the MS4 shall consult with the Regional Water Board to establish dates to meet new interim targets and to achieve wasteload allocations. At least one interim target and date must occur during the five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.

10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDL and Implementation Plan for San Luis Obispo Creek *–Pathogens*

Effective Date: 7/25/2005
BPA: Chapter 4
Resolution No. R3-2004-0142
Phase II Entities: Cal Poly State University, City of San Luis Obispo, County of San Luis Obispo
Impaired Water Body: San Luis Obispo Creek, Stenner Creek, Brizziolari Creek

Requirements for Implementing the TMDL

The Phase II entities identified in this TMDL section are required to implement best management practices specifically targeting fecal coliform loading. Required actions include development and implementation of: public education regarding fecal coliform sources and associated health risk, enforceable means of addressing pet waste and wild animals that are attracted to storm water infrastructure, and elimination of illicit discharges.

By January 1, 2019, the Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as “the MS4”) shall each implement a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at

abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.

2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. Where TMDL attainment schedules have passed, but Wasteload Allocations have not been achieved by January 1, 2019, the MS4 shall consult with the Regional Water Board to establish dates to meet new interim targets and to achieve wasteload allocations. At least one interim target and date must occur during the five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.

10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL Schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDL for the San Lorenzo River Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek, and Lompico Creek – *Pathogens*

Effective Date: 6/8/2011
BPA: Chapter 4
Resolution No. R3-2009-0023
Phase II Entities: City of Santa Cruz, County of Santa Cruz, City of Scotts Valley
Impaired Water Body: San Lorenzo River Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek, Lompico Creek

Requirements for Implementing the TMDL

By January 1, 2019, the Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as “the MS4”) shall each implement a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4’s jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4’s jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.

6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. At least one interim target and date must occur during the first five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.
10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By June 8, 2024, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDL for Soquel Lagoon, Soquel Creek, and Noble Gulch – *Pathogens*

Effective Date: 9/15/2010
BPA: Chapter 4
Resolution No. R3-2009-0024
Phase II Entities: City of Capitola, County of Santa Cruz
Impaired Water Body: Soquel Lagoon, Soquel Creek, Noble Gulch

Requirements for Implementing the TMDL

By January 1, 2019, the Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as "the MS4") shall each implement a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL Schedule.
2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and

progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.

9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. At least one interim target and date must occur during the first five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.
10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By September 15, 2023, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDL and Implementation Plan for Watsonville Slough – *Pathogens*

Effective Date: 11/20/2006
BPA: Chapter 4
Resolution No. R3-2006-0025
Phase II Entities: County of Santa Cruz, City of Watsonville
Impaired Water Body: Watsonville Slough, Struve Slough, Harkins Slough, Gallighan Slough, Hanson Slough

Requirements for Implementing the TMDL

By January 1, 2019, the Phase II entities identified in this TMDL section shall implement practices that will assure their allocation is achieved. The Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as "the MS4") shall each implement a Wasteload Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. Where TMDL attainment schedules have passed, but Wasteload Allocations have not been achieved by January 1, 2019, the MS4 shall consult with the Regional Water Board to establish dates to meet new interim targets and to achieve wasteload allocations. At least one interim target and date must occur during the five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target

by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.

10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment, including public education and participation. The MS4 public participation and outreach efforts must include the following tasks: a) Educating the public about sources of fecal coliform and its associated health risks in surface waters; and b) Identifying and promoting specific actions that responsible parties can implement to reduce pathogen loading from sources such as homeless encampments, agricultural field workers, and homeowners who contribute waste from domestic pets.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Sediment

TMDL for Morro Bay (including Chorro Creek, Los Osos Creek, and the Morro Bay Estuary) – *Sediment*

Effective Date: 12/3/2003
BPA: Chapter 4
Resolution No. R3-2002-0051
Phase II Entities: County of San Luis Obispo
Impaired Water Body: Morro Bay, Los Osos Creek, Chorro Creek, Dairy Creek, Pennington Creek, Warden Creek

Requirements for Implementing the TMDL

By January 1, 2019, the County of San Luis Obispo shall implement practices that will assure their allocation is achieved, including identifying and implementing specific road sediment control measures. The County of San Luis Obispo (hereafter referred to in this TMDL section as “the MS4”) shall implement a Wasteload Allocation Attainment Program that identifies the actions it will take to attain its wasteload allocation. The Wasteload Allocation Attainment Program shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at

abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.

2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. At least one interim target and date must occur during the first five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.
10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.

11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By December 3, 2053, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDL and Implementation Plan for Pajaro River including Llagas Creek, Rider Creek, and San Benito River – *Sediment*

Effective Date: 11/27/2006
BPA: Chapter 4
Resolution No. R3-2005-0132
Phase II Entities: City of Gilroy, City of Hollister, City of Morgan Hill, Santa Cruz County Fairgrounds, City of Watsonville
Impaired Water Body: Tres Pinos, San Benito River, Llagas Creek, Uvas Creek, Upper Pajaro River, Corralitos Creek (including Rider Creek), Mouth of Pajaro River

Requirements for Implementing the TMDL

The Phase II entities identified in this TMDL section shall implement the practices specified in this Order, tailored to focus on reduction of sediment discharges to the affected waterbodies, to ensure achievement of the wasteload allocations.

By November 27, 2051, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDL for San Lorenzo River (Including Carbonera Creek, Lompico Creek, and Shingle Mill Creek) – *Sediment*

Effective Date: 12/18/2003
BPA: Chapter 4
Resolution No. R3-2002-0063
Phase II Entities: City of Santa Cruz, County of Santa Cruz, City of Scotts Valley
Impaired Water Body: San Lorenzo River, Carbonera Creek, Lompico Creek, Shingle Mill Creek

Requirements for Implementing the TMDL

By January 1, 2019, the Phase II entities identified in this TMDL section shall implement practices that will assure their allocation is achieved, including identifying and implementing specific road sediment control measures. The Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as “the MS4”) shall each implement a Wasteload

Allocation Attainment Program that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4's jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4's jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.
4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis will most likely incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocation. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim targets and wasteload allocations.
9. If the approved TMDL does not explicitly include interim targets, the MS4 shall establish interim targets (and dates when stormwater discharge conditions will be evaluated) that are equally spaced in time over the TMDL attainment schedule and represent measurable, continually decreasing MS4 discharge concentrations or other appropriate interim measures of pollution reduction and progress towards the wasteload allocation. At least one interim target and date must occur during the first five years commencing on January 1, 2019. The MS4 shall achieve its interim targets by the date it specifies in the Wasteload Allocation Attainment Program. If the MS4 does not achieve its interim target

by the date specified, the MS4 shall develop and implement more effective BMPs that it can quantitatively demonstrate will achieve the next interim target.

10. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment.

By December 18, 2028, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Toxicity and Pesticides

TMDL for the Santa Maria River Watershed – *Toxicity and Pesticides*

Effective Date: 10/29/2014
BPA: Chapter 4
Resolution No. R3-2014-0009
Phase II Entities: City of Guadalupe, City of Santa Maria, County of Santa Barbara
Impaired Water Body: Blosser Channel, Bradley Channel, Greene Valley Creek, Main Street Canal, Orcutt Creek, Santa Maria River

Requirements for Implementing the TMDL

By January 1, 2019, the Phase II entities identified in this TMDL section (hereafter referred to in this TMDL section as “the MS4”) shall each develop, submit, and begin implementation of a Wasteload Allocation Attainment Program, or an integrated plan, that identifies the actions they will take to attain their wasteload allocations. The Wasteload Allocation Attainment Programs or integrated plans shall include:

1. A detailed description of the strategy the MS4 will use to guide BMP selection, assessment, and implementation, to ensure that BMPs implemented will be effective at abating pollutant sources, reducing pollutant discharges, and achieving wasteload allocations according to the TMDL schedule.
2. Identification of sources of the impairment within the MS4’s jurisdiction, including specific information on various source locations and their magnitude within the jurisdiction.
3. Prioritization of sources within the MS4’s jurisdiction, based on suspected contribution to the impairment, ability to control the source, and other pertinent factors.

4. Identification of BMPs that will address the sources of impairing pollutants and reduce the discharge of impairing pollutants.
5. Prioritization of BMPs, based on suspected effectiveness at abating sources and reducing impairing pollutant discharges, as well as other pertinent factors.
6. Identification of BMPs the MS4 will implement, including a detailed implementation schedule. For each BMP, identify milestones the MS4 will use for tracking implementation, measurable goals the MS4 will use to assess implementation efforts, and measures and targets the MS4 will use to assess effectiveness. MS4s shall include expected BMP implementation for future implementation years, with the understanding that future BMP implementation plans may change as new information is obtained.
7. A quantifiable numeric analysis that uses published BMP pollutant removal estimates, performance estimates, modeling, best professional judgment, and/or other available tools to demonstrate that the BMP selected for implementation will likely achieve the MS4's wasteload allocation by the schedule identified in the TMDL. This analysis may incorporate modeling efforts. The MS4 shall conduct repeat numeric analyses as the BMP implementation plans evolve and information on BMP effectiveness is generated. Once the MS4 has water quality data from its monitoring program, the MS4 shall incorporate water quality data into the numeric analyses to validate BMP implementation plans.
8. A detailed description, including a schedule, of a monitoring program the MS4 will implement to assess discharge and receiving water quality, BMP effectiveness, and progress towards any interim targets and ultimate attainment of the MS4s' wasteload allocations. The monitoring program shall be designed to validate BMP implementation efforts and quantitatively demonstrate attainment of interim and final wasteload allocations. The Central Coast Water Board may approve participation in statewide or regional monitoring programs as meeting all, or a portion of monitoring requirements.
9. A detailed description of how the MS4 will assess BMP and program effectiveness. The description shall incorporate the assessment methods described in the CASQA Municipal Storm Water Program Effectiveness Assessment Guide.
10. A detailed description of how the MS4 proposes to assess its attainment of interim targets and the final wasteload allocation.
11. A detailed description of how the MS4 will modify the program to improve upon BMPs determined to be ineffective during the effectiveness assessment.
12. A detailed description of information the MS4 will include in annual reports to demonstrate adequate progress towards attainment of wasteload allocations according to the TMDL schedule.
13. A detailed description of how the MS4 will collaborate with other agencies, stakeholders, and the public to develop and implement the Wasteload Allocation Attainment Program or integrated plan.
14. Any other items identified by Integrated Report fact sheets, TMDL Project Reports, TMDL Resolutions, or that are currently being implemented by the MS4 to control its contribution to the impairment, including public education and participation items identified above.

Waste load allocations will be achieved through implementation of management practices and strategies to reduce pesticide loading, and wasteload allocation attainment will be demonstrated through water quality monitoring. Implementation can be conducted by MS4s specifically and/or through statewide programs addressing urban pesticide water pollution. The Wasteload Allocation Attainment Program may include participation in statewide efforts, by organizations such as California Stormwater Quality Association (CASQA), that coordinate with Department of Pesticide Regulation and other organizations taking actions to protect water quality from the use of pesticides in the urban environment.

By November 1, 2029, the permittees shall demonstrate attainment of the pyrethroids WLA as specified in Section E.15.a.(ii). or F.5.i.1. (ii). of this Order. This estimate is based on the widespread availability of pyrethroids, including consumer usage, and current limited regulatory oversight. By November 1, 2044, the permittees shall demonstrate attainment of the organochlorine pesticides (DDT, DDD, DDE, chlordane, eldrin, toxaphene, dieldrin) WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

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Region 4: Los Angeles Regional Water Board

Bacteria

TMDL for Avalon Beach – *Bacteria*

Effective Date: April 5, 2012
BPA: N/A (Issued through R4-2012-0077)
Phase II Entities: City of Avalon
Impaired Water Body: Avalon Beach

Requirements for Implementing the TMDL

City of Avalon's compliance with the MS4-specific provisions of Cease and Desist Order No. R4-2012-0077 and the applicable implementation requirements and timelines therein, in addition to compliance with all requirements of this Order, shall constitute compliance with the requirements of this Attachment.

TMDL for Ballona Creek – *Bacteria*

Effective Date: April 27, 2007
BPA Chapter 7-21
Resolution Nos.: 2006-11, R12-008 revision
Phase II Entities: University of California Los Angeles, Veteran Affairs, Greater Los Angeles Healthcare System
Impaired Water Body: Ballona Creek

Requirements for Implementing the TMDL:

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019, and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the

Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By January 1, 2019, the permittees shall demonstrate attainment of the Dry Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By July 15, 2021, the permittees shall demonstrate attainment of the Wet Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDL for Los Angeles Harbor (Inner Cabrillo Beach and Main Ship Channel) – *Bacteria*

Effective Date: March 10, 2005
BPA Chapter 7-11
Resolution No.: 2004-011; R12-007 (revised)
Phase II Entities: Federal Correctional Institution (FCI), Terminal Island, California State University Dominguez Hills
Impaired Water Body: Dominguez Channel Watershed Management Area

Requirements for Implementing the TMDL:

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019, and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The

Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDL for Los Angeles River – *Bacteria*

Effective Date: March 23, 2012
BPA Chapter 7-39
Resolution No.: R10-007
Phase II Entities: California State University Los Angeles, California State University Northridge
Impaired Water Body: Los Angeles River

Requirements for Implementing the TMDL:

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019, and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los

Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By March 23, 2037, the permittees shall demonstrate attainment of the Wet Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By March 23, 2022 to September 23, 2030, according to the following table, the permittees shall demonstrate attainment of the Dry Weather WLA, for the indicated waterbody segment, as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Waterbody Segment	Achieve Final dry weather WLA by:
Segment B (upper and middle Reach 2)	March 23, 2022
Segment B Tributaries (Rio Hondo & Arroyo Seco)	September 23, 2023
Segment A (lower Reach 2 and Reach 1)	March 23, 2024
Segment A Tributaries (Compton Creek)	September 23, 2025
Segment E (Reach 6)	March 23, 2025
Segment E Tributaries (Dry Canyon, McCoy and Bell Creeks, and Aliso Canyon Wash)	March 23, 2029
Segment C (lower Reach 4 and Reach 3)	September 23, 2030
Segment C Tributaries (Tujunga Wash, Burbank Western Channel and Verdugo Wash)	September 23, 2030
Segment D (Reach 5 and upper Reach 4)	September 23, 2030
Segment D Tributaries (Bull Creek)	September 23, 2030

TMDL for Santa Monica Bay Beaches – *Bacteria*

Effective Date: July 15, 2003
BPA: Chapter 7-4
Resolution Nos.: 2002-04 (dry weather), 2002-022 (wet weather), R12-007 revision
Phase II Entities: Department of Parks and Recreation (Point Dume State Beach, Leo Carrillo State Beach, Robert H Meyer Memorial State Beach)
Impaired Water Body: Santa Monica Bay

Requirements for Implementing the TMDL:

The Department of Parks and Recreation (specifically, Point Dume State Beach, Leo Carrillo State Beach, and Robert H Meyer Memorial State Beach) must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019, and shall be submitted to the Executive Officer upon finalization.

Or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By January 1, 2019, the permittees shall demonstrate attainment of the summer period Dry Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By January 1, 2019, the permittees shall demonstrate attainment of the winter period Dry Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By July 15, 2021, the permittees shall demonstrate attainment of the Wet Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Indicator Bacteria

TMDL for San Gabriel River and Impaired Tributaries – *Indicator Bacteria*

Effective Date: June 14, 2016
BPA: Chapter 7-41
Resolution No.: R15-005
Phase II Entities: California State Polytechnic University, Pomona
Impaired Water Body: San Gabriel River and Tributaries

Requirements for Implementing the TMDL:

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be

finalized by July 1, 2019, and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By June 14, 2026, the permittees shall demonstrate attainment of the Dry Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By June 14, 2036, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Marine Debris

TMDL for Santa Monica Bay – *Marine Debris*

Effective Date: March 20, 2012
BPA Chapter 7-34
Resolution No.: 2010-010
Phase II Entities: Department of Parks and Recreation (Point Dume State Beach, Robert H Meyer Memorial State Beach)
Impaired Water Body: Santa Monica Bay Watershed Management Area

Requirements for Implementing the TMDL:

By January 1, 2019, the Department of Parks and Recreation (at Point Dume State Beach and Robert H. Meyer Memorial State Beach) must submit for Los Angeles Regional Water Board Executive Officer approval, a Minimum Frequency of Assessment and Collection Program (MFAC)/BMP Program that meets the following criteria:

a) The MFAC/BMP Program includes an initial minimum frequency of trash assessment and collection and suite of structural and/or nonstructural BMPs. The MFAC/BMP Program shall include collection and disposal of all trash found in the source areas and along the shoreline. Responsible jurisdictions shall implement an initial suite of BMPs based on current trash management practices in land areas that are found to be sources

of trash to waterbodies within the Santa Monica Bay Watershed Management Area and to Santa Monica Bay.

Beaches and Harbors along Santa Monica Bay

For beaches and harbors along Santa Monica Bay, the initial minimum frequency shall be set as follows:

1. The trash source areas of beaches and harbors shall be cleaned on a daily basis year-round.
2. Trash on Santa Monica Bay shorelines shall be collected daily. An assessment shall immediately follow at the frequency specified in the Trash Monitoring and Reporting Plan (TMRP).
3. The assessment performed immediately after the collection events shall focus on the shorelines or interface along Santa Monica Bay.
4. The protocol for conducting the assessment immediately after the collection event shall include methods and frequencies of assessment, specific locations on the beaches and harbors, in the TMRP.
5. Responsible jurisdictions for beaches and harbors shall conduct routine trash generation rate evaluation on the nonpoint source areas at selected beaches or harbors under their management. Protocols, as specified in the TMRP, for this evaluation include:
    i) The evaluation shall be performed in the late afternoon before dusk. Data collected may represent the daily trash quantity littered or deposited on the nonpoint source areas.
    ii) Methods, locations and frequencies of evaluation on the beaches and harbors shall be included in the TMRP.
6. Water in harbors shall be inspected and all trash found on the water shall be removed at a frequency and during critical conditions as defined in the approved TMRP.
7. Compliance for jurisdictions responsible for nonpoint source trash at areas where daily cleanup is implemented, is determined by the following conditions:
    i) The assessment conducted immediately after cleanup shall demonstrate that all trash on the shoreline or harbor is 100% removed and no trash remains.
    ii) Responsible jurisdictions for beaches and harbors where daily cleanup is performed, shall demonstrate that the trash generation rate of the source areas does not show an increasing trend and does not exceed the benchmark of 310 pounds (lbs) per mile of beach/harbor per day, or 113,150 lbs/mile/year.
8. Should trash amounts collected during evaluation at the source areas exceed 113,150 lbs/mile/year, or not indicate a decreasing trend, the responsible jurisdictions shall immediately initiate additional BMPs as specified in the TMRP,
9. By January 1, 2019, responsible agencies and jurisdictions shall also develop a Trash Monitoring and Reporting Plan (TMRP) for Los Angeles Regional Water Board Executive Officer approval that describes the methodologies that will be used to assess and monitor trash in their responsible areas within the Santa Monica Bay Watershed Management Area or along Santa Monica Bay.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Metals

TMDL for Ballona Creek – *Metals*

Effective Date: October 29, 2008
BPA: Chapter 7-12
Resolution No.: 2007-015; R13-010 (revised)
Phase II Entities: Veteran Affairs, Greater Los Angeles Healthcare System, University of California Los Angeles
Impaired Water Body: Ballona Creek

Requirements for Implementing the TMDL:

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019, and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By January 1, 2019, the permittees shall demonstrate attainment of the Dry Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By January 11, 2021, the permittees shall demonstrate attainment of the Wet Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDL for Los Angeles River and Tributaries – *Metals*

Effective Date: November 3, 2011
BPA: Chapter 7-13
Resolution No.: R07-014; R10-003 (revised); R15-004 (revised)
Phase II Entities: California State University Los Angeles, California State University Northridge
Impaired Water Body: Los Angeles River

Requirements for Implementing the TMDL:

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019, and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By January 11, 2024, the permittees shall demonstrate attainment of the Dry Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By January 11, 2028, the permittees shall demonstrate attainment of the Wet Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDL for Los Cerritos Channel – *Metals*

Effective Date: March 17, 2010
USEPA Established
Phase II Entities: California State University Long Beach, Long Beach Veterans Affairs Medical Center
Impaired Water Body: Los Cerritos Channel

Requirements for Implementing the TMDL:

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019, and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By September 30, 2023, the permittees shall demonstrate attainment of the Dry Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By September 30, 2026, the permittees shall demonstrate attainment of the Wet Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Metals and Selenium

TMDL for Calleguas Creek – *Metals and Selenium*

Effective Date: March 26, 2007
BPA Chapter 7-19
Resolution No.: 2006-012
Phase II Entities: Naval Base Ventura County (Point Mugu), Department of Parks and Recreation (Point Mugu State Park), California State University, Channel Islands
Impaired Water Body: Calleguas Creek

Requirements for Implementing the TMDL:

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019, and shall be submitted to the Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By March 26, 2022, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDL for San Gabriel River and Impaired Tributaries – *Metals and Selenium*

Effective Date: March 26, 2007
USEPA Established
Phase II Entities: California State Polytechnic University, Pomona
Impaired Water Body: San Gabriel River and Tributaries

Requirements for Implementing the TMDL:

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019, and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

The final deadline for attainment of the WLA is not specified in the TMDL. Therefore, municipalities identified in this TMDL section shall propose a timeline to attain the WLA in the shortest practicable time, subject to Regional Water Board Executive Officer approval. Attainment of the WLA shall be demonstrated as specified in Section E.15.a.(ii)/Section F.5.i.1.(ii) of this Order.

Nitrogen and Related Effects

TMDL for Los Angeles River – *Nitrogen and Related Effects*

Effective Date: March 23, 2004
BPA Chapter 7-8
Resolution Nos.: R03-009 (amended by R03-016, R05-014, R07-005, & R12-010)
Phase II Entities: California State University Los Angeles, California State University Northridge
Impaired Water Body: Los Angeles River

Requirements for Implementing the TMDL:

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019 and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation

TMDL for Calleguas Creek – *Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation*

Effective Date: March 24, 2006
BPA Chapter 7-16
Resolution No.: 2005-009
Phase II Entities: Naval Base Ventura County (Point Mugu), Department of Parks and Recreation (Point Mugu State Park), California State University, Channel Islands
Impaired Water Body: Calleguas Creek

Requirements for Implementing the TMDL:

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019 and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By March 24, 2026, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Toxic Pollutants

TMDL for Ballona Creek Estuary – *Toxic Pollutants*

Effective Date: January 11, 2006
BPA: Chapter 7-14
Resolution No.: 2005-008; R13-010 (revised)
Phase II Entities: Veteran Affairs, Greater Los Angeles Healthcare System, University of California Los Angeles
Impaired Water Body: Ballona Creek

Requirements for Implementing the TMDL:

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019 and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019 and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By January 11, 2021, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Toxics and Metals

TMDL for Los Angeles and Long Beach Harbors – *Toxics and Metals*

Effective Date: March 23, 2012
BPA Chapter 7-40
Resolution No.:2011-008
Phase II Entities: Federal Correction Institution (FCI), Terminal Island, Community Corrections Management (CCM), Long Beach, California State University Dominguez Hills
Impaired Water Body: Dominguez Channel Watershed

Requirements for Implementing the TMDL:

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019 and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By March 23, 2032, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Toxicity

TMDL for Calleguas Creek Watershed – *Toxicity*

Effective Date: March 24, 2006
BPA Chapter 7-17
Resolution No.: 2005-010
Phase II Entities: Naval Base Ventura County (Point Mugu), Department of Parks and Recreation (Point Mugu State Park), California State University, Channel Islands
Impaired Water Body: Calleguas Creek

Requirements for Implementing the TMDL:

The Phase II entities identified in this TMDL section must take either of the following actions to meet the requirements of this TMDL:

1. Enter in a cooperative agreement with Phase I MS4 Permittees, in the watershed or subwatershed of the impaired water body of this Section, to participate in a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) developed and approved pursuant to one of the Los Angeles Region's Phase I MS4 permits. A Permittee shall notify the Regional Water Board of its intent to enter into a cooperative agreement with Phase I MS4 Permittees. Such notification shall be provided by January 1, 2019, and shall identify the Phase I MS4 Permittee(s) and the WMP or EWMP that the Permittee intends to participate in. The cooperative agreement shall be finalized by July 1, 2019 and shall be submitted to the Los Angeles Regional Water Board Executive Officer upon finalization.

or alternatively,

2. Propose a program plan for attaining the wasteload allocation(s). The Program Plan must identify the currently used and planned BMPs and any other planned actions to attain the wasteload allocation(s), which may include, but is not limited to, retaining the volume of runoff associated with the 85th percentile, 24-hour storm event on-site. The Program Plan must provide a technical demonstration (using modeling and/or empirical data) that there is a reasonable assurance that by implementing the BMPs and other planned actions in the Program Plan, the Permittee's MS4 discharges will achieve the wasteload allocation(s) by the attainment schedule deadline(s) identified within this specific TMDL section. The Program Plan must also include monitoring of the Permittee's MS4 discharges to track progress toward achieving the wasteload allocation(s) and validate the reasonable assurance demonstration. The Program Plan is subject to approval by the Los Angeles Regional Water Board Executive Officer. The Program Plan must be submitted for Los Angeles Regional Water Board Executive Officer approval by July 1, 2019. Once approved, the Permittees must implement the Program Plan and are responsible for attaining applicable wasteload allocations and demonstrating such attainment with monitoring data.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Trash

TMDL for Ballona Creek – *Trash*
Effective Date: August 28, 2002

BPA: Chapter 7.3
Resolution No.: 2001-014 2004-023 (revision), R15-006 (revision)
Phase II Entities: Veteran Affairs, Greater Los Angeles Healthcare System, University of California Los Angeles
Impaired Water Body: Ballona Creek

Requirements for Implementing the TMDL:

The Phase II entities identified in this TMDL section shall implement either 1) Full Capture Systems, 2) partial capture devices and the application of institutional controls, or 3) a scientifically based alternative attainment approach.

A Full Capture System is any device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate (Q) resulting from a one year, one hour, storm event. The Rational Equation is used to compute the peak flow rate (See Fact Sheet for Rational Equation).

A partial capture device does not meet the definition of a Full Capture System; a partial capture device may not trap all particles 5 mm or greater or may not have the minimum design treatment capacity of a one year, one hour, storm event. Thus, a MS4 Permittee must implement institutional controls in combination with the partial capture device to comply with the wasteload allocations. MS4 Permittees employing partial capture devices and institutional controls shall use a mass balance approach based on the trash daily generation rate, assessed annually, to demonstrate attainment. (See Fact Sheet for attainment determination information)

An alternative attainment approach to implementing either 1) a Full Capture System or 2) partial capture devices and the application of institutional controls must be submitted for approval by the Los Angeles Regional Water Board Executive Officer. By July 1, 2019, MS4 Permittees seeking approval of an alternative attainment approach, shall include in their submittal any proposed studies of institutional controls and partial capture devices for their particular subwatershed(s) or demonstrate that existing studies are representative and transferable to the implementing area. Permittees shall also provide a schedule for periodic, attainment effectiveness demonstration and evaluation.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDL for Los Angeles River – *Trash*

Effective Date: September 23, 2008
BPA Chapter 7-2
Resolution No.:07-012, R15-006 (revision)
Phase II Entities: California State University Los Angeles, California State University Northridge
Impaired Water Body: Los Angeles River

Requirements for Implementing the TMDL:

The Phase II entities identified in this TMDL section shall implement either 1) Full Capture Systems, 2) partial capture devices and the application of institutional controls, or 3) a scientifically based alternative attainment approach.

A Full Capture System is any device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate (Q) resulting from a one year, one hour, storm event. The Rational Equation is used to compute the peak flow rate (See Fact Sheet for Rational Equation).

A partial capture device does not meet the definition of a Full Capture System; a partial capture device may not trap all particles 5 mm or greater or may not have the minimum design treatment capacity of a one year, one hour, storm event. Thus, a MS4 Permittee must implement institutional controls in combination with the partial capture device to comply with the wasteload allocations. MS4 Permittees employing partial capture devices or institutional controls shall use a mass balance approach based on the trash daily generation rate, assessed annually, to demonstrate attainment. (See Fact Sheet for attainment determination information)

An alternative attainment approach to implementing either 1) a Full Capture System or 2) partial capture devices and the application of institutional controls must be submitted for approval by the Los Angeles Regional Water Board Executive Officer. By July 1, 2019, MS4 Permittees seeking approval of an alternative attainment approach, shall include in their submittal any proposed studies of institutional controls and partial capture devices for their particular subwatershed(s) or demonstrate that existing studies are representative and transferable to the implementing area. Permittees shall also provide a schedule for periodic, attainment effectiveness demonstration and evaluation.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDL for Ventura River Estuary – *Trash*

Effective Date: March 6, 2008
BPA Chapter 7-25
Resolution No.:07-008
Phase II Entities: Ventura County Fairgrounds (Seaside Park and Ventura County Fairgrounds)
Impaired Water Body: Ventura River

Requirements for Implementing the TMDL:

The Ventura County Fairgrounds (including Seaside Park and Ventura County Fairgrounds) shall implement Full Capture Systems. A Full Capture System is any device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate (Q) resulting from a one year, one hour, storm event. The Rational Equation is used to compute the peak flow rate (See Fact Sheet for Rational Equation).

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

UNOFFICIAL DRAFT — Not Certified by Clerk

Region 5: Central Valley Regional Water Board

Diazinon & Chlorpyrifos

TMDL for Lower San Joaquin River – *Diazinon & Chlorpyrifos*

Effective Date: December 20,2006
BPA: Chapter 3
Resolution No.: R5-2005-0138
Phase II Entities: City of Patterson
Impaired Water Body: San Joaquin River from Mendota Dam to Vernalis

Requirements for Implementing the TMDL and Monitoring Requirements:

The Phase II entities identified in this TMDL section (hereinafter referred to as Permittees in this TMDL section) shall implement the following actions by January 1, 2019:

1. a. Conduct an assessment: By July 1, 2020, the Permittees shall complete and submit to the Central Valley Regional Water Board Executive Officer an assessment to, at a minimum: determine the diazinon and chlorpyrifos levels and attainment of waste load allocations in urban discharge; and evaluate attainment of established water quality objectives applicable to diazinon and chlorpyrifos for the receiving water. Assessment monitoring may be done in coordination or conjunction with other municipalities and/or Permittees. The Permittees are responsible for providing the assessment and necessary information related to the assessment to the Central Valley Regional Water Board Executive Officer for review and approval. The assessment information may come from the Permittee's monitoring efforts; monitoring programs conducted by State or federal agencies or collaborative watershed efforts; or from special studies that evaluate the effectiveness of management practices.

   b. With Central Valley Regional Water Board Executive Officer approval, the Permittees may participate in the Delta Regional Monitoring Program or other collective monitoring efforts in lieu of some or all of the individual monitoring requirements required by this section.

   c. Permittees that implement individual water quality monitoring pursuant to 1.a., above, must submit a Monitoring Plan and Quality Assurance Project Plan (QAPP) to the Executive Officer for review and approval.

      i) Monitoring Plan – at a minimum, the Monitoring Plan must include the following information:

         1) Management questions to be answered by the Monitoring Plan,
         2) Constituents to be monitored, analytical methods, and reporting limits,
         3) Sampling site(s) locations, including latitude and longitude coordinates, water body name and water body segment if applicable,
         4) Other monitoring efforts that will provide supplemental data for the local water quality monitoring program and assessment (if any),
         5) Proposed schedule and level of detail for monitoring reports. If a more comprehensive report is necessary every few years, the Monitoring Plan shall

propose a schedule and description of the level of detail (consistent with the information described below) that will be included within the Annual Reports.

ii) Quality Assurance Project Plan (QAPP) consistent with Surface Water Ambient Monitoring Program (SWAMP). All samples shall be collected and analyzed according to the QAPP. Monitoring Reports shall be submitted with the Annual Report and include the following information (consistent with the approved Monitoring Plan):

1) The purpose of the monitoring, brief contextual background, and a brief description of the study design and rationale;
2) Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable;
3) Identification of and rationale for any deviations from the QAPP;
4) Results of data collection, including concentration detected, measurement units, reporting limits, and detection limits, if applicable;
5) Quantifiable assessment, analysis and interpretation of data for each monitoring parameter;
6) Comparison to reference sites (if applicable), guidelines or targets;
7) Discussion of whether data collected addresses the objective(s) or question(s) of study design;
8) Quantifiable discussion of program/study pollutant reduction effectiveness.

2. Pesticide Management Plans: Unless the Permittees can demonstrate attainment of the waste load allocations, the Permittee shall prepare a Pesticide Management Plan which includes a description of actions that will be taken to reduce diazinon and chlorpyrifos discharges to meet the applicable allocations. Pesticide Management Plan provisions addressing diazinon and chlorpyrifos can be included in the pesticide management plans covering current use pesticides with the goal of reducing the discharge of pesticides from municipal storm water to receiving water. Pesticide Management Plans shall address the Permittee's own use of pesticides, and to the extent authorized by law, the use of such pesticides by other sources within their jurisdictions. Pesticide Management Plans shall include identifying and promoting, within the context of integrated pest management (IPM) programs, the use of pest management practices that minimize the risk of pesticide impacts on surface water quality resulting from urban runoff discharges. Additionally, the plan shall include the integration of IPM into the Permittee's municipal operations and be promoted to residents, businesses, and public agencies within each Permittee's jurisdiction through public outreach.

   The Central Valley Regional Water Board Executive Officer may require revisions to the Pest Management Plans if the Central Valley Regional Water Board Executive Officer determines that the Pest Management Plan is not likely to attain the waste load allocations. Pest Management Plans may be submitted by individual Permittee or Permittee groups and may refer to actions required by other agencies or actions required elsewhere in this permit. Pest Management Plans may include actions to reduce MS4 pesticide discharges through participation or support of a regional or statewide pesticide reduction program. To receive credit toward compliance for such participation, the Permittees must demonstrate that they have participated in the implementation of the program (i.e., contributing materially and in proportion in the size of a Permittee's service area, including, but not limited to, implementation of reduction program measures, membership, contribution of resources,

etc.). Examples of programs that could be eligible include Our Water Our World (outreach), a recognized regional monitoring program, and California Stormwater Quality Association's (CASQA) pesticide regulatory initiative. In developing the monitoring and reporting programs for the Permittee, the Central Valley Water Board will, in coordination with the DPR, assist the Permittee in identifying diazinon and chlorpyrifos alternatives for which monitoring may be necessary.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDL for Sacramento and Feather Rivers – *Diazinon & Chlorpyrifos*

Effective Date: May 3, 2007
BPA: Attachment 1
Resolution No.: R5-2007-0034
Phase II Entities: City of Anderson, County of Colusa, City of Marysville, City of Red Bluff, City of Redding, County of Shasta, County of Sutter, City of Yuba City, County of Yuba
Impaired Water Body: Sacramento River from Shasta Dam to I Street Bridge, Feather River from Fish Barrier Dam to Sacramento River

Requirements for Monitoring and Implementing the TMDL:

The Phase II entities identified in this TMDL section (hereinafter referred to as Permittees in this TMDL section) shall implement the following actions by January 1, 2019:

1. a. Conduct an assessment: By July 1, 2020, the Permittees shall complete and submit to the Central Valley Regional Water Board Executive Officer an assessment to, at a minimum: determine the diazinon and chlorpyrifos levels and attainment of waste load allocations in urban discharge; and evaluate attainment of established water quality objectives applicable to diazinon and chlorpyrifos for the receiving water. Assessment monitoring may be done in coordination or conjunction with other municipalities and/or Permittees. Permittees are responsible for providing the assessment and necessary information related to the assessment to the Central Valley Regional Water Board Executive Officer for review and approval. The assessment information may come from the Permittee's monitoring efforts; monitoring programs conducted by State or federal agencies or collaborative watershed efforts; or from special studies that evaluate the effectiveness of management practices.

   b. With Central Valley Regional Water Board Executive Officer approval, the Permittees may participate in the Delta Regional Monitoring Program or other collective monitoring efforts in lieu of some or all of the individual monitoring requirements required by this section.

   c. Permittees that implement individual water quality monitoring pursuant to 1.a., above, must submit a Monitoring Plan and Quality Assurance Project Plan (QAPP) to the Executive Officer for review and approval.

      i) Monitoring Plan – at a minimum, the Monitoring Plan must include the following information:

         1) Management questions to be answered by the Monitoring Plan,
         2) Constituents to be monitored, analytical methods, and reporting limits,

3) Sampling site(s) locations, including latitude and longitude coordinates, water body name and water body segment if applicable,
4) Other monitoring efforts that will provide supplemental data for the local water quality monitoring program and assessment (if any),
5) Proposed schedule and level of detail for monitoring reports. If a more comprehensive report is necessary every few years, the Monitoring Plan shall propose a schedule and description of the level of detail (consistent with the information described below) that will be included within the Annual Reports.

ii) Quality Assurance Project Plan (QAPP) consistent with Surface Water Ambient Monitoring Program (SWAMP). All samples shall be collected and analyzed according to the QAPP. Monitoring Reports shall be submitted with the Annual Report and include the following information (consistent with the approved Monitoring Plan):

i) The purpose of the monitoring, brief contextual background, and a brief description of the study design and rationale;
ii) Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable;
iii) Identification of and rationale for any deviations from the QAPP;
iv) Results of data collection, including concentration detected, measurement units, reporting limits, and detection limits, if applicable;
v) Quantifiable assessment, analysis and interpretation of data for each monitoring parameter;
vi) Comparison to reference sites (if applicable), guidelines or targets;
vii) Discussion of whether data collected addresses the objective(s) or question(s) of study design;
viii) Quantifiable discussion of program/study pollutant reduction effectiveness.

2. Pesticide Management Plans: Unless Permittees can demonstrate attainment of the waste load allocations, Permittees shall prepare a Pesticide Management Plan which include a description of actions that will be taken to reduce diazinon and chlorpyrifos discharges to meet the applicable allocations. Pesticide Management Plan provisions addressing diazinon and chlorpyrifos can be included in pesticide management plans covering current use pesticides with the goal of reducing the discharge of pesticides from municipal storm water to receiving water. Pesticide Management Plans shall address the Permittee's own use of pesticides, and to the extent authorized by law, the use of such pesticides by other sources within their jurisdictions. Pesticide Management Plans shall include identifying and promoting, within the context of integrated pest management (IPM) programs, the use of pest management practices that minimize the risk of pesticide impacts on surface water quality resulting from urban runoff discharges. Additionally, the plan shall include the integration of IPM into the Permittee's municipal operations and be promoted to residents, businesses, and public agencies within each Permittee's jurisdiction through public outreach.

   The Central Valley Regional Water Board Executive Officer may require revisions to the Pesticide Management Plans if the management plan is not likely to attain the waste load allocations. Pesticide Management Plans may be submitted by individual Permittee or Permittee groups and may refer to actions required by other agencies or actions required elsewhere in this permit. Management plans for pesticides may include actions to reduce

MS4 pesticide discharges through participation or support of a regional or statewide pesticide reduction program. To receive credit toward compliance for such participation, the Permittees must demonstrate that they have participated in the implementation of the program (i.e., contributing materially and in proportion in the size of a Permittee's service area, including, but not limited to, implementation of reduction program measures, membership, contribution of resources, etc.). Examples of programs that could be eligible include Our Water Our World (outreach), a recognized regional monitoring program, and California Stormwater Quality Association's (CASQA) pesticide regulatory initiative. In developing the monitoring and reporting programs for Permittees, the Central Valley Water Board will, in coordination with the DPR, assist the Permittee in identifying diazinon and chlorpyrifos alternatives for which monitoring may be necessary.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

TMDL for Sacramento and San Joaquin Delta – *Diazinon & Chlorpyrifos*

Effective Date: October 10, 2006
BPA: Chapter 31
Resolution No.: R5-2006-0061
Phase II Entities: City of Lathrop, City of Lodi, City of Manteca, City of Rio Vista, County of San Joaquin, City of Tracy, City of West Sacramento
Impaired Water Body: Sacramento-San Joaquin Delta Waterways

Requirements for Monitoring and Implementing the TMDL:

The Phase II entities identified in this TMDL section (hereinafter referred to as Permittees in this TMDL section) shall implement the following actions by January 1, 2019:

1. a. Conduct an assessment: By July 1, 2020, the Permittees shall complete and submit to the Central Valley Regional Water Board Executive Officer an assessment to, at a minimum: determine the diazinon and chlorpyrifos levels and attainment of waste load allocations in urban discharge; and evaluate attainment of established water quality objectives applicable to diazinon and chlorpyrifos for the receiving water. Assessment monitoring may be done in coordination or conjunction with other municipalities and/or Permittees. Permittees are responsible for providing the assessment and necessary information related to the assessment to the Central Valley Regional Water Board Executive Officer for review and approval. The assessment information may come from the Permittee's monitoring efforts; monitoring programs conducted by State or federal agencies or collaborative watershed efforts; or from special studies that evaluate the effectiveness of management practices.

   b. With Central Valley Regional Water Board Executive Officer approval, the Permittees may participate in the Delta Regional Monitoring Program or other collective monitoring efforts in lieu of some or all of the individual monitoring requirements required by this section.

   c. Permittees that implement individual water quality monitoring pursuant to 1.a., above, must submit a Monitoring Plan and Quality Assurance Project Plan (QAPP) to the Executive Officer for review and approval.

i) Monitoring Plan – at a minimum, the Monitoring Plan must include the following information:

1) Management questions to be answered by the Monitoring Plan,
2) Constituents to be monitored, analytical methods, and reporting limits,
3) Sampling site(s) locations, including latitude and longitude coordinates, water body name and water body segment if applicable,
4) Other monitoring efforts that will provide supplemental data for the local water quality monitoring program and assessment (if any),
5) Proposed schedule and level of detail for monitoring reports. If a more comprehensive report is necessary every few years, the Monitoring Plan shall propose a schedule and description of the level of detail (consistent with the information described below) that will be included within the Annual Reports.

ii) Quality Assurance Project Plan (QAPP) consistent with Surface Water Ambient Monitoring Program (SWAMP). All samples shall be collected and analyzed according to the QAPP. Monitoring Reports shall be submitted with the Annual Report and include the following information (consistent with the approved Monitoring Plan):

1) The purpose of the monitoring, brief contextual background, and a brief description of the study design and rationale;
2) Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable;
3) Identification of and rationale for any deviations from the QAPP;
4) Results of data collection, including concentration detected, measurement units, reporting limits, and detection limits, if applicable;
5) Quantifiable assessment, analysis and interpretation of data for each monitoring parameter;
6) Comparison to reference sites (if applicable), guidelines or targets;
7) Discussion of whether data collected addresses the objective(s) or question(s) of study design;
8) Quantifiable discussion of program/study pollutant reduction effectiveness.

2. Pesticide Management Plans: Unless Permittees can demonstrate attainment of the waste load allocations, Permittees shall prepare a Pesticide Management Plan which include a description of actions that will be taken to reduce diazinon and chlorpyrifos discharges to meet the applicable allocations. Pesticide Management Plan provisions addressing diazinon and chlorpyrifos can be included in pesticide management plans covering current use pesticides with the goal of reducing the discharge of pesticides from municipal storm water to receiving water. Pesticide Management Plans shall address the Permittee's own use of pesticides, and to the extent authorized by law, the use of such pesticides by other sources within their jurisdictions. Pesticide Management Plans shall include identifying and promoting, within the context of integrated pest management (IPM) programs, the use of pest management practices that minimize the risk of pesticide impacts on surface water quality resulting from urban runoff discharges. Additionally, the Pesticide Management Plan shall include the integration of IPM into the Permittee's municipal operations and be

promoted to residents, businesses, and public agencies within each Permittee's jurisdiction through public outreach.

The Central Valley Regional Water Board Executive Officer may require revisions to the Pesticide Management Plans if the plan is not likely to attain the waste load allocations. Pesticide Management Plans may be submitted by individual Permittee or Permittee groups and may refer to actions required by other agencies or actions required elsewhere in this permit. Pesticide Management Plans may include actions to reduce MS4 pesticide discharges through participation or support of a regional or statewide pesticide reduction programs. To receive credit toward compliance for such participation, the Permittees must demonstrate that they have participated in the implementation of the program (i.e., contributing materially and in proportion in the size of a Permittee's service area, including, but not limited to, implementation of reduction program measures, membership, contribution of resources, etc.). Examples of programs that could be eligible include Our Water Our World (outreach), a recognized regional monitoring program, and California Stormwater Quality Association's (CASQA's) pesticide regulatory initiative. In developing the monitoring and reporting programs for specific Permittees, the Central Valley Water Board will, in coordination with DPR, assist the Permittee in identifying diazinon and chlorpyrifos alternatives for which monitoring may be necessary.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Methylmercury

TMDL for the Delta – *Methylmercury*

Effective Date: October 20, 2011
Resolution No.: R5-2010-0043
Phase II Entities: City of Lathrop, City of Lodi, City of Rio Vista, City of Tracy, City of West Sacramento, County of San Joaquin, County of Yolo
Impaired Water Body: Sacramento-San Joaquin Delta and Yolo Bypass waterways listed in Appendix 43 of the Basin Plan – Table A43-1

Requirements for Implementing the TMDL:

1. The Phase II entities identified in this TMDL section (hereinafter referred to as Permittees in this TMDL section) shall implement best management practices (BMPs) to control erosion and sediment discharges with the goal of reducing mercury discharges. This will be implemented through compliance with the following Small MS4 Permit requirements:

    - Discharge Prohibitions B.4
    - Section E.6.a Legal Authority
    - Section E.9 Illicit Discharge Detection and Elimination
    - Section E.10 Construction Site Storm Water Runoff Control Program
    - Section E.11 Pollution Prevention/Good Housekeeping
    - Section E.12 Post-Construction
    - Section E.13 Monitoring
    - Section E.14 Program Effectiveness

- Section E.15 Compliance with Implementation Provisions

2. Between 2014 and 2020 (Phase 1 of the Delta Mercury Control Program), the large MS4 permittees (not part of this permit) in the Delta are developing and evaluating BMPs to control methylmercury discharges in storm water. During this period, the Permittees should implement methylmercury management practices identified by the large MS4 permittees or other management practices identified by the Delta Mercury Control Program studies that are reasonable and feasible.
3. The Permittees shall implement the Delta Mercury Exposure Reduction Program (see Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Chapter IV). This requirement may be met by ongoing participation in the collective Mercury Exposure Reduction Program work plan, dated October 2013 (https://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/delta_hg/hg_exposure_reduction/2013oct_merp_wrkpln.pdf). Participation can include financial contributions and in-kind services that directly support exposure reduction activities.
4. The Permittees shall document in their annual report, compliance with erosion and sediment control requirements in this Order, including a discussion of effectiveness of BMPs. The Permittees shall submit a Program Effectiveness Assessment as specified in Section E.14. of the Permit.
5. As specified in section E.15.d, the Permittees shall document implementation of any methylmercury controls or best management practices in their Annual Reports.

Monitoring Provisions:

The following monitoring requirements apply after the Central Valley Water Board's review of Delta Mercury Control Program, (see the Delta Mercury Control Program in the Basin Plan) or 20 October 2022, whichever date occurs first.

1. a. The Permittees shall begin monitoring methylmercury loads and concentrations in storm water discharges to assess attainment with the TMDL allocations. Within one year of the Delta Mercury Control Program review, (or 20 October 2022, whichever date occurs first), the Permittees shall submit a plan, for Central Valley Regional Water Board Executive Officer approval, describing the locations and frequency of methylmercury monitoring. The Plan shall be representative of the MS4 service area. The sampling locations, frequencies, and reporting may be the same as the requirements in this Order. The Permittees shall implement the monitoring plan within six (6) months of Central Valley Regional Water Board Executive Officer approval.

   b. With Central Valley Regional Water Board Executive Officer approval, the Permittees may participate in the Delta Regional Monitoring Program or other collective monitoring efforts in lieu of some or all of the individual monitoring requirements required by this section.

   c. Permittees that implement individual water quality monitoring pursuant to 1.a., above, must submit a Monitoring Plan and Quality Assurance Project Plan (QAPP) to the Executive Officer for review and approval.

i) Monitoring Plan – at a minimum, the Monitoring Plan must include the following information:

1) Management questions to be answered by the Monitoring Plan,
2) Constituents to be monitored, analytical methods, and reporting limits,
3) Sampling site(s) locations, including latitude and longitude coordinates, water body name and water body segment if applicable,
4) Other monitoring efforts that will provide supplemental data for the local water quality monitoring program and assessment (if any),
5) Proposed schedule and level of detail for monitoring reports. If a more comprehensive report is necessary every few years, the Monitoring Plan shall propose a schedule and description of the level of detail (consistent with the information described below) that will be included within the Annual Reports.

ii) Quality Assurance Project Plan (QAPP) consistent with Surface Water Ambient Monitoring Program (SWAMP). All samples shall be collected and analyzed according to the QAPP. Monitoring Reports shall be submitted with the Annual Report and include the following information (consistent with the approved Monitoring Plan):

a. The purpose of the monitoring, brief contextual background, and a brief description of the study design and rationale;
b. Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable;
c. Identification of and rationale for any deviations from the QAPP;
d. Results of data collection, including concentration detected, measurement units, reporting limits, and detection limits, if applicable;
e. Quantifiable assessment, analysis and interpretation of data for each monitoring parameter;
f. Comparison to reference sites (if applicable), guidelines or targets;
g. Discussion of whether data collected addresses the objective(s) or question(s) of study design;
h. Quantifiable discussion of program/study pollutant reduction effectiveness.

2. Progress toward attainment of the waste load allocations (WLA) shall be documented in the Annual Report by monitoring methylmercury loads from the MS4 or by quantifying the annual average methylmercury load reduced by implementing pollution prevention activities and source and treatment controls. The Delta Mercury Control Program (see Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Chapter IV) provides guidance for the calculation of methylmercury loading from urban areas and determination of attainment. The assessment information may come from the Permittee's monitoring efforts, monitoring programs conducted by State or federal agencies or collaborative watershed efforts, or from special studies that evaluate the effectiveness of management practices, as approved by the Central Valley Regional Water Board Executive Officer.

By December 31, 2030, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Nutrients

TMDL for Clear Lake – *Nutrients*

Effective Date: September 21, 2007
BPA: Chapter IV-37.04
Resolution No.: R5-2006-0060
Phase II Entities: City of Clearlake, County of Lake, City of Lakeport
Impaired Water Body: Clear Lake

Requirements for Implementing the TMDL:

The Phase II entities identified in this TMDL section (hereinafter referred to as Permittees in this TMDL section) shall implement best management practices (BMPs) to control erosion and sediment discharges as a means of controlling phosphorous. These will be implemented through compliance with the following Small MS4 Permit requirements:

- Discharge Prohibitions B.4
- Section E.6.a. Legal Authority
- Section E.9. Illicit Discharge Detection and Elimination
- Section E.10. Construction Site Storm Water Runoff Control Program
- Section E.11. Pollution Prevention/Good Housekeeping
- Section E.12. Post-Construction
- Section E.13. Monitoring
- Section E.14. Program Effectiveness
- Section E.15 Compliance with Implementation Provisions

The Permittees shall document implementation of erosion and sediment BMPs in their Annual Reports as specified in Section E.15.d of this Order. Each Annual Report shall include documentation of compliance with the above Permit requirements. Permittees shall complete and submit Program Effectiveness Assessments as specified in Section E.14 of this Order. The Permittees shall use the information gained from the Program Effectiveness Assessments to improve their program and identify new BMPs or modifications of existing BMPs.

Monitoring Provisions:

1. By July 1, 2019, each Permittee shall incorporate individual monitoring and reporting plans, or the Permittees can collectively incorporate a single monitoring plan, into their respective Storm Water Management Plans approved under the previous 2003 Permit (State Water Board Order 2003-0005-DWQ). The monitoring plans shall enable the Central Valley Water Board to evaluate the MS4 Permittee's progress toward attainment of the WLAs and shall be representative of the respective MS4 service area.
2. With Central Valley Regional Water Board Executive Officer approval, the Permittees may participate in a regional monitoring program or other collective monitoring efforts in lieu of some or all of the individual monitoring requirements required by this section.
3. Permittees that implement individual water quality monitoring pursuant to this provision must submit a Monitoring Plan and Quality Assurance Project Plan (QAPP) to the Executive Officer for review and approval.

a) Monitoring Plan – at a minimum, the Monitoring Plan must include the following information:

   i) Management questions to be answered by the Monitoring Plan,
   ii) Constituents to be monitored, analytical methods, and reporting limits,
   iii) Sampling site(s) locations, including latitude and longitude coordinates, water body name and water body segment if applicable,
   iv) Other monitoring efforts that will provide supplemental data for the local water quality monitoring program and assessment (if any),
   v) Proposed schedule and level of detail for monitoring reports. If a more comprehensive report is necessary every few years, the Monitoring Plan shall propose a schedule and description of the level of detail (consistent with the information described below) that will be included within the Annual Reports.

b) Quality Assurance Project Plan (QAPP) consistent with Surface Water Ambient Monitoring Program (SWAMP). All samples shall be collected and analyzed according to the QAPP. Monitoring Reports shall be submitted with the Annual Report and include the following information (consistent with the approved Monitoring Plan):

   i) The purpose of the monitoring, brief contextual background, and a brief description of the study design and rationale;
   ii) Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable;
   iii) Identification of and rationale for any deviations from the QAPP;
   iv) Results of data collection, including concentration detected, measurement units, reporting limits, and detection limits, if applicable;
   v) Quantifiable assessment, analysis and interpretation of data for each monitoring parameter;
   vi) Comparison to reference sites (if applicable), guidelines or targets;
   vii) Discussion of whether data collected addresses the objective(s) or question(s) of study design;
   viii) Quantifiable discussion of program/study pollutant reduction effectiveness

4. Progress toward attainment of the WLA shall be documented in the Annual Report.

Permittees may work with Central Valley Regional Water Board staff to estimate nutrient loadings from activities in the watershed. Loading estimates can be conducted using either water quality monitoring or computer modeling or a combination of the two.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Organic Enrichment and Low Dissolved Oxygen

TMDL for Lower San Joaquin River, San Joaquin River, Stockton Deep Water Ship Channel TMDL – *Organic Enrichment and Low Dissolved Oxygen*

Effective Date: February 27, 2007
BPA: Chapter IV-37.01

Resolution No.: R5-2005-005
Phase II Entities: Atwater City, Ceres City, Escalon City, Hughson City, Lathrop City, Livingston City, Los Banos City, Manteca City, Merced City, Merced County, Newman City, Oakdale City, Patterson City, Ripon City, Riverbank City, San Joaquin County, Stanislaus County, Turlock City
Impaired Water Body: Lower San Joaquin River (Stockton Deep Water Ship Channel, DWSC)

Requirements for Implementing the TMDL:

The Phase II Entities identified within this TMDL section (hereinafter referred to as Permittees in this TMDL section) shall implement best management practices (BMPs) to control the discharge of oxygen demanding substances and their precursors in their urban discharge. This will be implemented through compliance with the following Small MS4 Permit requirements:

- Discharge Prohibitions B.4
- Section E.6.a. Legal Authority
- Section E.9. Illicit Discharge Detection and Elimination
- Section E.10. Construction Site Storm Water Runoff Control Program
- Section E.11. Pollution Prevention/Good Housekeeping
- Section E.12. Post-Construction
- Section E.13. Monitoring
- Section E.14. Program Effectiveness
- Section E.15 Compliance with Implementation Process

In measuring compliance with permit requirements related to attainment of these wasteload allocations (WLAs), credit will be given for control measures implemented after July 12, 2004.

The Permittees shall document, in their Annual Reports, the implementation of BMPs to control the discharge of oxygen demanding substances and precursors in their urban discharge. Each Annual Report shall include documentation of compliance with the Permit requirements and a discussion of the effectiveness of the BMPs. The Permittees shall use the information gained from the Program Effectiveness Assessments to improve their program and identify new BMPs or modifications of existing BMPs to ensure that they are meeting applicable WLAs. The Program Effectiveness Assessment information may come from the Permittees' monitoring efforts; monitoring programs conducted by State or federal agencies or collaborative watershed efforts; or from special studies that evaluate the effectiveness of management practices.

Monitoring Provisions:

1. By January 1, 2020, Permittees shall submit the Monitoring and Reporting Plan consistent with E.13 for Central Valley Regional Water Board Executive Officer approval;
2. With Central Valley Regional Water Board Executive Officer approval, the Permittees may participate in the Delta Regional Monitoring Program or other collective monitoring efforts in lieu of some or all of the individual monitoring requirements required by this section.
3. Permittees that implement individual water quality monitoring pursuant to this provision must submit a Monitoring Plan and Quality Assurance Project Plan (QAPP) to the Executive Officer for review and approval.

a) Monitoring Plan – at a minimum, the Monitoring Plan must include the following information:

   i) Management questions to be answered by the Monitoring Plan,
   ii) Constituents to be monitored, analytical methods, and reporting limits,
   iii) Sampling site(s) locations, including latitude and longitude coordinates, water body name and water body segment if applicable,
   iv) Other monitoring efforts that will provide supplemental data for the local water quality monitoring program and assessment (if any),
   v) Proposed schedule and level of detail for monitoring reports. If a more comprehensive report is necessary every few years, the Monitoring Plan shall propose a schedule and description of the level of detail (consistent with the information described below) that will be included within the Annual Reports.

b) Quality Assurance Project Plan (QAPP) consistent with Surface Water Ambient Monitoring Program (SWAMP). All samples shall be collected and analyzed according to the QAPP. Monitoring Reports shall be submitted with the Annual Report and include the following information (consistent with the approved Monitoring Plan):

   i) The purpose of the monitoring, brief contextual background, and a brief description of the study design and rationale;
   ii) Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable;
   iii) Identification of and rationale for any deviations from the QAPP;
   iv) Results of data collection, including concentration detected, measurement units, reporting limits, and detection limits, if applicable;
   v) Quantifiable assessment, analysis and interpretation of data for each monitoring parameter;
   vi) Comparison to reference sites (if applicable), guidelines or targets;
   vii) Discussion of whether data collected addresses the objective(s) or question(s) of study design;
   viii) Quantifiable discussion of program/study pollutant reduction effectiveness.

4. Progress toward attainment of the WLA shall be documented in the Annual Report.

By January 1, 2019, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

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Region 6: Lahontan Regional Water Board

Sediment

TMDL for Middle Truckee River Watershed, Placer, Nevada and Sierra Counties – *Sediment*

Effective Date: May 14, 2008
BPA: Section 4.13
Resolution No.: R6T-2008-0019
Phase II Entities: County of Placer, City of Truckee
Impaired Water Body: Truckee River

Requirements for Implementing the TMDL:

The Phase II entities identified in this TMDL section (hereinafter referred to as Permittees in this TMDL section) shall develop, implement, and report best management practices (BMPs) as follows:

1. Road sand application BMPs and recovery tracking - Road sand shall be applied using BMPs and recovered to the maximum extent practicable. Amounts of road abrasives and de-icing agents applied and recovered must be monitored and reported annually.
2. Dirt roads maintained or decommissioned - Identified dirt roads with inadequate erosion control structures shall be rehabilitated and maintained, or decommissioned. Permittees shall focus on dirt roads with high potential for sediment delivery to surface waters (e.g., within 200 feet of watercourse).
3. Legacy sites restoration and best management practices implementation - Identified legacy sites shall be restored or storm water BMPs shall be implemented to prevent erosion and sedimentation to surface waters.
4. Implement an Education and Outreach program, consistent with Section E.7. of the Order, for the targeted audience of ski areas within the jurisdictional boundaries of the permittees, focusing on sediment and erosion control for those facilities.
5. Continue to implement the most recent municipal monitoring program as approved by the Regional Water Board or it’s designee.

By May 14, 2028, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Region 8: Santa Ana Regional Water Board

Bacterial Indicator

TMDL for Middle Santa Ana River – *Bacterial Indicator*

Effective date: September 1, 2006
Resolution No.: R8-2005-0001
Phase II Entities: CA Institute for Men, CA Institute for Women, CA Rehab Center, University of California, Riverside
Impaired Water Body: Santa Ana River, Reach 3, Chino Creek, Mill Creek, Prado Park Lake

Requirements for Implementing the TMDL

The Phase II entities identified in this TMDL section (hereinafter referred to as Permittees in this TMDL section) shall:

1. Monitoring Program: By January 1, 2019, submit for approval by the Regional Water Board or its designee a watershed-wide attainment monitoring and facility specific bacterial indicator monitoring program that is adequate to determine attainment with the dry and wet season waste load allocation. The Permittees may alternatively participate in a stakeholder group monitoring program for the same purpose. The monitoring program must be consistent with the existing Santa Ana River Watershed Bacteria Monitoring Program – Monitoring Plan, approved by the Regional Water Board on March 11, 2016 (or the most current, Regional Water Board approved revision).
2. By January 1, 2019, either a) develop a facility-specific Bacterial Indicator Reduction Plan or b) join an updated watershed-based Bacterial Indicator Reduction Plan (within the Santa Ana River watershed).

For those entities that choose to develop facility-specific Bacterial Indicator Reduction Plans, the following applies:

1. Dry Season Bacterial Indicator Reduction Plan - Develop a facility specific Bacterial Reduction Plan that details the plan and schedule for achieving the Dry Season Bacterial Indicator WLA as soon as feasible.
2. Wet Season Bacterial Indicator Reduction Plan – Develop a facility specific Bacterial Reduction Plan that details the plan and schedule for achieving the Wet Season Bacterial Indicator WLA by December 31, 2025.

The Dry Season and Wet Season Bacterial Indicator Reduction Plans should include the following:

1. The specific Best Management Practices (BMPs) implemented to reduce the concentration of indicator bacteria from the facility and the water quality improvements expected to result from these BMPs.
2. Any specific regional treatment facilities and the locations where such facilities will be built to reduce the concentration of indicator bacteria discharged from the facility and the expected water quality improvements to result when complete.

3. The technical documentation used to conclude that the Bacterial Indicator Reduction Plan, once fully implemented, is expected to achieve attainment of either the dry season or wet season urban wasteload allocation for indicator bacteria by the specified attainment date.
4. A detailed schedule for implementing the Bacterial Indicator Reduction Plan. The schedule must identify measurable and verifiable milestones to assess satisfactory progress toward meeting the dry and wet season wasteload allocations.
5. The specific metric(s) that will be established to demonstrate the effectiveness of the Bacterial Indicator Reduction Plan.
6. Detailed descriptions of any additional BMPs planned, and the time required to implement those BMPs, in the event that data from the watershed-wide water quality monitoring program indicate that water quality objectives for indicator bacteria are still being exceeded after the Bacterial Indicator Reduction Plan is fully implemented.

By January 1, 2019, the permittees shall demonstrate attainment of the Dry Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By December 31, 2025, the permittees shall demonstrate attainment of the Wet Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Nutrients

TMDL for Lake Elsinore/Canyon Lake – *Nutrients*

Resolution No.: R8-2004-0037
Effective date: July 26, 2005
Phase II Entities: March Air Reserve Base (ARB)
Impaired Water Body: Lake Elsinore, Canyon Lake

Lake Elsinore/Canyon Lake Nutrient TMDL Joint Responsibility Option
March ARB shall implement the following actions:

a. March ARB has already committed to cooperative implementation actions, monitoring actions, special studies and implementation actions jointly with other responsible agencies as an active paying member of the Lake Elsinore/Canyon Lake TMDL Task Force. March ARB shall continue with those actions in accordance with paragraph I.H. of the Agreement to Form the Lake Elsinore and Canyon Lake TMDL Task Force, dated June 18, 2012.
b. If the Regional Water Board is notified that March ARB is not fulfilling its Lake Elsinore/Canyon Lake Task Force obligations or if March ARB chooses to opt out of the cooperative approach with the TMDL Task Force for implementation actions, monitoring actions, and/or special studies, March ARB shall provide formal notification to the Regional Water Board. March ARB will then be required to conduct the following activities:
    1. Within 30 days of such notification, submit a proposed update of the March ARB SWPPP to address nutrient discharges;
    2. Within 30 days of such notification, submit a proposed March ARB specific nutrient monitoring program. This monitoring program must be prepared and executed in a manner that attainment of waste load allocations will be determined. The monitoring

program must be consistent with the most current, Regional Water Board approved, Lake Elsinore/Canyon Lake TMDL Task Force monitoring plan;

3. Within 60 days of such notification, submit a proposed water quality monitoring program to evaluate the impairment status of Lake Elsinore and Canyon Lake.
4. Submit an annual report by August 15th of each year.

By December 31, 2020, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Organochlorine Compounds

TMDL for San Diego Creek, Upper and Lower Newport Bay – *Organochlorine Compounds*

Effective date: July 2013
Resolution No.: 2011-0037
Phase II Entities: Orange County Fairgrounds, University of California, Irvine
Impaired Water Body: San Diego Creek, Upper Newport Bay, Lower Newport Bay

Requirements for Implementing the TMDL: The Orange County Fairgrounds and the University of California, Irvine shall:

1. Per the Small MS4 Monitoring Flow Chart in this Order, the Permittees are:

   a. Not covered under an Ocean Plan Exception;
   b. Are identified in Attachment G (as noted under Phase II Entities here);
   c. Are not required to conduct Water Quality Monitoring; and
   d. Do discharge to a waterbody/waterbodies impaired (on 303(d) list for organochlorine compounds) by urban runoff.

   Therefore, the Permittees must initiate consultation with Regional Water Board staff by February 1, 2019 to determine the implementation and monitoring requirements (contained in a TMDL Attainment Plan) for San Diego Creek, Upper Newport Bay, and Lower Newport Bay.

3. As a result of the consultation with Regional Water Board staff, the Permittees shall submit their final TMDL Attainment Plan by February 1, 2020 to the Regional Water Board's Executive Officer. The Permittees shall implement the TMDL Attainment Plan immediately upon submittal.

By December 31, 2020, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

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Region 9: San Diego Regional Water Board

Indicator Bacteria

Bacteria Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek) – *Indicator Bacteria*

Effective Date: April 4, 2011
Resolution No.: R9-2010-0001
Phase II Entities: 22nd District Agricultural Association, California State University at San Marcos, Marine Corps Air Station Miramar, Marine Corps Base Camp Pendleton, North County Transit District, San Diego State University, San Diego Veterans Administration Medical Center, University of California San Diego
Impaired Water Body: 20 impaired water quality limited segments within the following watersheds or portions of watersheds: Laguna/San Joaquin, San Juan, San Clemente, San Luis Rey, San Marcos, San Dieguito River, Miramar Creek, Scripps HA, Tecolate HA, San Diego River, and Chollas Creek

Requirements for Implementing the Bacteria Project I – Twenty Beaches and Creeks TMDL

The Phase II entities identified in this TMDL section (hereinafter referred to as Permittees in this TMDL section) must take the following actions to meet the requirements of this TMDL:

1. Develop and implement the Storm Water Pollution Prevention Plan (SWPPP) as required by section F.5.f.4 of this Order including additional measures necessary to achieve reductions in fecal coliform, enterococcus, and total coliform by the final attainment dates as required by the TMDL. The SWPPP must include short term and long-term Best Management Practices (BMPs) strategies appropriate for the prioritization schedule in Attachment A, pages A-63 through A-65 of Resolution No. R9-2010-0001.
2. By July 1, 2019, monitor discharges from their facilities including MS4 discharge locations to demonstrate progress towards attainment with final waste load allocations. The monitoring and assessment results must be submitted as part of the Annual Reports required under section F.5.j. of this Order.
3. The Permittees are encouraged to collaborate and coordinate with Phase I MS4s and other responsible parties to the Bacteria I TMDL using an adaptive framework approach as part of the waste load reduction planning and implementation strategies in the required SWPPP pursuant to section F of this Order and monitoring required pursuant to section F.5.i.4. Coordinated efforts by all responsible parties will accomplish the waste load reductions required in the TMDLs faster and achieve the ultimate goal of improving water quality as soon as possible.

By April 4, 2021, the permittees shall demonstrate attainment of the Dry Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order. By April 4, 2031 (or April 4, 2021 if SWPPP does not contain load reduction programs for other pollutants), the permittees shall demonstrate attainment of the Wet Weather WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

Sediment

TMDL for Los Peñasquitos Lagoon – *Sediment*

Effective Date: July 14, 2014
Resolution No. R9-2012-0033
Phase II Entities: Marine Corps Air Station Miramar, San Diego Veterans Administration Medical Center, University of California San Diego, North County Transit District
Impaired Water Body: Los Peñasquitos Lagoon

Requirements for Implementing the TMDL

The Phase II entities identified in this TMDL section (hereinafter referred to as Permittees in this TMDL section) must take the following actions to meet the requirements of this TMDL:

1. Develop and implement the Storm Water Pollution Prevention Plan (SWPPP) required by Provision F.5.f.4 of this Order to achieve reductions in sediment by the final TMDL attainment date. The development of a SWPPP to address the TMDL fulfills the responsibility for Phase II Copermittees to prepare a Load Reduction Plan (LRP). The SWPPP must be updated by July 1, 2019 with any additional BMPs, monitoring, or other measures needed to account for the Phase II site's potential to impact the receiving water body with respect to sediment. Permittees are responsible for reducing their sediment loads to the receiving water body or demonstrate that their discharges are not causing exceedances of the wasteload allocation.
2. By March 1, 2019 monitor sediment discharges from their facilities including MS4 discharge locations to demonstrate progress towards attainment of final waste load allocations. The monitoring, at a minimum, shall include representative flow rates and total suspended solids concentrations from individual discharger's facilities. The monitoring and assessment results must be submitted as part of the Annual Reports required under section E.16 of this Order.
3. The Permittees are encouraged to collaborate and coordinate with Phase I MS4s and other responsible parties to the Los Peñasquitos Lagoon Sediment TMDL using an adaptive framework approach as part of the waste load reduction planning and implementation strategies in the required SWPPP pursuant to section F of this Order. Coordinated efforts by all responsible parties will accomplish the waste load reductions required in the TMDLs faster and achieve the ultimate goal of improving water quality as soon as possible.

By July 14, 2034, the permittees shall demonstrate attainment of the TMDL WLA as specified in Section E.15.a.(ii). or F.5.i.1.(ii). of this Order.

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Attachment H — Acronyms & Abbreviations

Acronyms and Abbreviations

ASBS	Area of Special Biological Significance
BMP	Best Management Practices
CASQA	California Stormwater Quality Association
CEDEN	California Environmental Data Exchange Network
CFR	Code of Federal Regulations
CGP	Construction General Permit
CWA	Clean Water Act
DEM	Digital Elevation Model
DMA	Drainage Management Area
GIS	Geographic Information System
GPS	Global Positioning System
IGP	Industrial General Permit
LID	Low Impact Development
LUP	Linear Utility Project
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
O&M	Operation and Maintenance
PAH	Polycyclic Aromatic Hydrocarbon
SMARTS	Storm Water Multi-Application, Reporting, and Tracking System
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
QAPP	Quality Assurance Project Plan
QSD	Qualified SWPPP Developer
QSP	Qualified SWPPP Preparer
USEPA	United States Environmental Protection Agency

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Attachment I — GLOSSARY

Activism – is the practice of action or involvement as a means of achieving goals.

At the Point of Discharge(s) – Means in the surf zone immediately where runoff from an outfall meets the ocean water (a.k.a., at point zero).

Beneficial Uses – The Uses of water of the state protected against degradation, such as domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation and preservation of fish and wildlife, and other aquatic resources or preserves.

Catch Basin – A catch basin (a.k.a, storm drain inlet) is an inlet to the storm drain system that typically includes a grate or curb inlet where storm water enters the catch basin and a sump to capture sediment, debris and associated pollutants. Catch basins act as pretreatment for other treatment practices by capturing large sediments. The performance of catch basins at removing sediment and other pollutants depends on the design of the catch basin (e.g., the size of the sump), and routine maintenance to retain the storage available in the sump to capture sediment.

Common Plan or Development or Sale – U.S. EPA regulations include the term "commonplan of development or sale" to ensure that acreage within a common project does not artificially escape the permit requirements because construction activities are phased, split among smaller parcels, or completed by different owners/developers. In the absence of an exact definition of "common plan of development or sale," the State Water Board is required to exercise its regulatory discretion in providing a commonsense interpretation of the term as it applies to construction projects and permit coverage. The common plan of development is generally a contiguous area where multiple, distinct construction activities may be taking place at different times under one plan. A plan is generally defined as any piece of documentation or physical demarcation that indicates that construction activities may occur on a common plot. Such documentation could consist of a tract map, parcel map, demolition plans, grading plans, or contract documents. Any of these documents could delineate the boundaries of a common plan area. However, broad planning documents, such as land use master plans, conceptual master plans, or broad-based CEQA or NEPA documents that identify potential projects for an agency or facility are not considered common plans of development. An overbroad interpretation of the term would render meaningless the clear "one acre" federal permitting threshold and would potentially trigger permitting of almost any construction activity that occurs within an area that had previously received area-wide utility or road improvements.

Community Based Social Marketing (CBSM) – A systematic way to change the behavior of communities to reduce their impact on the environment. Realizing that simply providing information is usually not sufficient to initiate behavior change, CBSM uses tools and findings from social psychology to discover the perceived barriers to behavior change and ways of overcoming these barriers.

Construction Site – Any project, including projects requiring coverage under the General Construction Permit, that involves soil disturbing activities including, but not limited to, clearing, grading, paving, disturbances to ground such as stockpiling, and excavation.

Design Storm – For purposes of these Special Protections, a design storm is defined as the volume of runoff produced from one inch of precipitation per day or, if this definition is inconsistent with the discharger's applicable storm water permit, then the design storm shall be the definition included in the discharger's applicable storm water permit.

Direct Discharge – A discharge that is routed directly to waters of the United States by means of a pipe, channel, or ditch (including a municipal storm sewer system), or through surface runoff.

Discharge of a Pollutant – The addition of any pollutant or combination of pollutants to waters of the United States from any point source, or any addition of any pollutant or combination of pollutants to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. The term includes additions of pollutants to waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works.

Discharger – Any responsible party or site owner or operator within the Permittees' jurisdiction whose site discharges storm water runoff, or a non-storm water discharge.

Detached Single-family Home Project – The building of one single new house or the addition and/or replacement of impervious surface associated with one single existing house, which is not part of a larger plan of development.

Dry Weather – Refers to season where prolonged dry periods occur; in California's Mediterranean climate, it usually corresponds to the period between May and September.

Erosion – The physical detachment of soil due to wind or water. Often the detached fine soil fraction becomes a pollutant transported storm water runoff. Erosion occurs naturally, but can be accelerated by land disturbance and grading activities such as farming, development, road building, and timber harvesting.

Erosion Control Measures – Measures used to minimize soil detachment. These may include: Vegetation, either undisturbed or planted (e.g., grasses, wildflowers), and other materials, such as straw (applied over bare soil, crimped into soil); protective erosion control blankets; fiber (applied as mulch or hydromulch); and mulch (avoid plastics if possible).

Sediment Control Measures – Measures used to trap and/or retain detached soil before discharging to receiving waters. These may include: fiber rolls (e.g., keyed-in straw wattles, compost rolls); silt fence; retention basins; and active treatment systems.

Flood Management Facilities – Facilities or structures designed for the explicit purpose of controlling flood waters safely in or around populated areas. (e.g., dams, levees, bypass areas). Facilities or structures designed for the explicit purpose of controlling flood waters safely in or around populated areas (e.g., dams, levees, bypass areas). Flood management facilities do not include traditional stormwater conveyance structures (e.g. stormwater sewerage, pump stations, catch basins, etc.)

Grading – The cutting and/or filling of the land surface to a desired slope or elevation.

Healthy Watershed – Healthy watersheds are watersheds that function well ecologically and are sustainable. They support healthy, diverse aquatic habitat, have healthy riparian areas and corridors with sufficient vegetative buffer area to minimize land pollutant runoff into surfaces waters, sufficient cover and canopy to maintain healthy habitat, and have near natural levels of sediment transport. Surface waters meet water quality objectives, and sediments are sufficiently low in pollutants to provide for healthy habitat. Groundwaters are near natural levels in quantity and quality, for water supply purposes and for base flow for sustaining creek habitat and migratory fish routes. A Healthy Watershed sustains these characteristics through measures that ensure the dynamics that provide these healthy factors and functions are protected. For example, watersheds must be protected, through low impact development or other forms of protection, from hydromodification that adversely affects recharge areas' function or creeks' bed or bank stability. Creek buffer/riparian areas must be protected from land disturbance activities. Healthy sustainable watersheds use less energy for imported water, have fewer greenhouse gas emissions, and a lesser carbon footprint than unhealthy watersheds.

Hotspot – Hotspots are specific operations and areas in a sub watershed that may generate high storm water pollution. Hotspots are high priority sites.

Hydromodification – Modification of hydrologic pathways (precipitation, surface runoff, infiltration, groundwater flow, return flow, surface-water storage, groundwater storage, evaporation and transpiration) that results in negative impacts to watershed health and functions.

HUC 12 Watershed – The hydrologic unit code (HUC) is the “address” of the watershed. The HUC is the numerical code of the USGS watershed classification system used to identify the watersheds, or drainage basins, at various scales. The HUC organizes watersheds by a nested size hierarchy, so large scale watershed boundaries for an entire region may be assigned a two- digit HUC, while small scale, local watershed boundaries (within the larger regional watershed) may be assigned a 12-digit HUC. A HUC-12 watershed averages 22 square miles in size.

Illicit Discharge – Any discharge to a municipal separate storm sewer (storm drain) system (MS4) that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term illicit discharge includes all non-storm water discharges not composed entirely of storm water and discharges that are identified under the Discharge Prohibitions section of this General Permit. The term illicit discharge does not include discharges that are regulated by an NPDES permit (other than the NPDES permit for discharges from the MS4).

Impaired Waterbody – A waterbody (i.e., stream reaches, lakes, waterbody segments) with chronic or recurring monitored violations of the applicable numeric and/or narrative water quality criteria. An impaired water is a water that has been listed on the California 303(d) list or has not yet been listed but otherwise meets the criteria for listing. A water is a portion of a surface water of the state, including ocean, estuary, lake, river, creek, or wetland. The water currently may not be meeting state water quality standards or may be determined to be threatened and have the potential to not meet standards in the future. The State of California’s 303(d) list can be found at http://www.swrcb.ca.gov/quality.html.

Impervious Surface – A surface covering or pavement of a developed parcel of land that prevents the land's natural ability to absorb and infiltrate rainfall/storm water. Impervious surfaces include, but are not limited to; roof tops, walkways, patios, driveways, parking lots, storage areas, impervious concrete and asphalt, and any other continuous watertight pavement or covering. Landscaped soil and pervious pavement, including pavers with pervious openings and seams, underlain with pervious soil or pervious storage material, such as a gravel layer sufficient to hold the specified volume of rainfall runoff are not impervious surfaces.

Industrial Development – Development or redevelopment of property to be used for industrial purposes, such as factories, manufacturing buildings, and research and development parks.

Infill Site – A site in an urbanized area where the immediately adjacent parcels are developed with one or more qualified urban uses or at least 75% of the perimeter of the site adjoins parcels that are developed with qualified urban uses and the remaining 25% of the site adjoins parcels that have previously been developed for qualified urban uses and no parcel within the site has been created within the past 10 years.

Joint Storm Water Treatment Facility – A storm water treatment facility built to treat the combined runoff from two or more Regulated Projects.

Linear Underground/Overhead Projects (LUPs) – Include, but are not limited to, any conveyance, pipe, or pipeline for the transportation of any gaseous, liquid (including water and wastewater for domestic municipal services), liquiescent, or slurry substance; any cable line or wire for the transmission of electrical energy; any cable line or wire for communications (e.g., telephone, telegraph, radio, or television messages); and associated ancillary facilities. Construction activities associated with LUPs include, but are not limited to, (a) those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment, and associated ancillary facilities); and include, but are not limited to,(b) underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/ or pavement repair or replacement, and stockpile/borrow locations.

Low Impact Development – A sustainable practice that benefits water supply and contributes to water quality protection. Unlike traditional storm water management, which collects and conveys storm water runoff through storm drains, pipes, or other conveyances to a centralized storm water facility, Low Impact Development (LID) takes a different approach by using site design and storm water management to maintain the site's pre-development runoff rates and volumes. The goal of LID is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall. LID has been a proven approach in other parts of the country and is seen in California as an alternative to conventional storm water management.

Marine Operations – Marinas or mooring fields that contain slips or mooring locations for 10 or more vessels.

Maximum Extent Practicable (MEP) – The minimum required performance standard for implementation of municipal storm water management programs to reduce pollutants in storm water. Clean Water Act § 402(p)(3)(B)(iii) requires that municipal permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." MEP is the cumulative effect of implementing, evaluating, and making corresponding changes to a variety of technically appropriate and economically feasible BMPs, ensuring that the most appropriate controls are implemented in the most effective manner. This process of implementing, evaluating, revising, or adding new BMPs is commonly referred to as the iterative process.

Mixed-use Development or Redevelopment – Development or redevelopment of property to be used for two or more different uses, all intended to be harmonious and complementary. An example is a high-rise building with retail shops on the first 2 floors, office space on floors 3 through 10, apartments on the next 10 floors, and a restaurant on the top floor.

Municipal Separate Storm Sewer System (MS4) – The regulatory definition of an MS4 (40 CFR 122.26(b)(8)) is "a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created to or pursuant to state law) including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into waters of the United States. (ii) Designed or used for collecting or conveying storm water;(iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2."In practical terms, operators of MS4s can include municipalities and local sewer districts, state and federal departments of transportation, public universities, public hospitals, military bases, and correctional facilities. The Storm water Phase II Rule added federal systems, such as military bases and correctional facilities by including them in the definition of small MS4s.

National Pollutant Discharge Elimination System (NPDES) – A national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the CWA.

Natural Ocean Water Quality – The water quality (based on selected physical, chemical and biological characteristics) that is required to sustain marine ecosystems, and which is without apparent human influence, *i.e.*, an absence of significant amounts of: (a) man-made constituents (*e.g.,* DDT); (b) other chemical (*e.g.,* trace metals), physical (temperature/thermal pollution, sediment burial), and biological (*e.g.*, bacteria) constituents at concentrations that have been elevated due to man's activities above those resulting from the naturally occurring processes that affect the area in question; and (c) non-indigenous biota (*e.g.,* invasive algal bloom species) that have been introduced either deliberately or accidentally by man. Discharges "*shall not alter natural ocean water quality*" as determined by a comparison to the range of constituent concentrations in reference

areas agreed upon via the regional monitoring program(s). If monitoring information indicates that *natural ocean water quality* is not maintained, but there is sufficient evidence that a discharge is not contributing to the alteration of natural water quality, then the Regional Water Board may make that determination. In this case, sufficient information must include runoff sample data that has equal or lower concentrations for the range of constituents at the applicable reference area(s).

New Development – New Development means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision on an area that has not been previously developed.

Non-Traditional Small MS4 – Federal and State operated facilities that can include universities, prisons, hospitals, military bases (e.g. State Army National Guard barracks, parks and office building complexes.)

Notice of Intent (NOI) – The application form by which dischargers seek coverage under General Permits, unless the General Permit requires otherwise.

Nuisance – Anything that meets all of the following requirements: (1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; (2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; (3) occurs during, or as a result of, the treatment or disposal of wastes.

Open Channel – Flow within a distinct natural or modified channel, calculated as flow velocity times channel cross-sectional area.

Outfall – A point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States. Specific to Ocean Plan monitoring, outfalls include those measuring 18 inches or more in diameter.

Parking Lot – Land area or facility for the parking or storage of motor vehicles used for business, commerce, industry, or personal use.

Permittee/Permittees – Municipal agency/agencies and Non-traditional Small MS4s that are named in and subject to the requirements of this General Permit.

Permit Effective Date – July 1, 2013. The date at least 100 days after General Permit adoption, provided the Regional Administrator of U.S. EPA Region 9 has no objection.

Pervious Pavement – Pavement that stores and infiltrates rainfall at a rate that exceeds conventional pavement.

Point Source – Any discernible, confined, and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operations, landfill leachate collection systems, vessel, or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

Pollutant – Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 *et seq.*)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.

Pollutants of Concern – Pollutants of concern found in urban runoff include sediments, non-sediment solids, nutrients, pathogens, oxygen-demanding substances, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons (PAHs), trash, and pesticides and herbicides.

Pollution – An alteration of the quality of the waters of the state by waste to a degree which unreasonably affects the beneficial uses of the water or facilities which serve those beneficial uses.

Potable Water – Water that is safe for domestic use, drinking, and cooking.

Prioritized BMPs – BMPs installed and/or implemented to address pollutants of concern. Where pollutant(s) of concern are undocumented or unidentified, prioritized BMPs are defined as BMPs installed and/or implemented to address common pollutants of concern (see pollutants of concern definition).

Priority Storm Drain Inlets – Storm drain inlets that drain to sensitive receiving water bodies or water bodies with history of illegal dumping. Storm drain inlets that are located in areas where the maximum number of citizens are exposed (this may include areas of high foot traffic).

QAPrP – Quality Assurance Project Plan

Receiving Water – Surface water that receives regulated and unregulated discharges from activities on land.

Redevelopment – Land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred. Redevelopment does not include trenching, excavation and resurfacing associated with LUPs; pavement grinding and resurfacing of existing roadways; construction of new sidewalks, pedestrian ramps, or bike lanes on existing roadways; or routine replacement of damaged pavement such as pothole repair or replacement of short, non-contiguous sections of roadway.

Regulated Project – Refers to projects subject to the new and redevelopment standards in Section E.11 in this Order.

Regulated Small MS4 – A Small MS4 that discharges to a water of the United States (U.S.) or to another MS4 regulated by an NPDES permit and has been designated as regulated by the State Water Board or Regional Water Board under criteria provided in this Order.

Residential Housing Subdivision – Any property development of multiple single-family homes or of dwelling units intended for multiple families/households (e.g., apartments, condominiums, and town homes).

Retrofitting – Improving pollution and/or flow control at existing developments and facilities to protect or restore beneficial uses and watershed functions.

Riparian Areas – Plant communities contiguous to and affected by surface and subsurface hydrologic features of perennial or intermittent waterbodies. Riparian areas have one or both of the following characteristics: 1) distinctively different vegetative species than adjacent areas, and 2) species similar to adjacent areas but exhibiting more vigorous or robust growth forms. Riparian areas are usually transitional between wetland and upland.

Rural Area – Encompasses all population, housing, and territory not included within an urban area.

Sediments – Solid particulate matter, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface either above or below sea level.

Sensitive Waterbody – Receiving waters which are a priority to protect. They include: 1) Areas of Special Biological Significance (ASBS), 2) areas providing or known to provide habitat for chinook and coho salmon and steelhead, and 3) beaches that serve more than 50,000 people between April 1 and October 31 and are adjacent to flowing storm drains or creeks.

Separate Implementing Entity (SIE) – An entity that a permittee may utilize to satisfy one or more of the permit obligations. SIE may include a flood control agency, a Phase I permittee, a storm water consulting firm, etc.

Small MS4 – An MS4 that is not permitted under the municipal Phase I regulations, and which is "owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity…." (40 CFR §122.26(b)(16)).

Smart Growth Projects – Projects that produce multiple-benefits such as economic, social and environmental benefits. Smart growth projects commonly include high density development projects that result in a reduction of runoff volume per capita as a result of reduced impervious surface.

Solid Waste – All putrecible and nonputrecible solid, semisolid, and liquid wastes as defined by California Government Code Section 68055.1(h).

Source Control – Land use or site planning practices, or structural or nonstructural measures, that aim to prevent runoff pollution by reducing the potential for contact with rainfall runoff at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff.

Surface Drainage – Any above-ground runoff (sheet, shallow concentrated, and open channel) that flows into the storm drain system.

Standard Industrial Classification (SIC) – A federal system for classifying establishments by the type of activity, in which they are engaged, using a four-digit code.

Storm Drain System – The basic infrastructure in a municipal separate storm sewer system that collects and conveys storm water runoff to a treatment facility or receiving water body.

Storm Water – Storm water is generated when precipitation from rain and snowmelt events flows over land or impervious surfaces and does not percolate into the ground. As storm

water flows over the land or impervious surfaces, it accumulates debris, chemicals, sediment or other pollutants that could adversely affect water quality if the storm water is discharged untreated.

Storm Water Treatment System – Any engineered system designed to remove pollutants from storm water runoff by settling, filtration, biological degradation, plant uptake, media absorption/adsorption or other physical, biological, or chemical process. This includes landscape-based systems such as grassy swales and bioretention units as well as proprietary systems.

Structural Controls – Any structural facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution.

Subwatershed – An area approximately 10,000 to 40,000 acres in area identified by Hydrologic Unit Code 12 in the federal Watershed Boundary Dataset.

Surface Water Ambient Monitoring Program (SWAMP) – The State Water Board's program to monitor surface water quality; coordinate consistent scientific methods; and design strategies for improving water quality monitoring, assessment, and reporting.

Time of Concentration – The time it takes the most hydraulically-remote drop of water to travel through the watershed to a specific point of interest.

Total Maximum Daily Loads (TMDLs) – The maximum amount of a pollutant that can be discharged into a waterbody from all sources (point and nonpoint) and still maintain water quality standards. Under CWA section 303(d), TMDLs must be developed for all waterbodies that do not meet water quality standards even after application of technology-based controls, more stringent effluent limitations required by a state or local authority, and other pollution control requirements such as BMPs.

Targeted Audience – Group(s) of people the Permittee has targeted to receive educational message.

Trash and Debris – Trash consists of litter and particles of litter. California Government Code Section 68055.1 (g) defines litter as all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or containers constructed of steel, aluminum, glass, paper, plastic and other natural and synthetic materials, thrown or deposited on the lands and waters of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing.

Treatment – Any method, technique, or process designed to remove pollutants and/or solids from polluted storm water runoff, wastewater, or effluent.

Urban Rural Interface – The urban/rural interface is identified as the geographical location at which urban land use and rural land use interact.

Urbanized Area – A densely settled core of census tracts and/or census blocks that have population of at least 50,000, along with adjacent territory containing non-residential urban land uses as well as territory with low population density included to link outlying densely settled territory with the densely settled core. It is a calculation used by the Bureau of the Census to determine the geographic boundaries of the most heavily developed and dense urban areas. From the Phase II Final Rule (Revised June 2012)

http://www.epa.gov/npdes/pubs/fact2-2.pdf Data utilized in this Order was derived from 2010 U.S. Census Data.

Waste – Includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

Waste Load Allocation – The portion of a receiving water's total maximum daily load that is allocated to one of its existing or future point sources of pollution. Waste load allocations constitute a type of water quality-based effluent limitation.

Water Efficient Landscape Ordinance – The Model Water Efficient Landscape Ordinance (Title 23, Division 2, Chapter 2.7 of the California Code of Regulations) took effect January 1 2010 and is designed to: (1) promote the values and benefits of landscapes while recognizing the need to invest water and other resources as efficiently as possible; (2) establish a structure for planning, designing, installing, maintaining and managing water efficient landscapes in new construction and rehabilitated projects; (3) establish provisions for water management practices and water waste prevention for existing landscapes; (4) use water efficiently without waste by setting a Maximum Applied Water Allowance as an upper limit for water use and reduce water use to the lowest practical amount; (5) promote the benefits of consistent landscape ordinances with neighboring local and regional agencies; (6) encourage local agencies and water purveyors to use economic incentives that promote the efficient use of water, such as implementing a tiered-rate structure; and (7) encourage local agencies to designate the necessary authority that implements and enforces the provisions of the Model Water Efficient Landscape Ordinance or its local landscape ordinance.

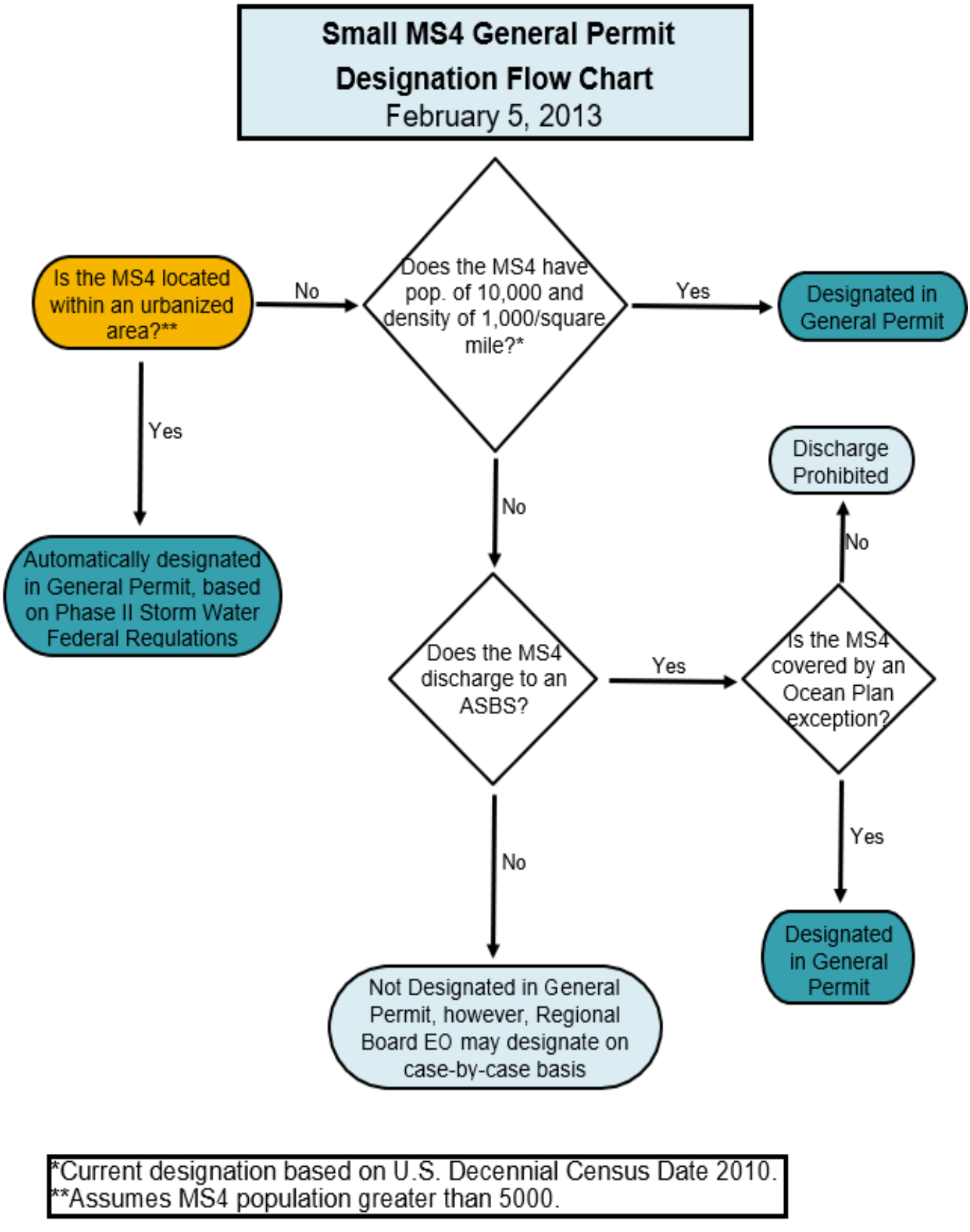
Water Quality Control Plan (Basin Plan) –The Regional Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State within each Region, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives and discharge prohibitions. Basin Plans are adopted and approved by the State Water Board, U.S. EPA, and the Office of Administrative Law where required.

Water Quality Objectives – The limits or levels of water quality elements or biological characteristics established to reasonably protect the beneficial uses of water or to prevent pollution problems within a specific area. Water quality objectives may be numeric or narrative.

Water Quality Standards – State-adopted and U.S. EPA-approved water quality standards for waterbodies. The standards prescribe the use of the waterbody and establish the water quality criteria that must be met to protect designated uses. Water quality standards also include the federal and state anti-degradation policy.

Watershed Management Zone – Post-construction management zones based on common key watershed processes and receiving water type (creek, marine nearshore waters, lake, etc.).

Watershed Processes – Functions that are provided by watersheds, including but not limited to, groundwater recharge, sediment supply and delivery, streamflow, and aquatic habitat.


Small MS4 General Permit
Designation Flow Chart
February 5, 2013
Is the MS4 located within an urbanized area?**
No
Does the MS4 have pop. of 10,000 and density of 1,000/square mile?*
Yes
Designated in General Permit
Yes
Automatically designated in General Permit, based on Phase II Storm Water Federal Regulations
No
Discharge Prohibited
No
Does the MS4 discharge to an ASBS?
Yes
Is the MS4 covered by an Ocean Plan exception?
Yes
Designated in General Permit
No
Not Designated in General Permit, however, Regional Board EO may designate on case-by-case basis
*Current designation based on U.S. Decennial Census Date 2010.
**Assumes MS4 population greater than 5000.

Phase II Permit Traditional Small MS4 Monitoring Flow Chart

February 5, 2013